

MGM MEDICAL COLLEGE, KAMOTHE, NAVI MUMBAI
ALIGNMENT & INTEGRATION COMMITTEE (AIC)

MGM/ Micro/2021/ CBME AIC/ O-32

Date: 2.8.2021

This is to inform that the MBBS CBME Curriculum has been implemented at MGMIHS from 2019-20 batch. Following are the members of the Alignment and Integration (AITO) committee (Under CBME Curriculum Committee).


Name of faculty	Departments
Dr Anahita V Bhesania Hodiwala	Convenor AIC
Dr Megha Bangar	Member and Coordinator AIC 1 st year – Anatomy, Physiology & Biochemistry
Dr. Pradeep Jadhav	Member and Coordinator AIC 2 nd year – Microbiology, Pathology & Pharmacology
Dr. Madhavi Mankar	Member and Coordinator AIC 3 rd year Part 1 – Comm. Med., FMT, ENT & Ophthal
Dr. Darpan Kaur	Member and Coordinator AIC 3 rd year Part 2 – Psychiatry, Radio, Anaes, Ortho, Dermat & Resp. Med.
Dr. Revathi N.	Member and Coordinator AIC 3 rd year Part 2 – Gen. Med, Gen. Surg, Paed. & OBGY
Dr. Charushila Shinde	Member Anatomy
Dr. Priyanka Rane	Member Physiology
Dr Priyanka Jadhav	Member Pathology
Dr. Ajay Shendarkar	Member FMT
Dr. Varshav Gore	Member Ophthalmology
Dr Meghana Phiske	Member Dermatology
Dr. Shreeja	Member Resp. Med.
Dr. Vaishali Sangole	Member ENT
Dr Sonali Mhaske Kadam	Member Radiology
Dr. Archana Har	Member Anesthesiology
Dr. Babita Ghodke	Member Medicine
Dr. Kundan Gedam	Member Surgery
Dr. Sunil Sharma	Member OBGY
Dr. Ashok Ghodke	Member Ortho

The AITO Committee has received since 2019, Alignment and Integration topics from all the MBBS departments (as per NMC norms). These topics were discussed and approved by all the members of the AITO committee. The approved topics have been also conveyed to the respective departments for implementation. Regular follow-up regarding implementation has been discussed.

We are attaching herewith the department wise approved Alignment and Integration topic list for all 3 phases of MBBS for your information.


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Convenor - AITO Committee

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DEPARTMENT OF ANATOMY
MGM MEDICAL COLLEGE, NAVI MUMBAI

I MBBS CBME Anatomy - Alignment Integration Topics

Sr. no.	Vert. Integration	Competency	Sub topics	Integrated Department
1	AN9.2 Mammary Gland (L)	AN9.2 Breast: Describe the location, extent, deep relations, structure, age changes, blood supply, lymphatic drainage, microanatomy and applied anatomy of breast	Clinical Anatomy - CA breast, mastitis	Gen. Surgery
2	AN10.1,4,7 Axilla with axillary lymph nodes (L)	AN10.4 Describe the anatomical groups of axillary lymph nodes and specify their areas of drainage	Lymph nodes palpation	Gen. Surgery
3	AN10.10,12 Shoulder joint (L)	AN10.12 Describe and demonstrate shoulder joint for- type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, muscles involved, blood supply, nerve supply and applied anatomy	Clinical Anatomy of shoulder - eg. Dislocation, frozen shoulder etc	Orthopaedics
4	AN71.2 Histo Cartilage (L)	AN71.2 Identify cartilage under the microscope & describe various types and structure- function correlation of the same	pathological changes in cartilage	Pathology
5	AN77.4,5 AN78.1,2,3 Fertilization, Implantation (1st Wk) (L)	AN78.3 Describe the process of implantation & common abnormal sites of implantation	abnormal site of implantation	OB-GY
6	AN71.1 Bone - Histo(L)	AN71.1 Identify bone under the microscope; classify various types and describe the structure-function correlation of the same	pathological changes in bone	Pathology
7	AN12.9,10 Spaces of Hand (L)	AN12.10 Explain infection of fascial spaces of palm	infection of palm spaces and incision	Gen. Surgery
8	AN24.1 Pleura (L)	AN24.1 Mention the blood supply, lymphatic drainage and nerve supply of pleura, extent of pleura and describe the pleural recesses and their applied anatomy	pleural effusion, pneumothorax	Gen. Medicine
9	AN47.13,14 Diaphragm (L)	AN47.14 Describe the abnormal openings of thoracoabdominal diaphragm and diaphragmatic hernia	diaphragmatic hernia	Gen. Surgery

Sr. no.	Vert. Integration	Competency	Sub topics	Integrated Department
10	AN25.2 Development CVS - 2 (L)	AN25.4 Describe embryological basis of: 1) ASD, 2) ventricular septal defect,	Atrial Septal Defect ventricular septal defect	Paediatrics
11	AN22.3,4,5 Coronary circulation (L)	AN22.4 Describe anatomical basis of ischaemic heart disease	Coronary artery disease	Gen. Medicine
12	AN25.5,6 Development CVS - 3 (L)	AN25.4 Describe embryological basis of: Fallot's tetralogy	Fallot's tetralogy	Paediatrics
13	AN20.3,5 Venous drainage of lower limb (L)	AN20.5 Explain anatomical basis of varicose veins and deep vein thrombosis	Recognition of sites of Incompetent valves	Gen. Surgery
14	AN15.3,4 Femoral triangle (L)	AN15.3,4 Describe and demonstrate boundaries, floor, roof and contents of femoral triangle, Explain anatomical basis of Psoas abscess & Femoral hernia	compression & canulisation of femoral artery, puncture & canulisation of femoral vein, femoral hernia	Gen. Surgery
15	AN70.2 Histo - lymphoid system II (L)	AN70.2 Identify the lymphoid tissue under the microscope & describe microanatomy of lymph node, spleen, thymus, tonsil and correlate the structure with function	histological changes in common pathological diseases in lymphoid tissue	Pathology
16	AN14.1,2,3 Femur - II (D)	AN14.3 Describe the importance of ossification of lower end of femur & upper end of tibia	ossification & fracture of Femur	Forensic medicine
17	AN17.1,2,3 Hip joint (L)	AN17.3 Describe dislocation of hip joint and surgical hip replacement	dislocation of hip joint and surgical hip replacement	Orthopaedics
18	AN77.5,6 AN78.5, 79.5,6 Anatomical principles in contraception, abortion & teratogens (L)	AN77.5 Enumerate and describe the anatomical principles underlying contraception	anatomical principles of contraception	OB-GY
19	AN18.4, 5,6,7 Knee jt.(L)	AN18.6 Describe knee joint injuries with its applied anatomy	common knee joint injuries with its applied anatomy	Orthopaedics
20	AN19. 5,6 Arches of foot (L)	AN19.6 Explain the anatomical basis of Flat foot & Club foot		Orthopaedics
21	AN44.3,7 Rectus sheath & abdominal incisions (L)	AN44.7 Enumerate common Abdominal incisions	abdominal incision	Gen. Surgery
22	AN52.6 Devt. Gastro intestinal system - 1 (L)	AN 25.4 Describe embryological basis of: tracheo-oesophageal fistula	Different types of tracheo-oesophageal fistula	Paediatrics

