UNDERGRADUATE (MBBS)

ACADEMIC RECORD/LOG BOOK

Biochemistry

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

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

Under Graduate (MBBS)
Academic Record/Log book
Department of Biochemistry

PREFACE

The goal of the Graduate Medical Education Regulation (GMER) is to sculpt every medical student into a responsible Indian Medical Graduate who can cater to the needs of the society. The thrust in the new regulations is to make medical education more learner-centric, patient-centric, gender-sensitive, and outcome-oriented and environment appropriate.

Communication and interpersonal skills are imperative in providing quality medical care. Our curriculum achieves this by providing dedicated curriculum time in the form of a longitudinal program based on Attitude, Ethics and Communication (AETCOM) competencies. Foundation Course is to orient medical learners to MBBS programme, and provide them with requisite knowledge, communication, technical and language skills.

Electives allow students to get exposed to diverse environment, get a glimpse of future career, to revisit basic sciences of their own interest and indulge in research activities. Family adoption program aims to provide experimental learning opportunity to Indian Medical Graduates in community-based health care.

Skill laboratories have been incorporated into the curriculum for the learners to get an opportunity to learn clinical and communication skills while eliminating the fear of harming patients. The Learner-doctor method of clinical training (Clinical Clerkship) is to provide learners with experience in longitudinal patient care, by being part of the health care team providing hands-on care for patients.

This academic record / log book should be maintained as a document to record day-to-day academic activities, assessments, grading of assessments and its feedback. Periodic recording of all academic activities should be done by the student and has to be submitted to the faculty in-charge during feedback sessions. This document will incorporate in it all components that are being assessed for the final internal assessment and should be submitted to the concerned department and the examiners. Internal assessment marks will be given after evaluating this document. For subjects spanning across different phases this academic record has to be maintained for that particular subject and has to be evaluated at the end of posting in each phase.

CERTIFICATE

This is to certify that the candidate Mr./Ms……. Reg No. ……, admitted in the year ……. in the ……. …….. (Medical College) has satisfactorily completed / has not completed all assignments/requirements mentioned in this logbook for first year MBBS course in the subject of Biochemistry during the period from ..... to ……. She / He is eligible / not eligible to appear for the summative (University) assessment as on the date given below.

Signature of Faculty

Name and Designation

Countersigned by Head of the Department

Place:

Date:

INDEX

No.	Content	Page
1	Curriculum Vitae	7
2	Distribution of subject wise teaching hours	8
3	Consolidated internal assessment marks	9
4	Formative assessment – Theory	10
5	Home assignment	17
6	Continuous class test	42
7	Self-Directed Learning	50
8	Formative assessment - Practical	75
9	Certification of skills	79
10	Attitude, Ethics and Communication	87
11	Attendance	92
12	Integrated session	93
13	Early clinical Exposure	94
14	Photo Story	99
15	Co-Curricular Achievements	101

CURRICULUM VITAE

Name of Student											
Date of commencement of phase 1											
Name of Parent/Guardian											
Date of Birth & Age											
Permanent Address											
Address for Postal Communication											
Mobile Phone (Parent/Guardian)											
Mobile Phone (Parent/Guardian)											
Mobile Phone (Student)											
Email ID (Parent/Guardian)											
Email ID (Student)											

Paste recent

passport size photo

Signature of Student

DISTRIBUTION OF SUBJECT WISE TEACHING HOURS

Subject	Large group teaching	SGT/ Practical/ Tutorials/ Seminars	SDL	Total
Foundation Course				80
Anatomy	180	430	10	620
Physiology	130	305	10	445
Biochemistry *	82	157	10	249
Early Clinical Exposure (ECE)**	-	27	-	27
Community Medicine	20	20	-	40
Family adoption Program (FAP)	-	24	-	24
(AETCOM)***	-	26	-	26
Sports and extra-curricular Activities	-	-	-	10
Total	**412**	**989**	**30**	**1521**

