THE WEST BENGAL UNIVERSITY OF HEALTH SCIENCES

PHASE I MBBS

COMPETENCY BASED CURRICULUM-2019

ANATOMY/PHYSIOLOGY/BIOCHEMISTRY LOG BOOK

THE WEST BENGAL UNIVERSITY OF HEALTH SCIENCES
DD–36, Sector-I, Salt Lake, Kolkata 700 064
Website: **www.wbuhs.ac.in**
Phone (EPBX)**:** 2321-3461 Fax:2358-0100

Memo No: OG/ WBUHS/2019-20/ 1697 **Date:** 14/11 /2019

Notification

Sub: Implementation of the Competency based curriculum & Assessment Module for Undergraduate Medical Education, 2019

Ref:

1. Medical Council of India, Competency based Undergraduate curriculum for the Indian Medical Graduate, 2018 (Vol. 1).
2. Minutes of the 24th Academic Council Meeting held on 12/04/2019.
3. Proceedings of the Pre-Clinical / UG BOS meeting held on 18/10/2019.

In exercise of the powers conferred under The West Bengal University of Health Sciences Act, 2002, (section 20), the Academic Council in its meeting held on 12.04.2019 has approved the revised Competency based curriculum & Assessment Module pertaining to MBBS course as annexed.

The Revised Curriculum as above shall be effective for the students admitted to MBBS course from the academic session 2019-20 onwards.

The revised curriculum The Graduate Medical Regulations, 2019 is to be implemented by all medical colleges under the ambit of Medical Council of India from August 2019. The roll out will be progressive over the duration of the MBBS course.

By Order,

Sd/-
REGISTRAR, WBUHS

To,
The Principal of all Medical Colleges / Institutes, affiliated to The West Bengal University of Health Sciences, Kolkata.

Copy to:

1. The Director of Medical Education, Dept. of Health & Family Welfare, Swasthya Bhaban, Kolkata.
2. PA to Vice-Chancellor, The West Bengal University of Health Sciences, Kolkata.
3. All Officers of the University Examination Section / Academic Section / Registrar Section.
4. Guard File/ Office copy.

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THE WEST BENGAL UNIVERSITY OF HEALTH SCIENCES

LOGBOOK CERTIFICATE

This is to certify that this log book is the bonafide record of
Mr. / Ms.....

Roll No. ..... Admission Year 2019-20, of the department of

Anatomy/Physiology/Biochemistry at..... Medical College. The log book is as per the guidelines of Competency Based Undergraduate Medical Education Curriculum, Graduate Medical Regulation 2019, from ..... to ..... .

He / She has satisfactory attended/ completed all assignments mentioned in this logbook as per the guidelines prescribed by Medical Council of India, for 1st MBBS Competency Based Curriculum in the subject of Anatomy / Physiology / Biochemistry.

Head of Department of Anatomy: .....
Signature with Date

Head of Department of Physiology: .....
Signature with Date

Head of Department of Biochemistry: .....
Signature with Date

.....
Principal/Dean: Signature with Date

BIODATA OF THE CANDIDATE

Photo

Name of the student:

Name of the course: 1st Prof. MBBS

Date of birth:

Father's / Guardian's name:

Mother's name:

Blood group:

Permanent Address:

……

……

……

……

Permanent Address:

……

……

……

……

Student's contact no:

Father's/guardian's contact no:

Student's mail id:

Father's/guardian's mail id:

Candidates Signature: …… **Date: ……**

GENERAL INSTRUCTIONS

1) The log book is a record of the academic / nonacademic activities of the student. Each Medical student is responsible for maintaining their logbook.

2) This logbook is prepared as per the guidelines of MCI for implementation of Competency based curriculum for 1st Professional MBBS students in the subject of Anatomy/Physiology/Biochemistry.

3) Students are instructed to keep their logbook entries up to date. It is the responsibility of the student to enter their activity in respective pages & get them duly singed by the supervising faculty.

4) Entries in the logbook will be in accordance with activities done in the pre-clinical departments & have to be scrutinized by the Head of the concerned department.

5) The logbook assessment will be based on multiple factors like
   - Overall presentation
   - Active participation in the sessions
   - Quality of write up of reflections
   - Timely completions
   - Attendance

6) The logbook shall be kept as record work of the candidate for that department / specialty & be submitted to department as a bonafide record of the candidate before appearing for the University examination.

NOTE:

1. A **clear record** of all components that add to the internal assessment marks needs to be maintained by the institution and retained by them for at least **5 years** after completion of the examination. Institutions may be asked to provide these details by the University as and when required.

2. The contents in the log book are suggested guidelines. The institutions can make necessary changes as per the needs.

OBJECTIVE OF MEDICAL GRADUATE TRAINING PROGRAM

1. The undergraduate medical education program is designed with a goal to create an

"Indian Medical Graduate" (IMG) possessing requisite knowledge, skills, attitudes, values and responsiveness, so that he or she may function appropriately and effectively as a physician of first contact of the community while being globally relevant.

2. In order to fulfill this goal, the IMG must be able to function in the following ROLES appropriately and effectively:

Clinician who understands and provides preventive, promotive, curative, palliative and holistic care with compassion.

Leader and member of the health care team and system with capabilities to collect analyze, synthesize and communicate health data appropriately.

Communicator with patients, families, colleagues and community.

Lifelong learner committed to continuous improvement of skills and knowledge.

Professional who is committed to excellence, is ethical, responsive and accountable to patient's community and the profession.

The revised curriculum is to be implemented by all medical colleges under the ambit of Medical Council of India from August 2019. The roll out will be progressive over the duration of the MBBS course.

