CURRICULUM OF ENT

MBBS COURSE

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INTRODUCTION

EDUCATIONAL HOURS

Year	Theory	Practical	Total
3rd year	25 hours	25 hours (4 weeks clinical rotation)	50
4th year	50 hours	50 hours (6 weeks clinical rotation)	100
Total	75 hours in 36 weeks/year	75 hours	150 hours
Strategy	Lectures Problem based learning Small group discussion Case based discussion	Clinical Rotation & ward visit Seminars & CPC Audio video sessions Tutorial / PBL Skills Lab Practice	

LEARNING OUTCOMES

AT THE END OF CURRICULUM STUDENT WILL BE ABLE TO

To equip doctors with essential knowledge, skill and attitude in order to enablethem to:

- Identify ENT diseases including emergencies, provide primary health care, refer to appropriate center and provide follow-up to the patients.
- Perform essential minor ENT procedures.
- Communicate effectively with the patient, the family and the community regarding disease and its relevant issues.
- Understand medical ethics and its application pertaining to ENT and maintain the confidentiality of the patient.
- To understand the prevalence and prevention of the common Public Health Problem related to ENT in the community
- Understand the principles of medical research including fundamentals of Information Technology

EDUCATION STRATEGIES

The educational strategies in this curriculum are multiple and aligned with domain of learning and according to the desired outcome

Interactive lectures
One-third of the curriculum will be delivered in a traditional didactic format including PowerPoint presentations and case discussions. Didactic education is considered to be a one-way transmission of material from teacher to learner, we cannot overlook the possibility of meaningful interaction between experts and learners during live lectures. This type of interaction, which allows for immediate clarification of concepts and extension of knowledge, may be particularly important for novice learners who have relatively little exposure to the subject matter, such as our study population.

Problem based learning
A lot of emphasis is on case based discussion. Problem-based learning (PBL) is complex and heterogeneous. A wide variety of educational methods are referred as PBL. These include Lecture-based case, Case based lecture, Case based discussions, Problem or inquiry based and Closed loop or reiterative. Incorporation of case based discussion in teaching enhances the critical thinking and problem-solving skills. It also helps in developing a broader prospective of clinical case scenarios.

Case based Discussion
A lot of emphasis is on case based discussion during ward placement. Problem-based learning (PBL) is complex and heterogeneous. A wide variety of educational methods are referred as PBL. These include Lecture-based case, Case based lecture, Case based discussions, Problem or inquiry based and Closed loop or reiterative. Incorporation of case based discussion in teaching enhances the critical thinking and problem-solving skills. It also helps in developing a broader prospective of clinical case scenarios (5).

Small Group Discussion
Small group discussion provides a unique environment to achieve high standards in medical education. Activation of prior knowledge, exchange of ideas, and engagement at a higher cognitive level are assumed to result in deeper learning and better academic achievements by students (6).

Clinical Skills Sessions
Clinical skills session are important part of curriculum to achieve psychomotor and affective outcomes. Learning manual skills is a fundamental part of health care education, and motor, sensory and cognitive learning processes are essential aspects of professional development. Simulator training has been shown to enhance factors that facilitate motor and cognitive learning. Students learned manual skills, how to perform the procedure, and professional behaviour. They learned by preparing, watching, practising and reflecting. The simulator contributed by providing

opportunities for students to prepare for the skills training, to see anatomical structures, to feel resistance, and to become aware of their own performance ability (7).

Video sessions
Pathology is a subject which involves visual learning and formulating concepts. Video assisted learning sessions also provides opportunities to learn gross anatomy.

Clinical Sessions
Clinical sessions are important as they provide opportunity for experiential learning in terms of clinical skills and dealing with patients.

ASSESSMENT

MCQ's and SEQ's

Multiple choice question and short essay question test will be used at the end of part of curriculum to assess the learning of knowledge. These all assessment exercises will be formative. The written tests like Multiple-Choice Questions (MCQs) and Short-Essay Questions (SEQs) test formats are used for the assessment of cognitive domain. The MCQs are more objective and essentially select type of item response format. MCQs have a cueing effect, which promotes guessing and leads to higher scores. In addition, writing MCQs of higher cognitive level of problem solving is challenging. On the contrary, the SEQs are more subjective and have a supply or construct type item response format, which does not have any cueing effect and can effectively assess problem solving skills.

Clinical exam and OSCE

Short case and OSCE will be used to evaluate clinical skills and procedural skills at the ward end of placement. The OSCE is a method of clinical skill assessment, and it has been reported to be appropriate for assessing learning achievement levels in the psychomotor and emotional domains, which are difficult to evaluate with written examinations.

Viva Voce

Viva voce is used for assessment of knowledge and problem solving ability of students. This method is useful evaluating cognitive domain.