SGT: Small group teaching, SDL: Self-directed learning

*Including Molecular Biology

**Minimum ECE hours. These hours are to be divided equally by anatomy, physiology & biochemistry.

***AETCOM module is a longitudinal programme.

DISTRIBUTION OF INTERNAL ASSESSMENT MARKS THEORY AND PRACTICAL

I. Formative Assessment			II. Continuous Internal Assessment Theory				Total marks
1st PCT* Theory	2nd PCT Theory	Prelims Theory (Paper I & II)	Home Assignment	Continuous Class test (LMS**)	Self-Directed Learning	Attendance Theory	
I-A	I-B	I-C	II-A	II-B	II-C	II-D	
20	20	10	10	20	10	10	100

III. Formative Assessment			IV. Continuous Internal Assessment Practical				Total marks
1st PCT* Practical	2nd PCT Practical	Prelims Practical	Certifiable skill- based competencies (Through OSPE/OSCE/Spots/ Exercise/Other)	AETCOM competencies	Record book / Log book	Attendance Practical	
III-A	III-B	III-C	IV-A	IV-B	IV-C	IV-D	
20	20	10	20	10	10	10	100

**PCT – Part Completion test; **LMS – Learning Management System*

I. FORMATIVE ASSESSMENT - THEORY

Date	Assessment	Topic	Marks obtained
	PCT - 1		/100
	PCT - 2		/100
	Prelims	Paper I	/100
		Paper II	/100
		Total	/200

Signature of Facilitator

Formative Feedback Session - Theory assessment	Marks:
Topic:	Date:
Reflection by the Student	
Feed Back and Remedial Action suggested by the Facilitator/ Remedial assessment marks	
Signature of Student	
Signature of Facilitator after completion of remedial action	

Formative Feedback Session - Theory assessment	Marks:
Topic:	Date:
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Topic:	Date:
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Signature of Student	
Signature of Facilitator after completion of remedial action	

II A. HOME ASSIGNMENT

Note:

- This section includes academic mile stones attained through assignments or "out of class" academic work.
- The learner shall be given an assignment based on the core or non-core topics of the curriculum and any other such topics as deemed necessary.
- The structure for the assignment 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.
- Plagiarism should be discouraged.
- The completion of such activity shall be recorded in this section by the learner and signed by the facilitator.

Date	Topic

Signature of Facilitator

Home Assignment: 1 **Date:**

Feedback given by the Facilitator

Signature of Facilitator:

Home Assignment: 2 **Date:**

Feedback given by the Facilitator

Signature of Facilitator:

Home Assignment: 3 **Date:**

Feedback given by the Facilitator

Signature of Facilitator:

Home Assignment: 4 **Date:**

Feedback given by the Facilitator

Signature of Facilitator:

Home Assignment: 5 **Date:**

Feedback given by the Facilitator

Signature of Facilitator:

Home Assignment: 6 **Date:**

Feedback given by the Facilitator

Signature of Facilitator:

II B. CONTINUOUS CLASS TEST (LMS)

No.	Topic	Date of completion
1	Cell, Subcellular organelles, transport mechanisms and Chemistry of carbohydrates	
2	Chemistry of proteins, plasma proteins, Hemoglobin metabolism	
3	Enzymology and Clinical Enzymology, Chemistry of Lipids	
4	Metabolism of Lipids- I	
5	Metabolism of Lipids- II	
6	Metabolism of Carbohydrates	
7	Metabolism of Amino acids and Proteins-I	
8	Metabolism of Amino acids and Proteins-II	
9	Nutrition	
10	Biological oxidation, Clinical and Applied Biochemistry	
11	Molecular Biology-I	
12	Molecular Biology-II	
13	Advanced Biochemistry and Miscellaneous	