Training shall primarily focus on preventive and community-based approaches to health and disease, with specific emphasis on national health priorities such as family welfare, communicable diseases, epidemics and disaster management.

Acquisition and certification of skills shall be through experiences in patient care, diagnostic and skill laboratories.

The development of ethical values and overall professional growth as integral part of curriculum shall be emphasized through a structured longitudinal and dedicated program on professional development and ethics.

Focus

· Foundation Course

· Early Clinical Exposure

· Integrated Teaching / Learning

· Skills Training

DURATION AND DETAILS OF COURSE

The duration of the certified study of the Bachelor of Medicine and Bachelor of Surgery course shall be 4½ Academic Years followed by one-year compulsory rotating Internship.

Normally the MBBS course shall commence on the 1st August of an academic year.
The period of 4½ years is divided into (9 semesters, each semester of 6 months duration) three phases.

Phase -1 (Semester 1 & 2)
First Professional MBBS

1. The first Professional examination shall be held at the end of first Professional training (1+12 months), in the subjects of Human Anatomy, Physiology & Biochemistry.
2. As per proposed GMER 2019, the University examinations will be held in the month of September for First Professional MBBS.
3. A maximum number of four permissible attempts would be available to clear the first Professional University examination, whereby the first Professional course will have to be cleared within 4 years of admission to the said course. Partial attendance at any University examination shall be counted as an availed attempt.

Phase- 2 (Semester 3 & 4)
Second Professional MBBS

1. The second Professional examination shall be held at the end of second professional training (11 months), in the subjects of Pathology, Microbiology & Pharmacology.
2. As per proposed GMER 2019, the University examinations will be held in the month of September for Second Professional MBBS.
3. Must pass in all the Phase I (Pre-Clinical) subjects, before joining the Phase II (Para-Clinical) subjects.

Phase- 3
Third Professional MBBS Part -I (Semester 5 & 6)

1. Third Professional Part I shall be held at end of third Professional part 1 of training (12 months) in the subjects of Ophthalmology, Otorhinolaryngology, Community Medicine and Forensic Medicine.

2. As per proposed GMER 2019, the University examinations will be held in the month of October for Third Professional MBBS Part- I.

3. Candidate who fails in the II professional examination shall not be allowed to appear in Part I of Third professional examination, unless he/she passes all subjects of II Professional examination.

Third Professional MBBS Part –II (Semester 7, 8 & 9)

1. Third Professional Part II - (Final Professional) examination shall be at the end of training (14 months including 2 months of electives) in the subjects of General Medicine, General Surgery, Obstetrics & Gynaecology and Paediatrics.

The discipline of Orthopaedics, Anaesthesiology, Dentistry and Radio diagnosis will constitute 25% of the total theory marks incorporated as a separate section in paper II of General Surgery.

The discipline of Psychiatry and Dermatology, Venereology and Leprosy (DVL), Respiratory Medicine including Tuberculosis will constitute 25% of the total theory marks in General Medicine incorporated as a separate section in paper II of General Medicine.

2. As per proposed GMER 2019, the University examinations will be held in the month of January for Third Professional MBBS Part- II.

3. Candidates shall not be entitled to graduate after 10 years of his/her joining of the first part of the MBBS course.

Examinations schedule: As per GMER 2019, The University examinations will be held in the month of September for first & second phase and October for final phase part 1. The examination for final phase part 2 will be held in the month of January.

There will be one main examination in an academic year and a supplementary examination within 90 days of declaration of result of the main examination.

Distribution of subjects by professional phase:

Phase & Year of MBBS Training	Subjects & New Training Elements	Duration	University Examination
First Professional MBBS	* Foundation course (1 month) * Human Anatomy, Physiology & Biochemistry Introduction of Community Medicine, Humanities *Early Clinical Exposure * Attitude, Ethics & Communication Module (AETCOM)	1+12 months	At the end of First Professional MBBS training (to be held in the month of September)
Second Professional MBBS	* Pathology, Microbiology, Pharmacology, Forensic Medicine & Toxicology *Introduction to clinical subjects including Community Medicine * Clinical postings * AETCOM	12 months	At the end of Second Professional MBBS training (to be held in the month of September)
Third Professional MBBS Part- I	* General Medicine, General Surgery, OBG, Pediatrics, Orthopedics, Dermatology, Psychiatry Otorhinolaryngoloy, Ophthalmology, Community Medicine, Forensic Medicine, & Toxicology, Respiratory Medicine, Radio diagnosis & Radiotherapy, Anesthesiology * Clinical Subjects/ postings * AETCOM	12 months	At the end of Third Professional MBBS (Part-I) training (to be held in the month of October)
Electives	* Elective blocks of 04 weeks each & students will be assessed in between and at the end of each elective posting, which will contribute towards internal marks. Block 1 shall be done in pre-clinical or para-clinical & block 2 shall be done in a clinical department (including specialties, super-specialties, ICUs, blood bank and casualty).	(2 months)	Two months are allotted for elective rotations after completion of the exam at end of the third MBBS Part I examination and before commencement of third MBBS Part II.
Third Professional MBBS Part- II	General Medicine, Pediatrics, General Surgery, Orthopedics, Obstetrics & Gynecology including Family welfare & allied specialties * Clinical postings/ subjects * AETCOM	14 months	At the end of Third Professional MBBS (Part-II) training (to be held in the month of January)

Community Medicine will be integrated from Phase – I to Phase –III vertically and the syllabus will be provided in Phase – III.