	Vert. Integration	Competency	Sub topics	Integrated Department
23	AN44.4,5 Inguinal canal (L)	AN44.4 Describe & demonstrate extent, boundaries, contents of Inguinal canal including Hesselbach's triangle.	inguinal hernia	Gen. Surgery
24	AN47.1,2,3,4 Peritoneum II (L)	AN47.3,4 Explain anatomical basis of Ascites & Peritonitis, Explain anatomical basis of Subphrenic abscess	Peritoneal dialysis, Internal hernia, Clinical significance of hepatorenal pouch	Gen. Surgery
25	AN47.8,10,11 Portal Vein & circulation (L)	AN47.11 Explain the anatomic basis of hematemesis & caput medusae in portal hypertension	Portal hypertension	Gen. Surgery
26	AN47.5,6 Extra Hepatic biliary app.(L)	AN47.6 Explain the anatomical basis of Referred pain in cholecystitis, Obstructive jaundice	Referred pain of gallbladder, cholecystitis, Obstruction of CBD	Gen. Surgery
27	AN54.1,2 Radio + Living (D) - Abdo, pelvis	AN54.2, AN25.8 Describe & identify the special radiographs of abdominopelvic region (contrast X ray Barium Study, Cholecystography, IVP & HSG)	Barium Study, Cholecystography, IVP & HSG	Radiology
28	AN75.5, AN 81.1,2,3 Genetics - PND & Genetic Counseling (L)	AN81.2 Describe indications, process and disadvantages of amniocentesis, AN81.3 Describe indications, process and disadvantages of chorion villus biopsy	Indications, process, advantages and disadvantages of chorion villus biopsy, amniocentesis	OB-GY
29	AN 48.2,5,8 Anal canal (L)	AN48.5 Explain the anatomical basis of Int. & external haemorrhoids, Anal fistula	haemorrhoids, Anal fistula	Gen. Surgery
30	AN 49.4,5 Ischiorectal fossa (L)	AN49.4 Describe & demonstrate boundaries, content & applied anatomy of Ischiorectal fossa	Ischiorectal abscess anorectal fistula	Gen. Surgery
31	AN 49.1,2,3,5 Perineal pouches (L)	AN49.5 Explain the anatomical basis of Perineal tear, Episiotomy, Perianal abscess	Perineal tear, Episiotomy, Perianal abscess	OB-GY
32	AN27.1,2 Scalp(L)	AN27.1 Describe the layers of scalp, its blood supply, its nerve supply and surgical importance	surgical importance of layers, blood supply, lymphatic drainage & nerve supply of scalp	Gen. Surgery
33	AN 42.1, 50.1,2,4 Vertebral column & vertebral canal with its contents (L)	AN50.4 Explain the anatomical basis of Scoliosis, Lordosis, Prolapsed disc, Spondylolisthesis & Spina bifida	anatomical basis of Scoliosis, Lordosis, Prolapsed disc, Spondylolisthesis & Spina bifida	Orthopaedics
34	AN 70.1 Salivary glands - Histo (L)	Identify exocrine gland under the microscope & distinguish between serous, mucous and mixed acini	Pathological changes in salivary glands	Pathology

Sr. no.	Vert. Integration	Competency	Sub topics	Integrated Department
35	AN 31.2,5 3 rd cranial nerve (L)	AN31.5 Explain the anatomical basis of oculomotor, nerve palsies along with strabismus	nerve palsies along with strabismus	Ophthalmology
36	AN 31.2,5 4,6th cranial nerves (L)	AN31.5 Explain the anatomical basis of trochlear and abducent nerve palsies along with strabismus	Effect of Nerves palsies	Ophthalmology
37	41.1,2,3Parts and layers of eyeball (L)	AN41.2 Describe the anatomical aspects of cataract, glaucoma & central retinal artery occlusion	anatomical aspects of cataract, glaucoma & central retinal artery occlusion	Ophthalmology
38	AN36.1,2,3,4,5 Pharynx (L)	AN36.2,3,4 Describe the components and functions of Waldeyer's lymphatic ring, Describe the boundaries and clinical significance of pyriform fossa,	clinical significance of pyriform foss	ENT
39	AN 36.1,4 Palatine tonsil (L)	AN36.4 Describe the anatomical basis of tonsillitis, tonsillectomy and peri-tonsillar abscess	Tonsillitis, tonsillectomy and peri-tonsillar abscess	ENT
40	AN 37.2,3 Para nasal air sinus (L)	AN37.3 Describe anatomical basis of sinusitis & maxillary sinus tumours	Sinusitis & maxillary sinus tumours	ENT
41	AN38.1,2,3 Larynx-II (L)	AS4.2 Describe the Anatomy of the airway and its implications for general anaesthesia	Anatomy of the airway and its implications for general anaesthesia	Anaesthesiology
42	AN40.2,4,5 Middle ear cavity (L)	AN40.4 Explain anatomical basis of otitis externa and otitis media, AN40.5 Explain anatomical basis of myringotomy	Otitis media	ENT
43	AN28.5, AN35.5 cervical lymph nodes and lymphatic drainage of HFN (L)	AN35.5 Describe and demonstrate extent, drainage & applied anatomy of cervical lymph nodes	applied anatomy of cervical lymph node	Gen. Surgery
44	AN 57.3,4,5 Spinal Cord -II (L)	AN57.4 Enumerate ascending & descending tracts at mid thoracic level of spinal cord	Anatomical basis of syringomyelia	Gen. Medicine
45	AN 62.2 Cerebrum -II (L)	AN62.2 Describe & demonstrate surfaces, sulci, gyri, poles, & functional areas of cerebral hemisphere	Applied aspect of functional areas- hemiplegia, aphasia etc	Gen. Medicine
46	AN 62.6 Blood supply of brain (L)	AN62.6 Describe & identify formation, branches & major areas of distribution of circle of Willis	Effect of vascular occlusion of major arteries of circle of willis	Gen. Medicine

Sl. No.	Vert. Integration	Competency	Sub topics	Integrated Department
47	AN64.2 Devt. CNS 3 - (L)	AN64.3 Describe various types of open neural tube defects with its embryological basis	Types of open neural tube defects with its embryological basis	Paediatrics
48	AN56.2, AN 63.1,2 4TH Ventricle & CSF circulation(L)	AN50.3 Describe lumbar puncture (site, direction of the needle, structures pierced during the lumbar puncture), AN56.2 Describe circulation of CSF with its applied anatomy	Lumbar puncture	Gen. Medicine

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DEPARTMENT OF PHYSIOLOGY
MGM MEDICAL COLLEGE, NAVI MUMBAI

I MBBS CBME Physiology - Alignment Integration Topics

Sr. No.	Integration Topics	Competency	Sub Topic to integrate	Department
1	PY 1.4 - Cell	PY1.4 - Apoptosis - Programmed cell death	Cell death	Pathology
2	PY 2.11 - Blood count calculations	Hb, RBC Indices, WBC Blood Group BT & CT	Hb, RBC Indices, WBC Blood Group BT & CT	Pathology
3	PY 2.5 - Anaemias & Jaundice	PY2.5 - Anaemias & Jaundice	Anaemias & Jaundice	Pathology
4	PY 2.12 - ESR & PCV	PY 2.12 ESR & PCV	ESR & PCV, Osmotic fragility	Pathology
5	PY 3.3 - Degeneration & Regeneration in Nerve Fiber	PY 3.3 Degeneration & Regeneration in Nerve Fiber	Peripheral nerve injury	Gen. Medicine
6	PY 3.12 - Gradation of Muscular Activity	PY 3.12 - Gradation of Muscular Activity	Muscular Activity	Gen. Medicine
7	PY 2.9 - Blood Groups & Blood Transfusion	PY 2.9 - Blood Groups & Blood Transfusion	Blood Groups & Blood Transfusion	Pathology
8	PY 2.8 - Hemostasis & Anticoagulants	PY 2.8 - Hemostasis & Anticoagulants	Hemostasis & Anticoagulants - BT,CT	Pathology
9	PY 5.5 - ECG	PY 5.5 - ECG	ECG & Its uses	Gen. Medicine
10	PY 5.13 - Interpret Normal ECG	PY 5.13 - Interpret Normal ECG	Interpret Normal ECG	Gen. Medicine
11	PY 5.12 recording of BP and pulse at rest and different stages of exercises and posture in a volunteer and simulsted environment-	PY 5.12 record BP and pulse at rest and different stages of exercises and posture in a volunteer and simulsted environment-	PY 5.12 record BP and pulse at rest and different stages of exercises and posture in a volunteer and simulsted environment-	Gen. Medicine
12	PY 5.10 - Regional Criculation & Microcirculation	PY 5.10 - Regional Criculation & Microcirculation	Regional Criculation & Microcirculation	Gen. Medicine
13	PY 3.4 NM Junction Transmission	PY 3.4 NM Junction Transmission	NM Junction Transmission	Anaesthesia
14	PY 3.5 Action of NM Blocking drugs	PY 3.5 Action of NM Blocking drugs	Action of NM Blocking drugs	Anaesthesia
15	PY 6.8 Spirometry	PY 6.8 Spirometry	Spirometry	Resp Medicine