Signature of Facilitator

No.	Competency	Marks obtained
Topic 1: Basic Biochemistry		
BC1.1	Describe the molecular and functional organization of a cell and its sub- cellular components and composition and functions of Biological membranes.	
Topic 2: Enzyme		
BC2.1	Explain fundamental concepts of enzyme, isoenzyme, alloenzyme, coenzyme & co-factors. Enumerate the main classes of IUBMB nomenclature	
BC2.2	Describe and explain the basic principles of enzyme activity	
BC2.3	Describe and discuss enzyme Inhibition and role of enzymes or drugs as Inhibitors, and enzymes as therapeutic agents.	
BC2.4	Describe and discuss the clinical utility of various serum enzymes in laboratory and their use as markers of various pathological conditions.	
BC2.5	Interpret laboratory results of enzymes in various disorders.	
Topic 3: Chemistry and Metabolism of Carbohydrates		
BC3.1	Discuss and differentiate monosaccharides, di-saccharides and polysaccharides with examples, their importance as energy fuel, structural element, and storage molecule in human body.	
BC3.2	Describe the digestion, absorption and transport of carbohydrates from food along with its disorders.	
BC3.3	Define and briefly describe the pathways of carbohydrate metabolism and their regulation (glycolysis, gluconeogenesis, TCA, and significance of glycogen metabolism and HMP shunt), with associated disorders.	
BC3.4	Describe and discuss the regulation, functions and integration of minor Carbohydrate Metabolism pathway briefly along with associated diseases /disorders.	
BC3.5	Discuss the mechanism and significance of blood glucose regulation (Glucose homeostasis) in health and disease. Describe the types, Biochemical changes, complications and laboratory investigations related to diabetes & other carbohydrate metal disorders.	
BC3.6	Interpret the results of analytes associated with metabolism of carbohydrates and other laboratory investigations related to disorders of carbohydrate metabolism.	
Topic 4 : Chemistry and Metabolism of Lipids		

BC4.1	Describe and discuss main classes of lipids and their functions.	
BC4.2	Describe the digestion and absorption of dietary lipids and its (associated disorders.	
BC4.3	Describe and discuss the fatty acid oxidation, metabolism of ketone bodies along with their clinical significance.	
BC4.4	Describe metabolism of Triglycerides and cholesterol metabolism along with its regulation and clinical significance.	
BC4.5	Describe the metabolism of lipoproteins with brief overview of lipoprotein structure, their interrelations & relations with atherosclerosis.	
BC4.6	Discuss Biological role and therapeutic applications of Eicosanoids and their Inhibitors.	
BC4.7	Describe Fatty liver, cholelithiasis and obesity.	
Topic 5: Chemistry & Metabolism of Proteins and Immunology		
BC5.1	Discuss briefly structure of amino acids and classify amino acids on the basis of Nutritional and Metabolic significance.	
BC5.2	Discuss classification of proteins, structural organization, functions and clinical aspects.	
BC 5.3	Describe the digestion and absorption of dietary proteins	
BC 5.4	Describe plasma proteins and their functions and brief overview of normal and abnormal electrophoretic pattern of serum proteins, acute phase proteins.	
BC 5.5	Describe the structure, functions and disorders of Immunoglobulins with brief description of cellular and humoral Immunity.	
BC 5.6	Describe the formation, transport, detoxification of Ammonia, Ammonia toxicity and its clinical significance.	
BC 5.7	Describe the specialized products formed from the amino acids Glycine, Phenylalanine, Tyrosine, Tryptophan, and Methionine, branched chain amino acids and Arginine and the inborn errors associated with them. Discuss new-born screening.	

BC5.8	Describe the structure and functions of heme in the body and describe the processes involved in its metabolism with emphasis on jaundice and describe porphyrin metabolism.	
BC5.9	Describe the major types of Hemoglobin and its types, derivatives & variants found in the body and their physiological / pathological relevance	
Topic 6: Extracellular Matrix		
BC6.1	Enumerate the functions and components of the extracellular matrix (ECM).	
BC6.2	Discuss the involvement of ECM components in health and disease.	
BC6.3	Describe protein targeting & sorting along with its associated disorders.	
Topic 7: Integration of Metabolism and Biological Oxidation		
BC7.1	Describe the integration of various metabolic processes in the body (Carbohydrate, Lipid, and Protein).	
BC7.2	Describe the Biochemical processes involved in generation of energy in cells.	
Topic 8: Vitamins and Nutrition		
BC8.1	Describe the Biochemical role of vitamins in the body and explain the manifestations of their deficiency	
BC8.2	Discuss the importance of various dietary components and explain importance of dietary fibre.	
BC8.3	Describe the types and causes of protein energy malnutrition and its effects.	
BC8.4	Provide dietary advice for optimal health in childhood and adult in disease conditions like diabetes mellitus, coronary artery disease and in pregnancy.	
BC8.5	Describe the causes (including dietary habits), effects and health risks associated with being overweight/ obese / metabolic syndrome	
BC8.6	Summarize the nutritional importance of commonly used items of food including fruits and vegetables (macro-molecules & its importance).	
Topic 9: Minerals, electrolytes, Water and Acid base balance		