ATTENDANCE

Every candidate should have attendance not less than 75% of the total classes conducted in theory, practical and clinical jointly in each calendar year calculated from the date of commencement of the term to the last working day as notified by the University in each of the subjects prescribed to be eligible to appear for the university examinations.

For appearing at the University Examination, student should have minimum 75% attendance in each subject.

A candidate lacking in the prescribed attendance in any subject(s) should not be permitted to appear for the examination in that subject(s).

Students cannot appear in part or separately in individual subjects during the first appearance at the Professional examination.

The Principal should notify the attendance details at the end of each professional phase without fail under intimation to this University.

EXAMINATION RULES & REGULATIONS/PATTERN
Competency based UG Assessment 2019 for Medical Graduates

(I) Suggested phase wise scheduling of tests for Internal Assessment for Colleges
(In conformity to proposed GMER 2019)

Phase	Minimum Number of tests during the year	Remarks
Phase-1	Human Anatomy - 3 Physiology - 3 Biochemistry - 3 Community Medicine - 1	ECE assessment should be included subject wise. There should be at least one short question from AETCOM in each subject. One of the 3 tests in preclinical subjects should be prelim or pre-university examination. Proposed schedule of three IA exams: December, April, July
Phase-2	Pathology - 3 Pharmacology - 3 Microbiology - 3 Two tests for- General Medicine (including Allied Subjects), General Surgery (including Allied Subjects), Obstetrics& Gynaecology, Forensic Medicine Community Medicine End of posting (EOP) examination at each clinical posting including those of allied subjects.	One of the 3 tests in Para clinical subjects should be prelim or pre-university examination. Clinical subjects should also be assessed at end of each posting (EOP) – Theory and Practical. There should be at least one short question from AETCOM in each subject.
Phase-3 Part-I	Forensic Medicine - 2 Community Medicine - 2 Ophthalmology - 2 Otorhinolaryngology - 2 Two tests for- General Medicine (including Allied Subjects), General Surgery ((including Allied Subjects), Paediatrics, Obstetrics & Gynaecology. EOP examination at each clinical posting including allied subjects.	One of the tests in Ophthalmology, ENT / Forensic Medicine / Community Medicine should be prelim or pre-university examination. Clinical subjects should also be tested at end of each posting (EOP)-Theory and Practical. There should be at least one short question from AETCOM in each subject.
Phase-3 Part-II	Two Tests for- General Medicine (including Allied Subjects), General Surgery (including Allied Subjects), Paediatrics, Obstetrics & Gynaecology. EOP examination at each clinical posting including that in allied subjects	Clinical subjects should also be tested at end of each posting (EOP) -Theory and Practical. There should be at least one short question from AETCOM in each subject. One of the tests in Medicine, Surgery, Paediatrics and Obstetrics & Gynaecology should be prelim or preuniversity examination. Assessment of electives to be included in IA.

SCHEME OF EXAMINATION - Internal Assessment

Scheme for calculation of Internal Assessment marks is given the table: There shall be three internal assessment examinations in each preclinical subject.

Theory IA	Marks	Practical IA	Marks
*Theory written paper	40	**Practical exam and viva - voce	40
Formative assessment : Part completion tests/ system-wise reviews/ MCQs/unit test / seminars/assignments / Case based learning tests		Formative assessment : Early clinical exposure + Skill certification	
Logbook (Subject wise)	10	Practical record & Logbook (Subject wise)	10
Total	**50**	**Total**	**50**

*Prior to submission to the University, the marks for each of the three internal examination theory assessments must be calculated out of 40 marks, regardless of the maximum marks.

**Prior to submission to the University, the marks for each of the three internal examination practical assessments must be calculated out of 40 marks, regardless of the maximum marks.

An **average of the marks scored in the three internal assessment examinations** will be considered as the final internal assessment marks. Only the final marks out of 50 needs to be submitted to the University, separately for theory and practical for each internal assessment.

Components of IA:
Day to day records and log book (including required skill certifications) should be given importance in Internal Assessment.
Assessment of Early Clinical Exposure should be included in formative as well as in internal assessment in first phase subject-wise.

Assessment of Foundation Course should be included in formative assessment of first phase.
Assessment of electives should contribute to internal assessment in final phase part-2.
There should be at least one assessment based on direct observation of skills, attitudes and communication at all levels.
A log book must be used to record these components. (A sample format of log book is being published separately).
Formative assessment methods (examples) include: on spot Viva Voce, on spot OSPE, oral presentations, written assignments
It is also recommended that remedial measures for students who are either not able to score qualifying marks or have missed on some assessments due to any reason(s), additional tests as and when required are conducted prior to university examinations.

1) 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.

2) 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.

Note:
1) Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination. 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.

2) 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.

3) Day to day records and log book (including required skill certifications) should be given importance in internal assessment.

4) There shall be no less than three internal assessment examinations in each Preclinical / Para-clinical subject and no less than two examinations in each clinical subject in a professional year. An end of posting clinical assessment shall be conducted for each clinical posting in each professional year.

5) When subjects are taught in more than one phase, the internal assessment must be done in each phase and must contribute proportionately to final assessment. For example, General Medicine must be assessed in second Professional, third Professional Part I and third Professional Part II, independently. Twenty five percent of weight age in theory tests in Medicine and Surgery should be given to allied subjects and there should be at least one question from each allied subject.

6) A **clear record** of all components that add to the internal assessment marks needs to be maintained by the institution and retained by them for at least **5 years** after completion of the examination. Institutions may be asked to provide these details by the University as and when required.