Sr. No.	Integration Topics	Competency	Sub Topic to integrate	Department
16	PY 4.9-Physiology aspects of peptic ulcer,gastroesophgeal reflux disease, vomiting , diarrhoea,constipation, Adynamic ileus,Hirschsprung's disease	PY 4.9-Physiology aspects of peptic ulcer,gastroesophgeal reflux disease, vomiting , diarrhoea,constipation, Adynamic ileus,Hirschsprung's disease	Physiology aspects of peptic ulcer,gastroesophgeal reflux disease, vomiting , diarrhoea,constipation, Adynamic ileus,Hirschsprung's disease	Medicine
17	PY 11.6 Physiology of Infancy	PY 11.6 Physiology of Infancy	Physiology of Infancy	Paediatrics
18	PY 9.10 Physiological basis of pregnancy tests	PY 9.10 Physiological basis of pregnancy tests	Physiological basis of pregnancy tests	Ob& Gyn
19	PY 9.12 Common causes of infertility	PY 9.12 Common causes of infertility	Common causes of infertility	Ob& Gyn
20	PY 9.6 Contraceptive Methods	PY 9.6 Contraceptive Methods	Contraceptive Methods	Ob& Gyn
21	PY 9.11 Hormonal changes during perimenopause and menopause	PY 9.11 Hormonal changes during perimenopause and menopause	Hormonal changes during perimenopause and menopause	Ob& Gyn
22	PY10.13 Smell and taste sensation perception	Py10.13 Smell and taste sensation perception	ENT	ENT
23	PY 10.14 Pathophysiology of altered smell and taste sensation	PY 10.14 Pathophysiology of altered smell and taste sensation	Pathophysiology of altered smell and taste sensation	ENT
24	PY 10.15 Functional anatomy of hearing	PY 10.15 Functional anatomy of hearing	Functional anatomy of hearing	ENT
25	PY 10.16 Pathophysiology of defness	PY 10.16 Pathophysiology of defness	Pathophysiology of defness	ENT
26	PY 10.7 Cerebral cortex, Basal ganglia	PY 10.7 Cerebral cortex, Basal ganglia	Cerebral cortex, Basal ganglia	Psychiatry
27	PY 11.10 - Interpret anthropometric assessment of infants	PY 11.10 - Interpret anthropometric assessment of infants	Interpret anthropometric assessment of infants	Paediatrics
28	PY 11.9 - Interpret Growth charts	PY 11.9 - Interpret Growth charts	Interpret Growth charts	Paediatrics
29	PY 10.8 - Behavioural & EEG	PY 10.8 - Behavioural & EEG	Behavioural & EEG	Psychiatry
30	PY 10.12- Identify normal EEG	PY 10.12- Identify normal EEG	Identify normal EEG	Psychiatry

No.	Integration Topics	Competency	Sub Topic to integrate	Department
31	PY 10.9- physiological basis of memory& learning of speech	PY 10.9- physiological basis of memory& learning of speech	Physiological basis of memory& learning of speech	Psychiatry

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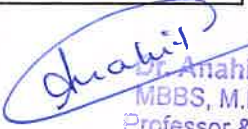
**DEPARTMENT OF BIOCHEMISTRY
MGM MEDICAL COLLEGE, NAVI MUMBAI**

I MBBS CBME Biochemistry - Alignment Integration Topics

Sr.No.	Competency	Dept for Integration	Exact sub topic on which 2-3 ppts slides are required
1	BI 6.5 Describe the biochemical role of vitamins in the body and explain the manifestations of their deficiency	General Medicine	Clinical manifestations & management vitamin deficiency disorders (Scurvy, megaloblastic anaemia, pernicious anemia, night blindness, rickets etc.)
2	BI 2.7 Interpret laboratory results of enzyme activities & describe the clinical utility of various enzymes as markers of pathological conditions.	Pathology, General Medicine	1)General Medicine- Clinical utility of various enzymes as markers for various disorders. 2)Pathology - Clinical corelation of various hematological indices with enzymatic assays
3	BI 10.5 Describe antigens and concepts involved in vaccine development.	Pediatrics, Microbiology	1)Microbiology- Development of vaccines, dosage & schedule 2) Pediatric- Pediatric vaccination & schedule
4	BI 3.10 Interpret the results of blood glucose levels and other laboratory investigations related to disorders of carbohydrate metabolism.	General Medicine	Interpretation & clinical corelation of laboratory investigations in diagnosis (Diabetes Mellitus , Lactose intolerance, G6PD, Galactosemia, Glycogen storage diseases)
5	BI 4.7 Interpret laboratory results of analytes associated with metabolism of lipids.	General Medicine	Interpretation & clinical corelation of laboratory investigations in diagnosis & management of (Dislipidemia, coronary artery disease, fatty liver, metabolic syndrome, Atherosclerosis etc)
6	BI 6.11 Describe the functions of haem in the body and describe the processes involved in its metabolism and describe porphyrin metabolism.	Pathology	Pathogenesis in porpyrine metabolism,
7	BI 5.4 Describe common disorders associated with protein metabolism.	Pediatrics	Interpretation & clinical corelation of laboratory investigations in diagnosis & management of Aminoacidurias
8	BI 6.4 Discuss the laboratory results of analytes associated with gout & Lesch Nyhan syndrome.	General Medicine	Interpretation & clinical corelation of laboratory investigations in diagnosis & management of Gout & Lesch Nyhan syndrome.
9	BI 7.3 Describe gene mutations and basic mechanism of regulation of gene expression.	Pediatrics	Clinical manifestation in mutation disorders

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Sr.No.	Competency	Dept for Integration	Exact sub topic on which 2-3 ppts slides are required
10	BI 6.10 Enumerate and describe the disorders associated with mineral metabolism.	General Medicine	Clinical manifestations & management in mineral deficiency disorders (Iron deficiency anemia, Wilson's disease, deficiency of zinc etc)
11	BI 6.15 Describe the abnormalities of kidney, liver, thyroid and adrenal glands.	General Medicine, H.Intg- Physiology, Anatomy	1) LFT- Interpretation of laboratory investigations in diagnosis & management of liver disorders (alcoholic liver disorders, jaundice, hepatitis, liver cirrosis) 2)RFT- Interpretation of laboratory investigations in diagnosis & management of renal disorders (nephrotic syndrome, acute & chronic kidney diseases), 3)Adrenal- Interpretation of laboratory investigations in diagnosis & management of adrenal glands disorders , 4)TFT- Interpretation of laboratory investigations in diagnosis & management of thyroid disorders
12	BI 10.1 Describe the cancer initiation, promotion oncogenes & oncogene activation. Also focus on p53 & apoptosis	Pathology	Pathology of apoptosis & oncogenesis in cancer development
13	BI 9.2 Discuss the involvement of ECM components in health and disease.	General Medicine	Pathogenesis of ECM in commonly observed disorders
14	BI 10.2 Describe various biochemical tumor markers and the biochemical basis of cancer therapy.	Obstetrics & Gynaecology, General Surgery, Pathology	1) OBGY- Clinical utility of tumor markers in diagnosis & management of various cancers 2)General Surgery- Surgical management of various cancers 3)Pathology- Diagnostics tools commonly used in pathology for detection of different cancers.
15	BI 8.5 Summarize the nutritional importance of commonly used items of food including fruits and vegetables.(macro-molecules & its importance)	Community Medicine	Nutritional importance food items (vegetables & fruits for healthy life style)
16	BI 8.2 Describe the types and causes of protein energy malnutrition and its effects.	Pediatrics	Clinical manifestation & management of PEM
17	BI 6.7 Describe the processes involved in maintenance of normal pH, water & electrolyte balance of body fluids and the derangements associated with these.	General Medicine, H.Intg- Physiology	Clinical manifestations & management of diselectrolytemia, acid base & water imbalance


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Department of Pathology

Alignment & Integration

Sr no.	Sr. No.	COMPETENCY	Topic for integration	Sub Topic for which PPT is needed	Departments for Integration
1	PA5.1	Define and describe the process of repair and regeneration including wound healing and its types	management of wound healing	Surgical management of wound healing	General Surgery
2	PA9.2	Describe the mechanism of hypersensitivity reaction.	Investigation of hypersensitivity reaction (Microbiology part)	Investigation of hypersensitivity reaction (microbiology part)	Microbiology
3	PA14.2	Describe the etiology, investigations and differential diagnosis of microcytic hypochromic anemia	Investigations and management of microcytic hypochromic anemia	Clinical management of Microcytic hypochromic anemia	General Medicine
4	PA21.2	Classify and describe the etiology, pathogenesis and pathology of vascular and platelet disorders including ITP and haemophilia's.	Clinical features and management of haemophilia's	Clinical features and management of haemophilia	Pediatrics
5	PA22.6	Describe transfusion reactions and enumerate the steps in the investigation of a transfusion reaction	Management of transfusion reaction	Clinical features and Management of transfusion reaction	General Medicine
6	PA24.2	Describe the etiology, pathogenesis, pathology, microbiology, clinical and microscopic features of peptic ulcer disease. Describe and identify the microscopic features of peptic ulcer	Clinical features and treatment of peptic ucler disease	Clinical features ,management/treatment of peptic ulcer disease	General Medicine
7	PA24.6	Describe and etiology and pathogenesis and pathologic and distinguishing features of Inflammatory bowel disease	Management of Inflammatory bowel disease	Surgical management of IBD	General Surgery
8	PA26.3(1)	Define and describe the etiology, types, pathogenesis, stages, morphology and complications and evaluation of Obstructive airway disease (OAD) and bronchiectasis	Physiology of lung, bronchus	Physiology of lung,bronchus	Physiology
9	PA26.3(2)	Define and describe the etiology, types, pathogenesis, stages, morphology and complications and evaluation of Obstructive airway disease (OAD) and bronchiectasis	Investigations of Obstructive airway disease (OAD) and bronchiectasis (Microbiology part)	Investigations of Obstructive airway disease(OAD)& bronchiectasis(Microbiology part)	Microbiology