BC9.1	Describe the dietary sources, absorption, transport, and metabolism, Biochemical functions of Iron, Calcium and copper with its associated clinical disorders.	
BC9.2	Discuss Magnesium, Zinc and Phosphorus along with its clinical significance and discuss the functions of trace elements	
BC9.3	Describe the processes involved in maintenance of normal pH, water & electrolyte balance of body fluids and the derangements associated with them	
Topic 10: Molecular Biology		
BC10.1	Describe nucleotides and nucleic acids and their clinical significance.	
BC10.2	Describe briefly synthesis of purines in the body with special stress on salvage pathway.	
BC10.3	Describe the degradation of purines and its significance with associated disorders.	
BC10.4	Describe in brief the major steps involved in Replication, Transcription, and translation.	
BC 10.5	Describe the types of DNA repair, gene mutations and associated disorders.	
BC10.6	Describe basic mechanism of regulation of gene expression	
BC10.7	Describe applications of molecular technologies like recombinant DNA technology and PCR in the diagnosis and treatment of diseases. Briefly discuss microarray, FISH, CRISPR	
Topic 11: Organ Function tests and Hormones		
BC 11.1	Describe the function tests of kidney, liver, thyroid and adrenal glands and their clinical significance. Interpret the function tests report.	
BC11.2	Enumerate the hormones and markers related to reproduction and reproductive health and their clinical interpretation (For e.g. LH, FSH, Prolactin, beta-HCG, Estrogen Progesterone, testosterone and AMH. Discuss importance of prenatal screening.	
Topic 12: Xenobiotic, oxidative stress and antioxidants		

BC12.1	Describe the role of xenobiotics in disease in health and disease	
BC12.2	Describe the anti-oxidant defense systems in the body.	
BC12.3	Describe the role of oxidative stress in the pathogenesis of conditions such as cancer, complications of diabetes mellitus and atherosclerosis	
Topic 13: Miscellaneous		
BC 13.1	Describe oncogenesis, oncogenes & its activation with focus on p53 & apoptosis.	
BC 13.2	Describe various Biochemical tumor markers and the Biochemical basis of cancer therapy.	
BC13.3	Discuss briefly on HIV and Biochemical changes in AIDS.	
BC13.4	Discuss metabolism of alcohol with Biochemical changes and effects of chronic alcoholism.	
BC13.5	Describe the role of Artificial Intelligence in clinical Biochemistry laboratory practices.	
Topic 14:Biochemical Laboratory test / Practical		
BC14.1	Describe commonly used laboratory apparatus equipments, good / safe laboratory practice, Biomedical hazards & waste management.	
BC14.2	Describe estimation of pH by pH meter or ABG analyser and interpretation of results with paper case scenarios.	
BC14.3	Describe the physical properties, chemical constituents of normal urine and abnormal constituents of urine and Perform urine analysis to determine normal and abnormal constituents (including dipsticks method demonstration).	
BC14.4	Identify abnormal constituents in urine, interpret the findings and correlate these with pathological states and prepare a urine report.	
BC14.5	Describe screening of urine for inborn errors & describe the use of paper chromatography	
BC14.6	Describe the principles of Colorimetry & Spectrophotometry.	