(II) Summative assessment logistics (For Universities)

Summative assessment consists of University examinations. Each theory paper will have 100 marks. Marks distribution for various subjects in University examinations:

Phase of Course	Written Theory Total	Practical / Clinical including Oral	Pass Criteria
First Professional			University Examination Mandatory 50% marks in theory and practical (practical = practical / clinical + viva) [theory=theory paper(s) only] 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 in the said subject. Internal Assessment: 50%combined in theory and practical (not less than 40% in each) for eligibility for appearing for University Examinations. Internal assessment marks are not to be added to marks of the University examinations and should be shown separately in the grade card.
Human Anatomy - 2 papers	200	100	
Physiology - 2 papers	200	100	
Biochemistry - 2 papers	200	100	
Second Professional			
Pharmacology - 2 Papers	200	100	
Pathology - 2 papers	200	100	
Microbiology - 2 papers	200	100	
Third Professional Part – I			
Forensic Medicine & Toxicology – 1 paper	100	100	
Ophthalmology – 1 paper	100	100	
Otorhinolaryngology – 1 paper	100	100	
Community Medicine - 2 papers	200	100	
Third Professional Part – II			
General Medicine - 2 papers	200	200	
General Surgery - 2 papers	200	200	
Paediatrics – 1 paper	100	100	
Obstetrics & Gynaecology - 2 papers	200	200	

First Professional MBBS (Phase -1)

A. Theory: 200 Marks
There shall be two theory papers of 100 marks each and duration of each paper shall be 3 hours. The pattern of questions in each paper & marks distribution for theory question papers shall be as mentioned below:

Type of Question	Number of Questions	Maximum Marks for each question	Total

Structured Long Answer questions (LAQ)	2	15	30
Short Answer questions (SAQ)	3	10	30
Short Notes	2 (One from AETCOM module)	5	10
Reasoning based questions/explain why	4 (One from AETCOM module)	5	20
MCQs (Single Response, 4:1 type)	5 or 10	2 or 1	10
		Total marks	**100**

B. Practical / Clinical Examination– 50 marks

C. Viva voce: 50 marks. Viva marks shall be the part of practical/clinical assessment. (Viva marks to be added to practical/clinical component and not theory)
The viva - voce examination shall carry 50 marks and all examiners will conduct the examination. Portions of Paper I - 25 Marks; Portions of Paper II - 25 Marks. Viva should focus on application and interpretation.

D. Criteria for passing university examination:

1) The student must **secure at least 40% marks in each of the two theory papers** with **minimum 50% of marks in aggregate** (both papers together) to pass.

2) The student must secure a minimum of 50% of marks in aggregate in the viva and practical examination both combined to pass. **(**The marks obtained in the viva examination will be added to the practical marks).

3) Students must secure at least 50% marks of the total marks (combined in theory and practical) assigned for internal assessment to be declared successful at the final university examination of that subject.

SCHEME OF UNIVERSITY EXAMINATIONS

As per proposed GMER 2019, the University examinations will be held in the month of September for first & second phase and October for final phase part 1. The examination for final phase part 2 will be held in the month of January (table).
There shall be **one main examination** in an academic year and **a supplementary** to be held **not later than 90 days** after the declaration of the results of the main examination.

TABLE SHOWING SCHEME FOR CALCULATION OF UNIVERSITY EXAMINATION MARKS

Theory						Practical/Clinical Examination including Viva				Subject Total	
Paper-1		Paper-2		Total Marks		Practical / Clinical	Viva	Total Marks			
FM	PM	FM	PM	FM	PM	FM	FM	FM	PM	FM	PM
100	40	100	40	200	100	50	50	100	50	300	150

Internal Assessment					
Theory IA		Practical IA		Total IA	
FM	PM	FM	PM	FM	PM
50	20	50	20	100	50

Note:
1) Theory 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 weight age 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 laboratories and /or hospital wards. The objective will be to assess proficiency and skills to conduct experiments, interpret data and form logical conclusion. Assessment of clinical and procedural skills should be based on direct observation by the examiners - 1 or 2 longer (15 minutes or so) OSCE type stations, where examiners can observe and assess complete history taking and/or physical examination skill with check lists.

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

4) A maximum number of four permissible attempts would be available to clear the first Professional University examination, whereby the first Professional course will have to be cleared within 4 years of admission to the said course. Partial attendance at any University examination shall be counted as an availed attempt.

5) A learner shall not be entitled to graduate after 10 years of his/her joining of the first part of the MBBS course.

Sd/
Deputy CoE, WBUHS

Records of Internal Assessment Examinations

Sl. No.	Eaxm No.	Date	Theory	Date	Practical including Viva	Signature of student	Signature of teacher
1	I Internal Assessment		----/100		----/50		
2	II Internal Assessment		----/100		----/50		
3	III Internal Assessment		----/200		----/100		
4	Calculation of Internal Assessment Marks		----/40		----/40		
5	*Betterment Exam (If any)		*----/200		*----/100	*	*
6	*Updated Internal Assessment Marks		*----/40		*----/40	*	*
7	Logbook subject wise records		----/10		----/10		
8	Final Internal Assessment Marks (to be submitted to University)		----/50		----/50		

.....
Signature of Head of the Institute

.....
Signature of Head of the Department

Note:

1. Day to day records & logbook (subject wise including required skill certifications) should be given importance in both theory & practical Internal Assessment separately as specified in competency based UG assessment Phase -1.

2. Certified copy of the Internal Assessment Marks record is to be sent by the respective HoDs to the O/o the Principal / Dean of the Institution for onward transmission to the O/o Controller of Examinations prior to University Examination.