Sr no.	Sr. No.	COMPETENCY	Topic for integration	Sub Topic for which PPT is needed	Departments for Integration
10	PA26.3(3)	Define and describe the etiology, types, pathogenesis, stages, morphology and complications and evaluation of Obstructive airway disease (OAD) and bronchiectasis	Management of Obstructive airway disease (OAD) and bronchiectasis	Clinical Management of obstructive airway disease bronchiectasis	General Medicine
11	PA26.5 (1)	Define and describe the etiology, types, exposure, environmental influence, pathogenesis, stages, morphology, microscopic appearance and complications of Occupational lung disease	Management of of Occupational lung disease	Clinical management of occupational lung disease	General Medicine
12	PA26.5 (2)	Define and describe the etiology, types, exposure, environmental influence, pathogenesis, stages, morphology, microscopic appearance and complications of Occupational lung disease	Prevention and environmental influence of occupational lung disease	Prevention & environmental influence of occupational lung disease	Community Medicine (PSM)
13	PA27.7	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of pericarditis and pericardial effusion	management of of pericarditis and pericardial effusion	Clinical management of pericarditis & pericardial effusion	General Medicine
14	PA28.3	Define and describe the etiology, precipitating factors, pathogenesis, pathology, laboratory urinary findings, progression and complications of acute renal failure	Management of of acute renal failure	Clinical management of acute renal failure	General Medicine
15	PA29.4	Describe the pathogenesis, pathology, hormonal dependency presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the prostate	Management of of carcinoma of the prostate	Surgical management of carcinoma of prostate	General Surgery
16	PA30.4	Classify and describe the etiology, pathogenesis, pathology, morphology, clinical course, spread and complications of ovarian tumors	Management of ovarian tumors	Management of ovarian tumors	Obstetrics & Gynaecology
17	PA31.4 (1)	Enumerate and describe the etiology, hormonal dependency and patyhologenesis of gynecomastia	Management of gynecomastia	Management of gynecomastia	Pediatrics
18	PA31.4 (2)	Enumerate and describe the etiology, hormonal dependency and patyhologenesis of gynecomastia	Management of gynecomastia	Management of gynecomastia	General Medicine
19	PA34.1	Describe the risk factors pathogenesis, pathology and natural history of squamous cell carcinoma of the skin	Management of squamous cell carcinoma of the skin	Management/treatment of squamous cell carcinoma of the skin	Dermatology, Venereology& Leprosy

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Integrated topics – II MBBS Subject Pharmacology

Sr No	Competency No	Competency	Topics for Integration	Sub Topic for which PPT is needed	Department for Integration*
1	PH1.12	Calculate the dosage of drugs using appropriate formulae for an individual patient, including children, elderly and patient with renal dysfunction	Dose modification in special conditions- children (Paediatric pharmacology) , elderly(Geriatric pharmacology)and renal dysfunction	One Case scenario from paediatrics and Two Case scenarios from General Medicine (renal dysfunction and elderly population)	Pediatrics and General Medicine
2	PH1.22	Describe drugs of abuse (dependence, addiction, stimulants, depressants, psychedelics, drugs used for criminal offences)	CNS stimulants and Cognition Enhancers	One Case study/ scenarios	Psychiatry
3	PH1.23	Describe the process and mechanism of drug deaddiction	Principles of Deaddiction	Management and Guidelines	Psychiatry
4	PH1.27	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antihypertensive drugs and drugs used in shock	Rx of Shock	Two Case study/ scenarios (anaphylactic and cardiogenic shock)	General Medicine
5	PH1.31	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of the drugs used in the management of dyslipidemias	Hypolipidemic agents	Management and Guidelines	General Medicine
6	PH1.32	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of drugs used in bronchial asthma and COPD	Bronchial asthma (Antiasthmatic drugs)	Management and Guidelines	Respiratory Medicine
7	PH1.33	Describe the mechanism of action, types, doses, side effects, indications and contraindications of the drugs used in cough (antitussives, expectorants/	Drugs for Cough	Types of cough (video media) Management	Respiratory Medicine

Sr No	Competency No	Competency	Topics for Integration	Sub Topic for which PPT is needed	Department for Integration*
8	PH1.34	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of the drugs used as below: Acid-peptic disease and GERD Antiemetics and prokinetics Antidiarrhoeals Laxatives Inflammatory Bowel Disease Irritable Bowel Disorders, biliary and pancreatic diseases	Anti diarrhoeals	One Case study/ scenarios and Guidelines	General Medicine
9	PH1.34	Describe the mechanism/s of action, types, doses, side effects, indications and contraindications of the drugs used as below: Acid-peptic disease and GERD Antiemetics and prokinetics Antidiarrhoeals Laxatives Inflammatory Bowel Disease Irritable Bowel Disorders, biliary and pancreatic diseases	Laxatives	One Case study/ scenarios and Guidelines	General Medicine
10	PH1.43	Describe and discuss the rational use of antimicrobials including antibiotic stewardship program	Rationale use and Antibiotic stewardship program	Antibiotic stewardship details – Micro, Total twoCase study/ scenarios of irrational use of drugs (One case from paediatrics and One case from Medicine)	Microbiology, Pediatrics, General Medicine
11	PH1.45	Describe the drugs used in MDR and XDR Tuberculosis	Tuberculosis	OneCase study/ scenarios , Management and Guidelines	Respiratory Medicine
12	PH1.47	Describe the mechanisms of action, types, doses, side effects,	Malaria	Micro- lab diagnosis, Medicine- Management	General Medicine, Microbiology

Sr No	Competency No	Competency	Topics for Integration	Sub Topic for which PPT is needed	Department for Integration*
		indications and contraindications of the drugs used in malaria, KALA-AZAR, amebiasis and intestinal helminthiasis		and Guidelines	
13	PH1.36	Describe the mechanism of action, types, doses, side effects, indications and contraindications of drugs used in endocrine disorders (diabetes mellitus, thyroid disorders and osteoporosis)	Diabetes Mellitus	Management and Guidelines	General Medicine
14	PH1.43	Describe and discuss the rational use of antimicrobials	Typhoid	Paediatric - One typhoid case study, Medicine- Management and Guidelines	Microbiology, Pediatrics, General Medicine
15	PH1.43	Describe and discuss the rational use of antimicrobials	Meningitis	Micro- Organisms and lab diagnosis, Paediatric - One case study, Medicine- Management	Microbiology, Pediatrics, General Medicine
16	PH1.27	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antihypertensive drugs and drugs used in shock	Hypertension	Management and Guidelines	General Medicine
17	PH1.27	Describe the mechanisms of action, types, doses, side effects, indications and contraindications of antihypertensive drugs and drugs used in shock	Myocardial Infarction	One Case scenario, MI – ECG sample, Management	General Medicine
18	PH5.1	Communicate with the patient with empathy and ethics on all aspects of drug use	Bioethics	Patient Communication checklist	General Medicine

*As per the CBME –MCI document for integration

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Content required from integrating departments:

Theme based Case scenarios/ Problem solving scenarios/ Pictorial case slide desk (2-3 slides)