BC14.7	Perform estimation of glucose by manual / semi-automated analyzer method and demonstrate glucometer usage. and interpretation of results with clinical scenarios.	
BC14.8	Perform estimation of urea and calculate BUN and interpretation of results in clinical scenarios.	
BC14.9	Perform the estimation of serum creatinine and calculate creatinine clearance.	
BC14.10	Perform estimation of uric acid in serum and interpretation of results with clinical scenarios.	
BC14.11	Perform estimation of serum proteins, albumin and A:G ratio	
BC14.12	Perform the estimation of serum total cholesterol	
BC14.13	Perform the estimation of serum Bilirubin by manual / semi automated analyzer method.	
BC14.14	Describe estimation of calcium and phosphorus and interpretation of results.	
BC14.15	Describe the estimation Triglycerides, HDL and calculation of LDL and interpretation of results with clinical scenarios.	
BC14.16	Describe the estimation of SGOT (AST) / SGPT (ALT) / Alkaline Phosphatase and interpretation of results with clinical scenarios.	
BC14.17	Describe briefly various body fluids & discuss the composition of CSF.	
BC14.18	Observe use of commonly used equipments/techniques in Biochemistry laboratory including: •pH meter •Paper chromatography of amino acid •Protein electrophoresis•TLC, PAGE •Electrolyte analysis by ISE •ABG analyzer •ELISA •Immunodiffusion •Autoanalyser •DNA isolation from blood/ tissue	
BC14.19	Explain the basis and rationale of Biochemical tests done and interpretation of laboratory results in the following conditions: - Diabetes mellitus, - Obesity, - dyslipidaemia, - Fatty liver - myocardial infarction, - Renal failure, - Gout, - Nephrotic syndrome, - Jaundice, - Liver diseases, pancreatitis, disorders of acid- base balance, - Thyroid disorders, - Genetic disorders - Nutritional disorders - Vitamin deficiency disorders, - Disorders of Mineral metabolism, - Disorders of electrolyte metabolism.	
BC14.20	Describe & Identify Pre-Analytical (especially order of draw, tourniquet technique), Analytical, Post Analytical errors.	
BC14.21	Describe Quality control and identify basic L J charts in Clinical biochemistry lab.	

BC14.22	Describe performance of OGTT, Glucose Challenge Test and HbA1c and interpretation of results with clinical scenarios.	
BC14.23	Calculate energy content of different food Items, identify food items with high and low glycaemic index and explain the importance of these in the diet.	
BC14.24	Observe, Interpret and discuss the baseline, diagnostic, prognostic, and discharge investigations of clinical biochemistry.	

II C. SELF DIRECTED LEARNING

Note:

1. This section includes academic mile stones attained through self-directed learning. The learner shall be assigned a specific learning objective for each session. (Library assignments, seminar, museum study etc.,)
2. The learner shall be given an assignment based on core and non-core topics of the curriculum and any other such topics as deemed necessary.
3. They shall record a detailed synopsis of the learning in this section. The student shall also record a list of the books/journals referred in Vancouver format.
4. The completion of such activity shall be recorded in this section by the learner and signed by the facilitator.

Date	Topic

Signature of Facilitator

SDL session:	**Date:**
Topic:	
Synopsis	

Bibliography

Feedback given by the Facilitator with signature

SDL session:	**Date:**
Topic:	
Synopsis	

Bibliography

Feedback given by the Facilitator with signature

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Topic:	
Synopsis	

Bibliography

Feedback given by the Facilitator with signature

III. FORMATIVE ASSESSMENT PRACTICAL

Date	Assessment	Topic	Marks obtained
	IA		
	PCT– I		/100
	IA		
	PCT – II		/100
	IA		
	Prelims		/200

Signature of Facilitator

Formative Feedback Session - Practical assessment	**Marks:**
Topic:	**Date:**
Reflection by the Student	
Feed Back and Remedial Action suggested by the Facilitator/ Remedial assessment marks	
Signature of Student	
Signature of Facilitator after completion of remedial action	

Formative Feedback Session - Practical assessment	**Marks:**
Topic:	**Date:**
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Topic:	**Date:**
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Formative Feedback Session - Practical assessment	**Marks:**
Topic:	**Date:**
Reflection by the Student	
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Signature of Student	
Signature of Facilitator after completion of remedial action	

IV. CONTINUOUS INTERNAL ASSESSMENT

IV A. CERTIFIABLE SKILL BASED COMPETENCIES

(THROUGH OSPE/OSCE/SPOTS/EXERCISE/OTHER)

Note:

1. This section captures the skills and competencies obtained by the learner during the course work in the department.
2. The facilitator shall assess the learner for the specific certifiable competency and those certifiable competencies which the learner has acquired shall be entered in this section. A record of these is also maintained in the assessment record.