3. A **clear record** of all components that add to the internal assessment marks needs to be maintained by the institution and retained by them for at least **5 years** after completion of the examination. Institutions may be asked to provide these details by the University as and when required.

4. In case of any discrepancy departmental record will be treated as final.

Record of Attendance

Theory	Practical	Signature of Teacher

Record of Early Clinical Exposure Activities

Sl.No.	Early Clinical Exposure Topic	Setting	Correlation	Date	Signature of Teacher
		Classroom/ Hospital/ Community	Basic Science/ Clinical Skills		
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Reflection on AETCOM Module

Topic: **Date:**

Signature of Teacher-in-charge

Self Directed Learning, Seminars, Tutorials, Projects, Quizzes

Sl. No.	Self Directed Learning, Seminars, Tutorials, Projects, Quizzes	Date	Signature of Teacher

THE WEST BENGAL UNIVERSITY OF HEALTH SCIENCES

WBUHS

ANATOMY LOGBOOK

For

1ST PROFESSIONAL MBBS STUDENTS

AS PER

COMPETENCY BASED CURRICULUM

INSTRUCTIONS

1) This logbook is prepared as per the guidelines of MCI for implementation of Competency based curriculum for 1st Professional MBBS students in the subject of Anatomy/Physiology/Biochemistry.
2) Students are instructed to keep their logbook entries up to date.
3) The logbook assessment will be based on multiple factors like
    - Overall presentation
    - Active participation in the sessions
    - Quality of write up of reflections
    - Timely completions
    - Attendance

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Sl.No.	Description	Page No's	Status	Signature of Teacher
			Complete/ Incomplete	
1	Competency			
2	Self-Directed Learning Seminars, Projects, Quizzes			
3	Early Clinical Exposure			
4	AETCOM Module * 1.2 and 1.3			
5	Attendance Records			
6	Records of Internal Assessment			

***AETCOM – Competencies for IMG,2018, Medical Council of India.**

Name of the College

_____

_____

Admission Year :_____

CERTIFICATE

This is to certify that,Mr/Ms._____

Roll No. _____Has satisfactorily attended/completed all assignments mentioned in this logbook as per guidelines prescribed by Medical Council of India, for Phase I MBBS Competency Based Curriculum in the subject of Anatomy.

Date : ____/____/_____

Place : _____

Professor and Head

Teacher –in – Charge

Department of Anatomy

Competency Assessment

Sl.No.	Name of Competency	Date cleared	Signature
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Sl.No.	Date	Topic Learnt	Mode of bearing (Project/Quiz/Seminar)	Signature
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Record of Early Clinical Exposure Activities

Sl.No.	Early Clinical Exposure Topic	Setting	Correlation	Date	Signature of Teacher
		Classroom/ Hospital/ Community	Basic Science/ Clinical Skills		
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Record of Attendance

Theory	Practical	Signature of Teacher

Module 1.4 : The Foundations of Communication – 1

Reflection on AETCOM Module

Topic : **Date :**

Signature of Teacher-in-charge

Reflection on AETCOM Module

Topic : **Date :**

Signature of Teacher-in-charge

Reflection on AETCOM Module

Topic : **Date :**

Signature of Teacher-in-charge

Reflection on AETCOM Module

Topic : **Date :**

Signature of Teacher-in-charge

Section 4A : Attendance Record of the Student

Sl.No.	Term	Theory (%)	Practical (%)	Signature of student	Signature of Teacher
A	I Term				
B	II Term				
C	III Term				
D	Overall attendance				

Note : Above information is for the benefit of students and parents. In case of any discrepancy departmental record will be treated as final.

Section 4B : Details of attending extra classes [For poor attendance (if any)]

Sl.No.	Date	Period	Total hours	Signature of Student	Signature of Teacher
Total hours					

Note : Above information is for the benefit of students and parents. In case of any discrepancy departmental record will be treated as final.

THE WEST BENGAL UNIVERSITY OF HEALTH SCIENCES

WBUHS

BIOCHEMISTRYLOGBOOK

For

1ST PROFESSIONAL MBBS STUDENTS

AS PER

COMPETENCY BASED CURRICULUM

INSTRUCTIONS

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    - Quality of write up of reflections
    - Timely completions
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4	AETCOM Module * 1.2 and 1.3			
5	Attendance Records			
6	Records of Internal Assessment			

***AETCOM – Competencies for IMG,2018, Medical Council of India.**

Name of the College

_____

_____

Admission Year :_____

CERTIFICATE

This is to certify that,Mr/Ms._____

Roll No. _____Has satisfactorily attended/completed all assignments mentioned in this logbook as per guidelines prescribed by Medical Council of India, for Phase I MBBS Competency Based Curriculum in the subject of Biochemistry.

Date : ____/____/_____

Place : _____

Professor and Head

Teacher –in – Charge

Department of Biochemistry

Competency Assessment

Sl.No.	Name of Competency	Date cleared	Signature
1			
2			
3			
4			
5			
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10			

Sl.No.	Date	Topic Learnt	Mode of bearing (Project/Quiz/Seminar)	Signature
1				
2				
3				
4				
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8				
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10				

Record of Early Clinical Exposure Activities

Sl.No.	Early Clinical Exposure Topic	Setting	Correlation	Date	Signature of Teacher
		Classroom/ Hospital/ Community	Basic Science/ Clinical Skills		
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Record of Attendance

Theory	Practical	Signature of Teacher

Module 1.4 : The Foundations of Communication – 1

Reflection on AETCOM Module

Topic : **Date :**

Signature of Teacher-in-charge

Reflection on AETCOM Module

Topic : **Date :**

Signature of Teacher-in-charge

Reflection on AETCOM Module

Topic : **Date :**

Signature of Teacher-in-charge

Reflection on AETCOM Module

Topic : **Date :**

Signature of Teacher-in-charge

Section 4A : Attendance Record of the Student

Sl.No.	Term	Theory (%)	Practical (%)	Signature of student	Signature of Teacher
A	I Term				
B	II Term				
C	III Term				
D	Overall attendance				

Note : Above information is for the benefit of students and parents. In case of any discrepancy departmental record will be treated as final.