Topics from Microbiology (PHASE 2) Identified for Integration

Sr No		Competency	Topic for Integration	Sub –Topic needed	Departments for Integration
1	MI1.5	Choose the most appropriate method of sterilization and disinfection to be used in specific situations in the laboratory, in clinical and surgical practice	<ul style="list-style-type: none"> Disinfection (Lab, OT, OPD) (Integrated) 	Disinfection of OT- Gen Surgery	General Surgery
2	MI2.1	Describe the etiologic agents in rheumatic fever and their diagnosis	<ul style="list-style-type: none"> Causative agents of Rheumatic Fever and its diagnosis (Integrated) 	Pathogenesis of Rheumatic fever- Pathology Management of Rheumatic Fever- Medicine	Gen Medicine Pathology
3	MI2.5	Describe the etio-pathogenesis and discuss the clinical evolution and the laboratory diagnosis of kalaazar, malaria, filariasis and other common parasites prevalent in India	<ul style="list-style-type: none"> Integrated : Malaria 	Pathogenesis of Malaria- Pathology Management of Malaria- Gen Medicine	Gen Medicine Pathology
4	MI2.7	Describe the epidemiology, the etio- pathogenesis, evolution complications, opportunistic infections, diagnosis, prevention and the principles of management of HIV	<ul style="list-style-type: none"> Integrated: HIV 	Pathogenesis of HIV- Pathology Management of HIV- Gen Medicine	Gen Medicine Pathology
5	MI3. 5	Enumerate the causative agents of food poisoning and discuss the pathogenesis, clinical course and laboratory diagnosis	<ul style="list-style-type: none"> Food Poisoning (Integrated) 	Drugs used in treatment of food poisoning- Pharmacology Management of a case of food poisoning	Gen Medicine Pharmacology
6	MI3. 7	Describe the epidemiology, the etio-pathogenesis and discuss the viral markers in the evolution of Viral hepatitis. Discuss the modalities in the diagnosis and prevention of viral hepatitis	<ul style="list-style-type: none"> Integrated: Hepatitis 	Pathogenesis of Hepatitis B- Pathology Management of Hepatitis B- Gen Medicine	Gen Medicine Pathology

Sr No		Competency	Topic for Integration	Sub –Topic needed	Departments for Integration
7	MI4.3	Describe the etio-pathogenesis of infections of skin and soft tissue and discuss the clinical course and the laboratory diagnosis	<ul style="list-style-type: none"> • Mycetoma and S/c Mycosis (Integrated) • B anthracis (Integrated) 	<p>Surgical Management in a case of Mycetoma- Gen Surgery</p> <p>Skin Manifestations in B anthrax infection (Hide porters disease- Dermatology)</p>	Dermatology Gen Surg
8	MI5.1	Describe the etiopathogenesis, clinical course and discuss the laboratory diagnosis of meningitis	<ul style="list-style-type: none"> • Meningococcus and Meningitis (Integrated) 	<p>Management of meningitis- Medicine</p> <p>Meningitis in paediatric age group- paediatrics</p> <p>Pathogenesis of meningitis- Pathology</p>	Gen Med Paediatrics Pathology
9	MI 8.5	Define Healthcare Associated Infections (HAI) and enumerate the types. Discuss the factors that contribute to the development of HAI and the methods for prevention	<ul style="list-style-type: none"> • PUO (Integrated) 	<p>Management of PUO- medicine</p>	General Medicine
10	MI7.2	Describe the etio-pathogenesis and discuss the laboratory diagnosis of sexually transmitted infections. Recommend preventive measures	<ul style="list-style-type: none"> • STDs (Integrated) 	<p>Skin manifestations in common STDs- Dermatology (Pictures)</p> <p>STDs in pregnant females- OBGY</p>	Dermatology OBGY
11	MI8.4	Describe the etiologic agents of emerging Infectious diseases. Discuss the clinical course and diagnosis	<ul style="list-style-type: none"> • Emerging and Re-emerging infections with special reference to COVID (Integration) 	<p>Management modalities in COVID of COVID</p>	Gen Medicine Community Medicine
12	MI8.6	Describe the basics of Infection control	<ul style="list-style-type: none"> • Infection Control (Integration) 	<p>Role of Community management in Infection control</p>	Community Medicine


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Community Medicine

Topics Identified for Integration

Sr No	Comp No	Competency	Topic for Integration	Sub –Topic needed	Departments for Integration
1	CM3.8	Describe the mode of action, application cycle of commonly used insecticides and rodenticides	Describe the mode of action of commonly used insecticides and rodenticides	Describe the mode of action of insecticides and rodenticides	Pharmacology
2.	CM5.2	Describe and demonstrate the correct method of performing a nutritional assessment of individuals, families and the community by using the appropriate method	Describe the correct method of performing a nutritional assessment of individuals (Adult & Child)	Nutritional assessment of individuals (Adult & Child)	Medicine & Paediatrics
3	CM5.2	Describe and demonstrate the correct method of performing a nutritional assessment of individuals, families and the community by using the appropriate method	Planning of Diet in selected disease like DM, HT, Kidney disease and anaemia	Planning of Diet in selected disease like DM, HT, Kidney disease and anaemia	
4	CM5.3	Define and describe common nutrition related health disorders (including macro-PEM, Micro-iron, Zn, iodine, Vit. A), their control and management	Define and describe common nutrition related health disorders	Clinical Management of PEM	Paediatrics
5	CM5.7	Describe food hygiene	Microbiological aspects of Food hygiene	Microbiological aspects of Food hygiene	Microbiology
6	CM7.6	Enumerate and evaluate the need of screening tests	Enumerate and evaluate the need of screening tests	Significance of Positive predictive value and Negative predictive value of screening Test	Medicine

Sr No	Comp No	Competency	Topic for Integration	Sub –Topic needed	Departments for Integration
7	CM8.1	Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for communicable diseases	use of essential laboratory tests at the primary care level for communicable diseases	use of essential laboratory tests at the primary care level for communicable diseases	Microbiology & Pathology
8	CM9.5 I	Describe the methods of population control	methods of population control	Recent updates of methods of population control	Obstetrics & Gynaecology
9	CM10.5	Describe Universal Immunization Program; Integrated Management of Neonatal and Childhood Illness (IMNCI) and other existing Programs.	Describe Universal Immunization Program; Integrated Management of Neonatal and Childhood Illness	Recent updates of Immunization Program; Integrated Management of Neonatal and Childhood Illness	Paediatrics
10	CM12.3	Describe the prevention of health problems of aged population	Describe the prevention of health problems of aged population	Clinical Management of common problems in geriatric age group	Medicine
11	CM14.3	Describe laws related to hospital waste management	Hospital infection control policy	laws related to hospital waste management & role hospital infection control Committee	Microbiology
12	CM15.1	Define and describe the concept of mental Health	Describe the concept of mental Health	Identification, prevention & treatment of common Mental Health problems	Psychiatry

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Sr. No.	Comp. No.	Competency	Topic for Integration	Sub – Topic needed	Department for Integration
4	FM2.3 MPJ	Describe and discuss issues related to sudden natural deaths	Molecular & cellular changes in sudden natural death	-	Pathology
5	FM2.5 MPJ	Discuss moment of death, modes of death - coma, asphyxia and syncope	Cellular changes seen in Asphyxia & syncope of coma	-	Psychiatry, Pathology
6	FM2.11 MPJ	Describe and discuss autopsy procedures including post-mortem examination, different types of autopsies, aims and objectives of post-mortem examination	Cellular changes seen in autopsy & post-mortem examination objective of Autopsy	-	Pathology
7	FM2.12 MPJ	Describe the legal requirements to conduct post-mortem examination and procedures to conduct medico-legal post-mortem examination	Autopsy cellular changes	-	Pathology
8	FM2.13 MPJ	Describe and discuss obscure autopsy	Cellular changes in post-mortem	-	Pathology
9	FM2.19	Investigation of anesthetic, operative deaths: Describe and discuss special protocols for conduction of autopsy and for collection, preservation and dispatch of related material evidences	++	-	Anesthesiology, General Surgery
10	FM3.1	IDENTIFICATION Define and describe Corpus Delicti, establishment of identity of living persons including race, Sex, religion, complexion, stature, age determination using morphology, teeth-eruption, decay, bite marks, bones-ossification centers, medico-legal aspects of age	Define and describe age determination sex determination using morphology , teeth eruption , decay, bite marks, bones-ossification centers, medico-legal aspects of age	-	Human Anatomy