Assignments

Students of different year will be given assignment of different nature such as research and literature search and surveys

INTERNAL ASSESSMENT

i. The weightage of internal assessment shall be 10% of totals marks.
ii. Continuous internal assessment shall consist of evaluation at the end of each assignments, e.g. stages/sub-stage, class tests etc., attitudinal assessment from educational supervisors.
iii. Assessment of knowledge, Skills and Attitude shall contribute toward internal assessment. Methods used to assess these domains shall include Multiple Choice Questions of one-best type, Short essay questions, Oral/Viva, and Practical/Clinical axaminations.
iv. The score of internal assessment shall contribute to the score in the final examination, Final university examination of each subject shall contribute 90 to total score, and the candidate shall pass in aggregate.
v. Proper record of continuous internal assessment shall be maintained.

LEARNING RESOURCES

The department of ENT will require following resources for implementation resources:

- Human resource
- Instructors (faculty members)
- Curriculum coordinator curriculum secretary
- Infrastructure
- Lecture hall with AV aids
- Tutorial room with AV aids
- Skills Lab
- Simulated patients and simulated manikins
- Computers

LISTS OF CONTENT RESOURCES

- Text book of ENT by Logan Turner. Latest Ed.
- Diseases of ENT by Dhengra. Latest Ed.
- Text Book of ENT by Masud.
- Oxford Hand Book of ENT by Prescott.
- Online Journals and Reading Materials through HEC Digital Library Facility.

CONTENTS MODULES

S.No	Topic
1	**Module 1** Nose
2	**Module 2** Disease of external nose
3	**Module 3** Diseases of septum
4	**Module 4** Rhinitis
5	**Module 5** Polyps
6	**Module 6** Foreign body nose
7	**Module 7** Sinusitis
8	**Module 8** Tumours
9	**Module 9** Buccal cavity, oral cavity, oropharynx
10	**Module 10** Larynx
11	**Module 11** Ear
12	**Module 12** Head & Neck
13	**Module 13** Clinical Skills
14	**Module 14** Instruments

IMPLEMENTATION

The curriculum will be spread over 2 year with 36 working weeks each year. During this period student will be exposed to various education strategies to achieve the learning objectives.

3rd Year.

In this year student will be exposed to do clinical rotation, ward visit and skills lab to develop understanding of ENT and its applied aspects.

Theory (Lecture, SGD and PBL)	Practical (Clinical rotation, CPC, Skill Lab)
25 Hours (36 Weeks)	25 Hours

4th Year.

In this year student will be exposed to do clinical rotation, ward visit and skills lab to develop understanding of ENT and its applied aspects.

Theory (Lecture, SGD and PBL)	Practical (Clinical rotation, CPC, Skill Lab)
50 Hours (36 Weeks)	50 Hours

Third Year			
	First term	Second term	Third term
1st Term			
2nd Term			
3rd Term			
Assessment			

Fourth Year			
	First term	Second term	Third term
1st Term			
2nd Term			
3rd Term			
Assessment			

THIRD YEAR WARD ROTATION IN EYE
Duration: 4 weeks (25 hours)
Location: ward, OPD, Tutorial room
Tutors: Assistant professor, associate Professor, Professor

	Ward	C	P	A	% age	Assessment
Week 1						
Week 2						
Week 3						
Week 4						
Week 5						
Week 6						

Evaluation:

- Attendance of 75% is mandatory
- 15 clinical histories must be completed on history register
- Every Saturday will be formative assessment for course work of that week
- End of course work will be ward test
- Ward test will be OSPE and 2 short cases

FOURTH YEAR WARD ROTATION IN EYE
Duration: 6 weeks (50 hours)
Location: Ward, OPD, Tutorial room
Tutors: Assistant Professor, Associate Professor, Professor

	Ward	C	P	A	% age	Assessment
Week 1						
Week 2						
Week 3						
Week 4						
Week 5						
Week 6						

Evaluation:

- Attendance of 75% is mandatory
- 15 clinical histories must be completed on history register
- Every Saturday will be formative assessment for course work of that week
- End of course work will be ward test
- Ward test will be OSPE and 2 short cases

PROGRAMME EVALUATION

Purpose of Evaluation

The major goals of the evaluation are to provide information that the students can use to achieve curricular objectives and that the faculty can use to monitor quality of and improve curriculum.

Design of Evaluation

The evaluation design as only posttest.

Users of evaluation: students, curriculum faculty, Principal Office

Resources: Curriculum faculty and departmental secretaries. No additional funding

Evaluation question:

- What percentage of students achieved 75% mandatory attendance?
- What percentage of students achieved pass marks in university exam?
- What are the strengths of the curriculum? What are the weaknesses? How can the curriculum can be improved?

Because of limited resources, the evaluation was kept simple. Data Collection was integrated into the curriculum schedule. The major goals of the evaluation are to provide information that the students can use to achieve curricular objectives and that the faculty can use to monitor quality of and improve curriculum. The evaluation design as only posttest.

End of curriculum evaluation form:

This will be filled by students and faculty members for evaluation of adequacy with each content was covered, whether they would recommend the curriculum to others and written comments on curriculum strengths, weaknesses and suggestions for improvements.

Annual Report:

Based on evaluation of the educational programe report will be generated annually and submitted to Medical Educational Department.