Section 4B : Details of attending extra classes [For poor attendance (if any)]

Sl.No.	Date	Period	Total hours	Signature of Student	Signature of Teacher
Total hours					

Note : Above information is for the benefit of students and parents. In case of any discrepancy departmental record will be treated as final.

THE WEST BENGAL UNIVERSITY OF HEALTH SCIENCES

WBUHS

BIOCHEMISTRY LOGBOOK

For

1ST PROFESSIONAL MBBS STUDENTS

AS PER

COMPETENCY BASED CURRICULUM

THE WEST BENGAL UNIVERSITY OF HEALTH SCIENCES

WBUHS

ANATOMY LOGBOOK

For

1ST PROFESSIONAL MBBS STUDENTS

AS PER

COMPETENCY BASED CURRICULUM

THE WEST BENGAL UNIVERSITY OF HEALTH SCIENCES

WBUHS

PHYSIOLOGY LOGBOOK

For

1ST PROFESSIONAL MBBS STUDENTS

AS PER

COMPETENCY BASED CURRICULUM

INSTRUCTIONS

1) This logbook is prepared as per the guidelines of MCI for implementation of Competency based curriculum for 1st Professional MBBS students in the subject of Anatomy/Physiology/Biochemistry.
2) Students are instructed to keep their logbook entries up to date.
3) The logbook assessment will be based on multiple factors like
    - Overall presentation
    - Active participation in the sessions
    - Quality of write up of reflections
    - Timely completions
    - Attendance

INDEX

Sl.No.	Description	Page No's	Status	Signature of Teacher
			Complete/ Incomplete	
1	Competency			
2	Self-Directed Learning Seminars, Projects, Quizzes			
3	Early Clinical Exposure			
4	AETCOM Module * 1.2 and 1.3			
5	Attendance Records			
6	Records of Internal Assessment			

***AETCOM – Competencies for IMG,2018, Medical Council of India.**

Name of the College

Admission Year : _____

CERTIFICATE

This is to certify that,Mr/Ms._____

Roll No._____Has satisfactorily attended/completed all assignments mentioned in this logbook as per guidelines prescribed by Medical Council of India, for Phase I MBBS Competency Based Curriculum in the subject of Physiology.

Date : ____/____/_____

Place : _____

Professor and Head

Teacher –in – Charge Department of Physiology

Competency Assessment (Knowledge Domain)

Sl.No.	Name of Competency	Date cleared	Signature
1	**General Physiology** PY1.1 Describe the structure and functions of a mammalian cell. PY1.2 Describe and discuss the principles of homeostasis. PY1.3 Describe intercellular communication. PY1.4 Describe apoptosis – programmed cell death. PY1.5 Describe and discuss transport mechanisms across cell membranes. PY1.6 Describe the fluid compartments of the body, its ionic composition & measurements. PY1.7 Describe the concept of pH & Buffer systems in the body. PY1.8 Describe and discuss the molecular basis of resting membrane potential and action potential in excitable tissue. PY1.9 Demonstrate the ability to describe and discuss the methods used to demonstrate the functions of the cells and its products, its communications and their applications in Clinical care and research		
2	**Hematology** PY2.1 Describe the composition and functions of blood components. PY2.2 Discuss the origin, forms, variations and functions of plasma proteins. PY2.3 Describe and discuss the synthesis and functions of Hemoglobin and explain its breakdown. Describe variants of hemoglobin. PY2.4 Describe RBC formation (erythropoiesis & its regulation) and its functions.		

	PY2.5 Describe different types of anemias & Jaundice. PY2.6 Describe WBC formation (granulopoiesis) and its regulation. PY2.7 Describe the formation of platelets, functions and variations. PY2.8 Describe the physiological basis of hemostasis and, anticoagulants. Describe bleeding & clotting disorders (Hemophilia, purpura). PY2.9 Describe different blood groups and discuss the clinical importance of blood grouping, blood banking and transfusion. PY2.10 Define and classify different types of immunity. Describe the development of immunity and its regulation. PY2.12 Describe test for ESR, Osmotic fragility, Hematocrit. Note the findings and interpret the test results etc. PY2.13 Describe steps for reticulocyte and platelet count.		
3	**Nerve-muscle Physiology** PY3.1 Describe the structure and functions of a neuron and neuroglia; Discuss Nerve Growth Factor & other growth factors/cytokines. PY3.2 Describe the types, functions & properties of nerve fibers. PY3.3 Describe the degeneration and regeneration in peripheral nerves. PY3.4 Describe the structure of neuro-muscular junction and transmission of impulses. PY3.5 Discuss the action of neuro-muscular blocking agents. PY3.6 Describe the pathophysiology of Myasthenia gravis. PY3.7 Describe the differenttypes of muscle fibers and their structure. PY3.8 Describe action potential and its properties in different muscle types (skeletal & smooth). PY3.9 Describe the molecular basis of muscle contraction in skeletal and in smooth muscles.		