Sr. No.	Comp. No.	Competency	Topic for Integration	Sub – Topic needed	Department for Integration
11	FM3.20	Discuss disputed paternity and maternity		-	Obstetrics &Gynecology
12	FM2.27	Define and discuss infanticide, foeticide and stillbirth	infanticide, foeticide and stillbirth	-	Pediatrics
13	FM2.28	Describe and discuss signs of intrauterine death, signs of live birth, viability of foetus, age determination of foetus, DOAP session of ossification centers, Hydrostatic test, Sudden Infants Death syndrome and Munchausen’s syndrome by proxy	Molecular and cellular changes of intrauterine death , sign of live birth , viability of foetus, age determination of foetus, Hydrostatic test, Sudden Infants Death syndrome and Munchausen’s syndrome by proxy	-	Pediatrics, Human Anatomy
14	FM3.29	Describe and discuss child abuse and battered baby syndrome	child abuse and battered baby syndrome	-	Pediatrics
15	FM6.1	Describe different types of specimen and tissues to be collected both in the living and dead: Body fluids (blood, urine, semen, faces saliva), Skin, Nails, tooth pulp, vaginal smear, viscera, skull, specimen for histo-pathological examination, blood grouping, HLA Typing and DNA Fingerprinting. Describe Locard’s Exchange Principle	, blood grouping, HLA Typing and DNA Fingerprinting. Describe Locard’s Exchange Principle	-	Pathology
16	FM8.1	Describe the history of Toxicology		-	Pharmacology
17	FM8.2	Define the terms Toxicology, Forensic Toxicology, Clinical Toxicology and poison	Poison toxins and management	-	Pharmacology
18	FM8.3	Describe the various types of poisons, Toxicokinetics, and Toxicodynamics and diagnosis of poisoning in living and dead	Toxicokinetics, and Toxicodynamics and diagnosis of poisoning in living and dead	-	Pharmacology

Sr. No.	Comp. No.	Competency	Topic for Integration	Sub – Topic needed	Department for Integration
19	FM8.4	Describe the Laws in relations to poisons including NDPS Act, Medico-legal aspects of poisons	, Medico-legal aspects of poisons	-	Pharmacology
20	FM8.5	Describe Medico-legal autopsy in cases of poisoning including preservation and dispatch of viscera for chemical analysis	preservation and dispatch of viscera for chemical analysis	-	Pharmacology
21	FM8.6	Describe the general symptoms, principles of diagnosis and management of common poisons encountered in India	general symptoms, principles of diagnosis and management of common poisons encountered in India	-	Pharmacology
22	FM8.7	Describe simple Bedside clinic tests to detect poison/drug in a patient's body fluids	Bedside clinic tests to detect poison/drug in a patient's body fluids	-	Pharmacology
22	FM8.8	Describe basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination	methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination	-	General Medicine Pharmacology
23	FM13.1	Describe toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry	toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry	-	General Medicine

Sr. No.	Comp. No.	Competency	Topic for Integration	Sub – Topic needed	Department for Integration
24	FM14.3	Assist and demonstrate the proper technique in collecting, preserving and dispatch of the exhibits in a suspected case of poisoning, along with clinical examination	demonstrate the proper technique in collecting, preserving and dispatch of the exhibits in a suspected case of poisoning, along with clinical examination	-	General Medicine
25	FM14.7	Demonstrate & identify that a particular stain is blood and identify the species of its origin	identify that a particular stain is blood and identify the species of its origin	-	Pathology, Physiology
26	FM14.8	Demonstrate the correct technique to perform and identify ABO & RH blood group of a person	correct technique to perform and identify ABO & RH blood group of a person	-	Pathology, Physiology
27	FM 14.9	Optic Injuries -	Grievous hurt- IPC -319	-	Ophthalmology
28	FM 14.10	Human organ donation Act	Human organs /Corneal donation	-	Anatomy Ophthalmology


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**TOPICS FOR INTEGRATION
DEPARTMENT OF ENT
PHASE 3**

SR.NO	CODE	TOPIC	SUBTOPIC	COMPETENCY	DEPARTMENT FOR INTEGRATION	PRESENTATION REQUIRED FROM THE DEPARTMENT
1	EN 1.1	Anatomy and physiology of nose	Describe the anatomy of nose with emphasis on blood and nerve supply of Nasal septum and lateral wall. Describe the physiology of Paranasal sinuses.	K	Anatomy	Presentation on anatomy of nose with emphasis on blood and nerve supply of Nasal septum and lateral wall.
2	EN 4.27	Allergic rhinitis in children	Elicit correct history, clinical features, investigations and describe the principles in management of allergic rhinitis	K/S	Paediatric	Presentation on history, clinical features, investigations and management of allergic rhinitis.
3	EN 4.53	HIV manifestations of ENT	Describe the clinical features, investigations and management of HIV manifestations of ENT.	K	General medicine	Presentation on the clinical features, investigations and management of HIV manifestations of ENT.
4	EN 1.2	Common diseases in ENT	Describe the pathophysiology of common diseases in ENT.	K	Pathology	Presentation on pathophysiology of common diseases in ENT


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Ophthalmology- Integration Topics

Sr. No	Code	Topic	Subtopic	Competency	Department for integration	Presentation required from the department
1	OP 6.3	Iridocyclitis	Enumerate systemic conditions that can present as iridocyclitis and describe their ocular manifestation	KH	Medicine	Systemic conditions which presents as iridocyclitis
2	OP 9.3	Ophthalmic and non-ophthalmic causes of headache	Describe the role of refractive error correction in a patient with headache. Enumerate the indication for referral.	K	Medicine	Non ophthalmic causes of headache. E.g., Migraine, headache.
3	OP 9.4	Avoidable blindness and vision 2020	Discuss, describe and enumerate causes of avoidable blindness and the National Programs for Control of Blindness (Including Vision 2020)	KH	Community Medicine	National Program for Control of Blindness
4	OP 1.1	Physiology of vision	Describe visual pathway, visual acuity and visual cycle. Discuss neurophysiology of vision	KH	Physiology	Describe and discuss visual cycle and neurophysiology of vision
5	OP 2.1	Lid anatomy and pathology	Describe lid anatomy. Discuss common abnormal lid conditions like stye, chalazion, orbital cellulitis, dacryocystitis, ptosis, entropion and ectropion	KH	Anatomy	Describe lid anatomy

Sr. No	Code	Topic	Subtopic	Competency	Department for integration	Presentation required from the department
6	OP 4.1	Corneal ulcer	Enumerate, describe and discuss types and causes of corneal ulceration	KH	Anatomy	Describe corneal anatomy
7	OP 5.2	Scleritis	Describe aetiology, systemic association, clinical features, complication, indication for referral and management	KH	Medicine	Discuss systemic association of scleritis
8	OP 6.7	Glaucoma	Discuss aetiology, clinical features of various glaucoma including open and closed angles. Describe investigation and treatment.	KH	Medicine	Discuss systemic association of glaucoma
9	OP 7.1	Anatomy and metabolism of lens	Discuss surgical anatomy and metabolism of lens.	KH	Biochemistry	Discuss aerobic (Krebs cycle), anaerobic metabolism, HMP shunt and sorbitol pathway.
10	OP 7.2	Aetiology, pathogenesis and complication of cataract	Describe stages of cataract	KH	Physiology	Describe water and electrolyte transport (pump leak mechanism)
11	OP 8.1	Vascular occlusive diseases of retina	Discuss etiopathogenesis, clinical features and management of vascular occlusions of retina	KH	Medicine	Ocular manifestation of systemic diseases causing vascular occlusions

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Department of Medicine
Phase 2
Topics for Nesting with dates

Sr. No	Competency	Topic	Sub Topics	Departments
1	IM3.3	Discuss and describe the pathogenesis, presentation, natural history and complications of pneumonia	Pathology- Pathogenesis of pneumonia Microbiology- Microorganisms causing <i>pneumonia</i>	Pathology, Microbiology
2	IM3.15	Describe and enumerate the indications for hospitalisation in patients with pneumonia		
3	IM3.16	Describe and enumerate the indications for isolation and barrier nursing in patients with pneumonia		
4	IM3.17	Describe and discuss the supportive therapy in patients with pneumonia including oxygen use and indications for ventilation	Microbiology- Microoganisms causing Ventilator associated pneumonia	Microbiology
5	IM3.19	Discuss, describe, enumerate the indications and communicate to patients on pneumococcal and influenza vaccines		
6	IM6.1	Describe and discuss the symptoms and signs of acute HIV seroconversion	Microbiology-Oppotunistic infections in HIV with photos	Microbiology
7	IM6.2	Define and classify HIV AIDS based on the CDC criteria		
8	IM6.5	Describe and discuss the pathogenesis, evolution and clinical features of common HIV related malignancies	Pathology- Pathogenesis of Malignancies	Pathology
9	IM6.6	Describe and discuss the pathogenesis, evolution and clinical features of common HIV related skin and oral lesions		
10	IM15.3	Describe and discuss the physiologic effects of acute blood and volume loss	Physiology- Clinical physiology of shock- .Pathology- Pathologyof shock-	Physiology, Pathology
11	IM15.11	Develop, document and present a treatment plan that includes fluid resuscitation, blood and blood component transfusion, and specific therapy for arresting blood loss		
12	IM15.12	Enumerate the indications for whole blood, component and platelet transfusion and describe the clinical features and management of a mismatched transfusion		