Competency and name of the activity	**BC14.3 Describe the physical properties, chemical constituents of normal urine – Organic and Inorganic constituents**		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	**BC14.3 Describe the physical properties, chemical constituents of normal urine – Organic and Inorganic constituents**		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	BC14.4 Perform urine analysis to estimate and determine abnormal constituents – Glucose, Ketones		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	BC14.4 Perform urine analysis to estimate and determine abnormal constituents – Blood, Proteins		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	**BC14.4 Perform urine analysis to estimate and determine abnormal constituents – Bile Salts, Bile pigments**		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	**BC14.7 Perform estimation of glucose by manual / semi-automated analyzer method and demonstrate Glucometer usage and interpretation of results with clinical scenarios.**		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	**BC14.8 Perform estimation of urea and calculate BUN and interpretation of results in clinical scenarios**		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	**BC14.9 Perform the estimation of serum creatinine and calculate creatinine clearance.**		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	BC14.10 Perform estimation of uric acid in serum and interpretation of results with clinical scenarios.		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	BC14.11 Perform estimation of serum proteins, albumin and A:G ratio		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	BC14.11 Perform estimation of serum proteins, albumin and A:G ratio		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	BC14.12 Perform the estimation of serum total cholesterol		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	**BC14.13 Perform the estimation of serum Bilirubin by manual / semi automated analyzer method.**		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

Competency and name of the activity	**BC14.21 Describe Quality control and identify basic L J charts in Clinical biochemistry lab**		
Date			
Attempt at activity First or Only (F) Repeat (R) Remedial (Re)			
Rating Below (B) expectations Meets (M) expectations Exceeds (E) expectations Or Numerical Score			
Decision of faculty Completed (C) Repeat (R) Remedial (Re)			
Initial of faculty and date			
Feedback received Initial of learner			

IV B. ATTITUDE, ETHICS AND COMMUNICATION

The "Indian Medical Graduate" (IMG) shall possess requisite knowledge, skills, attitudes, values and responsiveness, so that he or she may function appropriately and effectively *as a doctor of first contact of the community* while being globally relevant. In order to fulfill this goal, the IMG must be able to function in the following ROLES appropriately and effectively:

1. Clinician who understands and provides preventive, promotive, curative, palliative and holistic care with compassion.
2. Leader and member of the health care team and system with capabilities to collect, analyze, synthesize and communicate health data appropriately.
3. Communicator with patients, families, colleagues and community.
4. Lifelong learner committed to continuous improvement of skills and knowledge.
5. Professional, who is committed to excellence, is ethical, responsive and accountable to patients, community and profession.

Note:

1. This section includes academic mile stones attained through AETCOM learning. The learner shall be assigned a specific learning objective for each session.
2. The learner shall be given an assignment based on the AETCOM topics of the curriculum.
3. They shall record a detailed synopsis of the skill learnt in this section. The student shall also record a reflection of the learning and learning process.
4. The completion of such activity shall be recorded in this section by the learner and signed by the facilitator.

Date	**Module No.1.1**	**Topic- What does it mean to be a doctor?**
	1.1.1	Enumerate and describe professional qualities and roles of a physician
	1.1.2	Describe and discuss the commitment to lifelong learning as an important part of a Physician growth
	1.1.3	Enumerate and describe the role of a Physician in health care system
	1.1.4	Identify and discuss physician' s roles and responsibilities to society and the community that she/he serves

Date	AETCOM Competency **1.1 What does it mean to be a doctor?**

1.1.1 Enumerate and describe professional qualities and roles of a physician

Reflection / Narrative of the session

Feedback by the Facilitator with signature

Date	AETCOM Competency 1.1What does it mean to be a doctor?