	PY3.10 Describe the mode of muscle contraction (isometric and isotonic). PY3.11 Explain energy source and muscle metabolism. PY3.12 Explain the gradation of muscular activity. PY3.13 Describe muscular dystrophy: myopathies. PY3.17 Describe Strength-duration curve.		
4	**Nerve-muscle Physiology** PY4.1 Describe the structure and functions of digestive system. PY4.2 Describe the composition, mechanism of secretion, functions, and regulation of saliva, gastric, pancreatic, intestinal juices and bile secretion. PY4.3 Describe GIT movements, regulation and functions. Describe defecation reflex. Explain role of dietary fiber. PY4.4 Describe the physiology of digestion and absorption of nutrients. PY4.5 Describe the source of GIT hormones, their regulation and functions. PY4.6 Describe the Gut-Brain Axis. PY4.7 Describe & discuss the structure and functions of liver and gall bladder. PY4.8 Describe & discuss gastric function tests, pancreatic exocrine function tests & liver function tests. PY4.9 Discuss the physiology aspects of: peptic ulcer, gastro- esophageal reflux disease, vomiting, diarrhea, constipation, Adynamic ileus, Hirschsprung's disease.		
5	**Cardiovascular Physiology** PY5.1 Describe the functional anatomy of heart including chambers, sounds; and Pacemaker tissue and conducting system. PY5.2 Describe the properties of cardiac muscle including its morphology, electrical, mechanical and metabolic functions. PY5.3 Discuss the events occurring during the cardiac cycle.		

	PY5.4 Describe generation, conduction of cardiac impulse. PY5.5 Describe the physiology of electrocardiogram (E.C.G), its applications and the cardiac axis. PY5.6 Describe abnormal ECG, arrythmias, heart block and myocardial Infarction. PY5.7 Describe and discuss hemodynamics of circulatory system. PY5.8 Describe and discuss local and systemic cardiovascular regulatory mechanisms. PY5.9 Describe the factors affecting heart rate, regulation of cardiac output & blood pressure. PY5.10 Describe & discuss regional circulation including microcirculation, lymphatic circulation, coronary, cerebral, capillary, skin, fetal, pulmonary and splanchnic circulation. PY5.11 Describe the pathophysiology of shock, syncope and heart failure.		
6	**Respiratory Physiology** PY6.1 Describe the functional anatomy of respiratory tract. PY6.2 Describe the mechanics of normal respiration, pressure changes during ventilation, lung volume and capacities, alveolar surface tension, compliance, airway resistance, ventilation, V/P ratio, diffusion capacity of lungs. PY6.3 Describe and discuss the transport of respiratory gases: Oxygen and Carbon dioxide. PY6.4 Describe and discuss the physiology of high altitude and deep sea diving. PY6.5 Describe and discuss the principles of artificial respiration, oxygen therapy, acclimatization and decompression sickness. PY6.6 Describe and discuss the pathophysiology of dyspnea, hypoxia, cyanosis asphyxia; drowning, periodic breathing. PY6.7 Describe and discuss lung function tests & their clinical significance.		

7	**Renal Physiology** PY7.1 Describe structure and function of kidney. PY7.2 Describe the structure and functions of juxta glomerular apparatus and role of renin-angiotensin system. PY7.3 Describe the mechanism of urine formation involving processes of K filtration, tubular reabsorption & secretion; concentration and diluting mechanism. PY7.4 Describe & discuss the significance & implication of Renal clearance. PY7.5 Describe the renal regulation of fluid and electrolytes & acid-base balance. PY7.6 Describe the innervations of urinary bladder, physiology of micturition and its abnormalities. PY7.7 Describe artificial kidney, dialysis and renal transplantation. PY7.8 Describe & discuss Renal Function Tests. PY7.9 Describe cystometry and discuss the normal cystometrogram.		
8	**Endocrine Physiology** PY8.1 Describe the physiology of bone and calcium metabolism. PY8.2 Describe the synthesis, secretion, transport, physiological actions, regulation and effect of altered (hypo and hyper) secretion of pituitary gland, thyroid gland, parathyroid gland, adrenal gland, pancreas and hypothalamus. PY8.3 Describe the physiology of Thymus & Pineal Gland. PY8.4 Describe function tests: Thyroid gland; Adrenal cortex, Adrenal medulla and pancreas. PY8.5 Describe the metabolic and endocrine consequences of obesity & metabolic syndrome, Stress response. Outline the psychiatry component pertaining to metabolic syndrome. PY8.6 Describe & differentiate the mechanism of action of steroid, protein and amine hormones.		

9	**Reproductive Physiology** PY9.1 Describe and discuss sex determination; sex differentiation and their abnormities and outline psychiatry and practical implication of sex determination. PY9.2 Describe and discuss puberty: onset, progression, stages; early and delayed puberty and outline adolescent clinical and psychological association. PY9.3 Describe male reproductive system: functions of testis and control of spermatogenesis & factors modifying it and outline its association with psychiatric illness. PY9.4 Describe female reproductivesystem: (a) functions of ovary and its control; (b) menstrual cycle - hormonal, uterine and ovarian changes. PY9.5 Describe and discuss the physiological effects of sex hormones. PY9.6 Enumerate the contraceptive methods for male and female. Discuss their advantages & disadvantages. PY9.7 Describe and discuss the effects of removal of gonads on physiological functions. PY9.8 Describe and discuss the physiology of pregnancy, parturition & lactation and outline the psychology and psychiatry-disorders associated with it. PY9.9 Interpret a normal semen analysis report including (a) sperm count, (b) sperm morphology and (c) sperm motility, as per WHO guidelines and discuss the results. PY9.10 Discuss the physiological basis of various pregnancy tests. PY9.11 Discuss the hormonal changes and their effects during perimenopause and menopause. PY9.12 Discuss the common causes of infertility in a couple and role of IVF in managing a case of infertility.		
10	**Neuro Physiology** PY10.1 Describe and discuss the organization of nervous system. PY10.2 Describe and discuss the functions and properties of synapse, reflex, receptors.		