Sr. No	Competency	Topic	Sub Topics	Departments
13	IM15.6	Distinguish between upper and lower gastrointestinal bleeding based on the clinical features	General surgery-Pictures of GI Ulcers	Gen Surgery
14	IM15.10	Enumerate the indications for endoscopy, colonoscopy and other imaging procedures in the investigation of Upper GI bleeding		
15	IM16.14	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy for bacterial and viral diarrhea		
16	IM16.15	Distinguish based on the clinical presentation Crohn's disease from Ulcerative Colitis	Pharmacology- Drugs used in IBD. Surgery- Surgical therapies in IBD	Pharmacology, Gen Surgery
17	IM16.16	Describe and enumerate the indications, pharmacology and side effects of pharmacotherapy including immunotherapy		
18	IM16.17	Describe and enumerate the indications for surgery in inflammatory bowel disease		

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Medicine topics for integration phase 3 (2019 batch)

vertical integration

Comp No	Competency	Departments for integration	Subtopics
IM9.1	Define, describe and classify anemia based on red blood cell size and reticulocyte count	physiology,pathology	physiology- erythropoiesis pathology: significance of RBC Indices
IM11.5	Describe and discuss the pathogenesis and temporal evolution of microvascular and macrovascular complications of diabetes	biochemistry,surgery,ophthalmology,	biochemistry : formation of advanced glycation products Surgery : common complications of diabetes ophthalmology ocular manifestations of diabetes
IM12.3	Describe and discuss the physiology of the hypothalamopituitary - thyroid axis, principles of thyroid function testing and alterations in physiologic function	physiology, biochemistry, PHARMACOLOGY, ENT	physiology- physiological significance of pituitary hypothalamic axis biochemistrythyroid hormone synthesis pharmacology treatment of hypo and hyperthyroidism ENT thyroid surgery indications
IM12.13	Describe the pharmacology, indications, adverse reaction, interactions of thyroxine and antithyroid drugs		
IM23.3	Discuss and describe the aetiology, causes, clinical manifestations, complications, diagnosis and management of common vitamin deficiencies	BIOCHEMISTRY PHARMACOLOGY, PEDIATRICS	Biochemistry: lab diagnosis of vitamin deficiency Pharmacology therapeutic dosages of vitamin supplementation pediatrics clinical manifestations of Vitamin C and Vitamin D deficiency

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TOPICS FOR INTEGRATION WITH OTHER DEPARTMENT

PEDIATRICS – PHASE – III

Sr. No	Comp No	Competency	Topic for integration	Sub topic (2-4 slides)	Department for integration
1	PE 5.4, 5.5	Describe the clinical features, diagnosis and management of Breath Holding Spells	Common behavioural problems in children	clinical features, diagnosis and management of Breath Holding Spells and temper tantrums	Psychiatry
2	PE 7.2, 7.3	Explain the physiology of lactation	Physiology of lactation and Composition of types of Breastmilk	Physiology of lactation. Difference between Breastmilk and cow's milk	Physiology
3	PE 13.06	National anemia control program	National anemia control program	Recommendations of National anemia control program	Community Medicine
4	PE 24.5	Discuss role of antibiotics, antispasmodics and other drugs	Discuss role of antibiotics, antispasmodics and other drugs in diarrheal disorder	Discuss role of antibiotics, antispasmodics and emetics in acute diarrheal disorder	Pharmacology
5	PE 19.5	Immunization in special situation	Immunization in special situation	Immunization in children with immunodeficiency	Community Medicine

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Competency based UG curriculum 2021-22

Dermatology

Topics for integration

Sr no	Topic		Subtopics	Department for integration	PPT required from the department
1	Scabies	DR5.1	clinical features, presentations and complications of scabies in children and adults Identify and differentiate scabies from other lesions children	Paediatrics	adverse reaction of pharmacotherapies for scabies in children
2	Fungal infections	DR7.1	Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of dermatophytes in adults and children	Paediatrics	side effects of antifungal therapy in children
3	Viral infections	DR8.1	Describe the etiology, microbiology, pathogenesis and clinical presentations and diagnostic features of common viral infections of the skin in adults and children	Paediatrics	Clinical presentations and diagnostic features of common viral infections of the skin in children

Sr no	Topic		Subtopics	Department for integration	PPT required from the department
4	Leprosy	DR9 2	Classify, describe the epidemiology, etiology, microbiology, pathogenesis, clinical presentations and diagnostic features of Leprosy	General Medicine	Demonstrate an appropriate neurologic examination
		DR9 6		General Medicine	Describe the treatment of Leprosy based on the WHO guidelines
5	Sexually transmitted diseases (Syphilis)	DR10.1 DR10.3	Identify and classify syphilis based on the presentation and clinical manifestations	General Medicine	Enumerate the indications and describe the pharmacology, administration and adverse reaction of pharmacotherapies for syphilis

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DEPARTMENT OF PSYCHIATRY

LIST OF TOPICS FOR INTEGRATION

CBME PHASE III MBBS

SR NO.	COMP NO.	COMPETENCY	TOPIC FOR INTEGRATION	SUB TOPIC NEEDED	DEPARTMENTS FOR INTEGRATION
1	PS 15.1, PS 15.2, PS 15.4	Mental Retardation (Intellectual Disability) and Specific Learning Disabilities	Types, etiology and treatment	Specialist referral	Paediatrics
2	PS 16.1, PS 16.2, PS 16.3, PS 16.5	Psychiatric disorders in the Elderly – Enumerate, etiology, therapies, specialist referral	Types, etiology and therapies of psychiatric disorders in elderly	Specialist referral of psychiatric disorders in elderly	Geriatric Medicine
3	PS 3.7, PS 3.8	Organic Mental Disorders – Enumerate and clinical features, General Investigations in OMD	Types, clinical features of Organic Mental Disorder	General investigations of Organic Mental Disorder	General Medicine
4	PS 4.1, PS 4.4, PS 4.6, PS 4.7	Alcohol and Substance Abuse Disorders – Etiology, treatment, side effects of medications, specialist referral	Etiology, treatment and side effects of alcohol and substance abuse disorders	Specialist referral for alcohol and substance abuse disorders	General Medicine
5	PS 3.12, PS 5.1, PS 5.3, PS 5.5, PS 5.6	Schizophrenia and Psychotic disorders – Psychotic vs Non psychotic distinction, Etiology and classification, treatment, side effects of medications, specialist referral	Etiology, classification, treatment of schizophrenia and Psychotic disorders	Side effects of medications of Schizophrenia and Psychotic disorders	Pharmacology

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Respiratory Medicine topics for integration phase 3

vertical integration

Sr. No	Comp No	Competency	Departments for integration	Subtopics
1	CT1.1	Describe and discuss the epidemiology of tuberculosis and its impact on the work, life and economy of India.	Community Medicine	Epidemiology and National Tuberculosis elimination programme (NTEP)
2	CT1.4	Describe the epidemiology, the predisposing factors and microbial and therapeutic factors that determine resistance to drugs	A)Community Medicine B) Microbiology C) Pharmacology	A) Epidemiology of TB B)Drug Sensitivity Tests C)ATT-Drugs & Phymacokinetics & Phymacodynamics
3	CT1.15	Prescribe an appropriate antituberculosis regimen based on the location of disease, smear positivity and negativity and co-morbidities based on current national guidelines including directly observed tuberculosis therapy (DOTS)	A)Pharmacology B) community medicine	A) Anti TB Drags B) NTEP & DOTS
4	CT 2.4	Describe & discuss the physiology & pathophysiology of hypoxia and hypercapnea	A)Physiology B) Pathology	A) Control of Respiration B) Patholgy of gas exchange, Airways & Alveoli.
5	CT 2.16	Discuss and describe therapies for OAD including bronchodilators, leukotriene inhibitors, mast cell stabilisers, theophylline, inhaled and systemic steroids, oxygen and immunotherapy	Pharmacology	Pharmacology of Bronchodialtors , oxygen delivery immwnotherapy

Quality

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MGM MEDICAL COLLEGE AND HOSPITAL, NAVI MUMBAI
Department of Surgery