1.1.2 Describe and discuss the commitment to lifelong learning as an important part of a Physician growth

Reflection / Narrative of the session

Feedback by the Facilitator with signature

Date	**AETCOM Competency** **1.1 What does it mean to be a doctor?**
1.1.3 Enumerate and describe the role of a Physician in health care system	
Reflection / Narrative of the session	
Feedback by the Facilitator with signature	

Date	AETCOM Competency **1.1 What does it mean to be a doctor?**
1.1.4 Identify and discuss physician' s roles and responsibilities to society and the community that she/he serves	
Reflection / Narrative of the session	
Feedback by the Facilitator	

ATTENDANCE

Month	Theory (%)	Practical (%)

Details	Percentage of attendance / Marks
Foundation Course (minimum 75%) (Common for all 3 departments)	
Theory (out of 10 marks)	
Practical (out of 10 marks)	
AETCOM	
Early Clinical Exposure	

INTEGRATED SESSION

1. This section includes academic mile stones attained through horizontal and vertical integrated sessions.
2. The learner shall attend all such integrated sessions, observe, interact and understand the topic.
3. The learner shall submit the end of session assessment (e.g. MCQ session of 15-20 MCQ questions)
4. The completion of such activity shall be recorded in this section by the learner and signed by the facilitator.

No.	Topic	Date of session
1		
2		
3		
4		
5		
6		

Signature of Facilitator

EARLY CLINICAL EXPOSURE

- The objectives of early clinical exposure are to enable the learner to

1. Recognize the relevance of basic sciences in diagnosis, patient care and treatment.
2. Provide a context that will enhance basic science learning.
3. Relate to experience of patients as a motivation to learn.
4. Recognize attitude, ethics and professionalism as integral to the doctor- patient relationship.
5. Understand the socio-cultural context of diseases through the study of humanities.

- The three elements of ECE are

1. Provision of clinical correlation to basic sciences learning.
2. Provision of authentic human contact in a social or clinical context that enhances learning in the early/pre-clinical years of undergraduate education.
3. Introductionto humanities in medicine.

- **Salient Principles:**

  The key principles underlying early clinical exposure are to provide a clinical context and ensure patient centricity. The clinical context can include case scenarios, videos, actual patient or simulated patient etc. The presence of actual patients in every session of ECE, though not essential, is preferred. Therefore, ECE is exposure to the relevant clinical context in earlier years. It must be noted that purpose of ECE is not to prepone the conventional clinical teaching but to provide better understanding of basic sciences through a clinical context.

Note:

1. This section includes academic mile stones attained through early clinical exposure. The learner shall be assigned a specific learning objective for each session.
2. The learner shall be assigned to such ECE sessions in groups as deemed necessary by the individual institutions. The learner shall observe, interact, understand and perceive the activity. They shall record a detailed synopsis of the learning in this section. The student shall also record a detailed reflection of their experience of what was observed.
3. The completion of such activity shall be recorded in this section by the learner and signed by the facilitator.

ECE Session 1:	
Date	**Initials of Facilitator**
Objectives	
Synopsis of Learning / Reflection	

ECE Session 2:	
Date	**Initials of Facilitator**

Objectives	

Synopsis of Learning / Reflection

ECE Session 3:	
Date	**Initials of Facilitator**
Objectives	
Synopsis of Learning / Reflection	

ECE Session 4:	
Date	**Initials of Facilitator**
Objectives	
Synopsis of Learning / Reflection	

PHOTO STORY

1. Students may document the important moments of this journey e.g. prizes won, competitions attended, department activities etc.,
2. These are based on the preferences of individual institutions.
3. The projects are voluntary activity and not included for internal assessment.

CO-CURRICULAR ACHIEVEMENTS

1. This section shall include the important co-curricular activities in which the student is involved during the academic year which shall be documented for the student and the department e.g. prizes won, competitions attended, etc.
2. These are based on the preferences of individual institutions.
3. The projects are voluntary activity and not included for internal assessment.