	PY10.3 Describe and discuss somatic sensations & sensory tracts. PY10.4 Describe and discuss motor tracts, mechanism of maintenance of tone, control of body movements, posture and equilibrium & vestibular apparatus. PY10.5 Describe and discuss structure and functions of reticular activating system, autonomic nervous system (ANS). PY10.6 Describe and discuss Spinal cord, its functions, lesion & sensory disturbances. PY10.7 Describe and discuss functions of cerebral cortex, basal ganglia, thalamus, hypothalamus, cerebellum and limbic system and their abnormalities. PY10.8 Describe and discuss behavioral and EEG characteristics during sleep and mechanism responsible for its production. PY10.9 Describe and discuss the physiological basis of memory, learning and speech. PY10.10 Describe and discuss chemical transmission in the nervous system. (Outline the psychiatry element). PY10.13 Describe and discuss perception of smell and taste sensation. PY10.14 Describe and discuss pathophysiology of altered smell and taste sensation. PY10.15 Describe and discuss functional anatomy of ear and auditory pathways & physiology of hearing. PY10.16 Describe and discuss pathophysiology of deafness. Describe hearing tests. PY10.17 Describe and discuss functional anatomy of eye, physiology of image formation, physiology of vision including color vision, refractive errors, color blindness, physiology of pupil and light reflex. PY10.18 Describe and discuss the physiological basis of lesion in visual pathway. PY10.19 Describe and discuss auditory & visual evoke potentials.		

Competency Assessment (Skill Domain)

Sl.No.	Name of Competency	Date cleared	Signature
1	PY2.11 Estimate Hb, RBC, TLC, RBC indices, DLC, Blood groups, BT/CT.		
2	PY3.14 Perform Ergography. PY3.15 Demonstrate effect of mild, moderate and severe exercise and record changes in cardiorespiratory parameters. PY3.16 Demonstrate Harvard Step test and describe the impact on induced physiologic parameters in a simulated environment. PY3.18 Observe with Computer assisted learning (i) amphibian nerve - muscle experiments (ii) amphibian cardiac experiments.		
3	PY4.10 Demonstrate the correct clinical examination of the abdomen in a normal volunteer or simulated environment.		
4	PY5.12 Record blood pressure & pulse at rest and in different grades of S exercise and postures in a volunteer or simulated environment. PY5.13 Record and interpret normal ECG in a volunteer or simulated S environment. PY5.14 Observe cardiovascular autonomic function tests in a volunteer or S simulated environment. PY5.15 Demonstrate the correct clinical examination of the cardiovascular S system in a normal volunteer or simulated environment. PY5.16 Record Arterial pulse tracing using finger plethysmography in a volunteer or simulated environment.		
5	PY6.8 Demonstrate the correct technique to perform & interpret Spirometry. PY6.9 Demonstrate the correct clinical examination of the respiratory system in a normal volunteer or simulated environment. PY6.10 Demonstrate the correct technique to perform measurement of peak expiratory flow rate in a normal volunteer or simulated environment.		

6	PY10.11 Demonstrate the correct clinical examination of the nervous system: Higher functions, sensory system, motor system, reflexes, cranial nerves in a normal volunteer or simulated environment. PY10.12 Identify normal EEG forms. PY10.20 Demonstrate (i) Testing of visual acuity, color and field of vision and (ii) hearing (iii) Testing for smell and (iv) taste sensation in volunteer/ simulated environment.		
7	PY11.13 Obtain history and perform general examination in the volunteer / simulated environment. PY11.14 Demonstrate Basic Life Support in a simulated environment.		

Sl.No.	Date	Topic Learnt	Mode of bearing (SDL/Project/Quiz/Seminar)	Signature
1				
2				
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Record of Early Clinical Exposure Activities

Sl.No.	Early Clinical Exposure Topic	Setting Classroom/ Hospital/ Community	Correlation Basic Science/ Clinical Skills	Date	Signature of Teacher
1					
2					
3					
4					
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8					
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Record of Integrated Physiology

Sl.No.	Date	Topic Learnt	Mode of Learning (SGD/Lecture)	Signature
1				
2				
3				
4				
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6				
7				
8				
9				
10				

Record of Attendance

Theory	Practical	Signature of Teacher

Module 1.4 : The Foundations of Communication – 1

Reflection on AETCOM Module

Topic : **Date :**

Signature of Teacher-in-charge

Topic : **Date :**

Signature of Teacher-in-charge

Topic : **Date :**

Signature of Teacher-in-charge

Topic : **Date :**

Signature of Teacher-in-charge

Section 4A : Attendance Record of the Student

Sl.No.	Term	Theory (%)	Practical (%)	Signature of student	Signature of Teacher
A	I Term				
B	II Term				
C	III Term				
D	Overall attendance				

Note : Above information is for the benefit of students and parents. In case of any discrepancy departmental record will be treated as final.

Section 4B : Details of attending extra classes [For poor attendance (if any)]

Sl.No.	Date	Period	Total hours	Signature of Student	Signature of Teacher
Total hours					

Note : Above information is for the benefit of students and parents. In case of any discrepancy departmental record will be treated as final.