Topics Identified for Integration

Sr No	Comp No.	Topic for Integration	Sub- Topic needed	Departments for Integration
1.	SU 19.1	Describe the etiology and classification of cleft lip and palate	Etiology and classification of cleft lip and palate	Anatomy
	SU 19.2	Describe the Principles of reconstruction of cleft lip and palate		
2	SU 21.1	Describe surgical anatomy of the salivary glands ,pathology ,and clinical presentation of disorders of salivary glands	anatomyofthesalivaryglands,	Anatomy
	SU 21.2	Enumerate the appropriate investigations and describe the Principles of treatment of disorders of salivary glands	Physiology of salivary glands Etiopathology of salivary glands	Physiology Pathology
3	SU 22.1	Describe the applied anatomy and physiology of thyroid	Anatomy of thyroid	Anatomy
	SU 22.2	Describe the etiopathogenesis of thyroidal swellings	Physiology of thyroid	Physiology
	SU 22.4	Describe the clinical features, classification and principle of management of thyroid cancer	etiopathogenesis of thyroidal swellings	Pathology
4	SU 24.1	Describe the anatomy of pancreas . Physiology of pancreas ,	anatomy of pancreas .	Anatomy
	SU 24.2	Patho-physiology of pancreatitis. Describe the clinical features, principles of investigation, medical management of pancreatic endocrine tumours.	Physiology of pancreas , Patho-physiology of pancreatitis. medical management of pancreatic endocrine tumours	Physiology Pathology Medicine

Sr No	Comp No.	Topic for Integration	Sub- Topic needed	Departments for Integration
5	SU 25.1	Describe applied anatomy of breast .	anatomy of breast .	anatomy
	SU 25.2	Describe the etiopathogenesis, clinical features of benign breast disease including infections of the breast	etiopathogenesis, of benign breast disease including infections of the breast	Pathology
	SU 25.3	Imaging in case of breast diseases Describe clinical features, Investigations and principles of treatment of benign and malignant tumours of breast.	Imaging in case of breast diseases	Radiology
6	SU 28.12	Describe the applied anatomy of billiary system.	Describe the applied anatomy of billiary system.	Anatomy
		Describe the clinical features, investigations and principles of management of obstructive jaundice.	Pathogenesis in Obstructive Jaundice Radiological features in obstructive Jaundice	Pathology Radiology

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Orthopaedics- Integration Topics

Sr No	Competency Number	Competency	Topic for integration	Subtopic needed	Departments for integration
1	OR2.1	Fractures	Describe and discuss the mechanism of Injury, clinical features, investigations and plan management of fracture of clavicle	Clavicle fracture slides	Anatomy
2	OR2.2	Fractures	Describe and discuss the mechanism of Injury, clinical features, investigations and plan management of fractures of proximal humerus	Few slides of Proximal humerus fractures and its surgical anatomy	Anatomy
3	OR2.5	Fractures	Describe and discuss the aetiopathogenesis, clinical features, mechanism of injury, investigation & principles of management of fractures of both bones forearm and Galeazzi and Monteggia injury	Few slides of Forearm fractures	Anatomy
4	OR2.10	Fractures	Describe and discuss the aetiopathogenesis, mechanism of injury, clinical features, investigations and principles of management of fractures of proximal femur	Proximal Humerus fractures	Anatomy
5	OR11.1	Peripheral nerve injuries	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of peripheral nerve injuries in diseases like foot drop, wrist drop, claw hand, palsies of Radial, Ulnar, Median, Lateral Popliteal and Sciatic Nerves	Slides of surgical anatomy of peripheral nerves	Anatomy
6	OR2.16	Fractures	Describe and discuss the mechanism of injury, clinical features, investigations and principles of management of open fractures with focus on secondary infection prevention and management	Infection	Microbiology, Pathology

Sr No	Competency Number	Competency	Topic for integration	Subtopic needed	Departments for integration
7	OR3.1	Musculoskeletal Infection	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of Bone and Joint infections a) Acute Osteomyelitis b) Subacute osteomyelitis c) Acute Suppurative arthritis d) Septic arthritis & HIV infection e) Spirochaetal infection f) Skeletal Tuberculosis	Infection	Microbiology, Pathology
8	OR4.1	Skeletal tuberculosis	Describe and discuss the clinical features, Investigation and principles of management of Tuberculosis affecting major joints (Hip, Knee) including cold abscess and caries spine	Infection	Pathology, General Surgery
9	OR5.1	Inflammatory disorders	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of various inflammatory disorder of joints	Rheumatoid Arthritis	General medicine
10	OR10.1	Bone tumors	Describe and discuss the aetiopathogenesis, clinical features, investigations and principles of management of benign and malignant bone tumours and pathological fractures	Tumors	Pathology

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MGM MEDICAL COLLEGE, KAMOTHE, NAVIMUMBAI
DEPARTMENT OF RADIODIAGNOSIS
ALIGNMENT AND INTEGRATION

SR. NO.	NO.	COMPETENCIES TOPIC FOR INTEGRATION	SUBTOPIC FOR INTEGRATION NEEDED	DEPARTMENT FOR INTEGRATION
1.	RD1.13	Describe the components of the PC and PNDT Act and its medicolegal implications	Medicolegal implications in PC and PNDT Act.	FMT
2.	RD 1.7	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining to disorders in pediatrics.	Common respiratory disorders in children in brief.	Pediatrics
3.	RD 1.4	Enumerate indications for various common radiological investigations, choose the most appropriate and cost effective method and interpret findings in common conditions pertaining to disorders in Obs and Gynaec.	Common uterine disorders in brief.	Surgery

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UG Topics from Anaesthesiology (Phase 2) Identified for Integration

<i>Sl. No.</i>		<i>Competency</i>	<i>Topic for Integration</i>	<i>Sub – Topic Needed</i>	<i>Departments for Integration</i>
1.	AS 1.3	Ethical aspect of anaesthesiology and informed consent	Informed consent (Surgery, CM, Gynae& Obstetrics)	Informed consent for surgical procedures	General Surgery
2.	AS 4.1	Discuss the pharmacology of durgsused in induction & maintenance of general anaesthesia (Including IV & Inhalational induction agents, opioids & muscle relaxants)	• Opioids	Opioids and its receptors	Pharmacology
			• Muscle relaxants	Physiology of Neuromuscluar injection and muscle relaxants	Physiology Pharmacology
3.	AS 5.5	Principles of regional anesthesia (Including spinal, epidural and caudal in adult & children)	Anatomy of spine & epidural space	Anatomy of spine and epidural space	Anatomy
4.	AS 8.1	Describe the anatomical correlates and physiologic principles of pain in palliative care	Pain pathways & Pain fibers	Pain pathways and pain fibers	Physiology
5.	AS 9.4	Enumerate the blood products in the pre operative period	Blood and its components	Various types of blood products	Blood Bank (Pathology)


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Integrated Teaching Department of OBGY

Sr. No	Code	Competency	Integration	Method of Teaching	Department of Integration
1	No OG 1.1	Competency: Demographic and vital statistics- Birth Rate, Maternal Mortality & Morbidity	Community Medicine	Integrated Teaching	Community Medicine:- Indian statistics for Birth rate and maternal mortality rate, neonatal mortality rate
2	No OG 8.7	Competency: Enumerate the indications for and types of vaccination in pregnancy	Community Medicine	Integrated Teaching	Community Medicine:- National guidelines for immunization in pregnancy
3	No OG 10.2	Competency: Enumerate the indications and describe the appropriate use of blood and blood products, their complications and management	Pathology /Transfusion Medicine	Integrated Teaching	Transfusion Medicine:- Available blood components in MGM Blood Bank.
4	No OG 18.3	Competency: Describe and discuss the diagnosis of birth asphyxia Paed.	Paediatrics	Integrated Teaching	Paediatrics:- Management of birth Asphyxia
5	No OG 20.1	Competency: Enumerate the indications and describe and discuss the legal aspects, indications, methods for first and second trimester MTP; complications and management of complications of Medical Termination of Pregnancy	Community Medicine/Forensic Medicine	Integrated Teaching	Community Medicine:- Recent changes in MTP Act.
6	No OG 22.2	Competency: Describe and discuss the etiology (with special emphasis on Candida, T. vaginalis, bacterial vaginosis), characteristics, clinical diagnosis, investigations, genital hygiene, management of common causes and the syndromic management	Microbiology	Integrated Teaching	Microbiology:- Common organisms in vulvo vaginal infections.
7	No OG 40.1	Competency: Describe etiology, diagnosis and management of Fever in pregnancy & its impact on pregnancy	Medicine	Small Group Teaching	Medicine:- Common causes of fever in clinical practice.

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