OPHTHALMOLOGY

TABLE OF SPECIFICATION (ToS)		
Sr. No.	**Topic Specification**	**SEQ's**
1	Espistaxis	01
2	Nasal Septum	01
3	Stridor	01
4	Larynx / infection	01
5	Tracheostomy	01
6	Deafness	01
7	Middle Ear	01
8	Ext. ear canal	01
9	Oropharynx	01
	TOTAL	09

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TABLE OF SPECIFICATION (ToS)		
Sr. No.	**Topic Specification**	**MCQ's**
1	Nasal polyp	02
2	Oral cavity	02
3	Nasal septum	03
4	Middle ear	07
5	Tumor Larynx	02
6	Larynx	05
7	Nose	04
8	Salivary gland	02
9	External ear	04
10	F/B Bronchus	01
11	Otosclerosis	02
12	CSF Rhinorrhea	01
13	Nose Sinuses	01
14	Vertigo	01
15	Oropharynx	03
16	Teacheostomy	01
17	Granulomatus disease	01
18	Tumor NPC	01
19	Tumour - Nose	01
20	Tumors	01
	Total	45

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Interactive Station 06 Stations
Non observed station 06 Stations

TABLE OF SPECIFICATION (ToS for OSPE)		
Sr. No.	**Topic**	**No. of Staion**
1	Ear (Instruments / Radiograph / Patient Specimen / Photograph)	02
2	Nose (Instruments / Radiograph / Patient Specimen / Photograph)	02
3	Throat (Instruments / Radiograph / Patient Specimen / Photograph)	02
4	Short case Ear	01
5	Short case Nose	01
6	Short case throat	01
7	History taking	01
8	Viva internal	01
9	Viva external	01
	Total	12

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FORMAT		
Sr. No.	**COMMENTS**	**MARKS**
1	**OSPE** 12 Stations (06 non-observed stations related to practicals (each of 04 marks)	**90**
2	**THEORY**	**90**
3	**INTERNAL ASSESSMENT**	**20**
	Total	**200**

Contents	Objectives	Domain	Strategy	Assess-ment
Module 1: Nose				
	• Anatomy and physiology • History taking and examination	C3 C3P2A2	LEC/SGD WARD/CBD	MCQ/SEQ OSPE
Module 2: Diseases of external nose				
	• Congenital lesions, choanal atresia, meningiocoele,encephalocoele, trauma, cut nose, fractures, external deformities.	C3	LEC/SGD	MCQ/SEQ
Module 3: Diseases of septum				
	• Epistaxis • DNS • Haematoma • Septal abscess • Perforation	C3 C3 C3 C3 C3	LEC/SGD LEC/SGD LEC/SGD LEC/SGD LEC/SGD	MCQ/SEQ MCQ/SEQ MCQ/SEQ MCQ/SEQ MCQ/SEQ
Module 4: Rhinitis				
	• Allergic • Atrophic • Hyper-trophic • Foreign bodies. • V.M.R.	C3 C3 C3 C3 C3	LEC/SGD LEC/SGD LEC/SGD LEC/SGD LEC/SGD	MCQ/SEQ MCQ/SEQ MCQ/SEQ MCQ/SEQ MCQ/SEQ
Module 5: Polyps				
	• Mucous • Ethmoidal • Antrochoanal • Bleeding polypus	C3 C3 C3 C3	LEC/SGD LEC/SGD LEC/SGD LEC/SGD	MCQ/SEQ MCQ/SEQ MCQ/SEQ MCQ/SEQ
Module 6: Foreign body nose				
	• Rhinolith • Maggots	C3 C3	LEC/SGD LEC/SGD	MCQ/SEQ MCQ/SEQ
Module 7: Sinusitis				
	• Acute sinusitis • Chronic sinusitis, complications • Fungal infection of nose and paranasal sinuses • CSF rhinorhea	C3 C3 C3 C3	LEC/SGD LEC/SGD LEC/SGD LEC/SGD	MCQ/SEQ MCQ/SEQ MCQ/SEQ MCQ/SEQ

Contents	Objectives	Domain	Strategy	Assess-ment
Module 8: Tumours				
	• Basal cell carcinoma	C3	LEC/SGD	MCQ/SEQ
	• Squamous cell carcinoma	C3	LEC/SGD	MCQ/SEQ
	• Pappiloma	C3	LEC/SGD	MCQ/SEQ
	• Osteoma	C3	LEC/SGD	MCQ/SEQ
	• Headache and its ent causes	C3	LEC/SGD	MCQ/SEQ
Module 9: BUCCAL CAVITY, ORAL CAVITY, OROPHARYNX				
	• Anatomy and physiology	C3	LEC/SGD	MCQ/SEQ
	• History and examination	C3P2A2	WARD/CBD	OSPE
	• ORAL CAVITY ULCERS: Traumatic, Aphthus, Vincents angina, Agranulocytic, Tuberculous, Maligant uclers, Thrush, Leukoplakia, Behcet's disease, Ulcerative lesions of oral cavity,	C3	LEC/SGD	MCQ/SEQ
	• OROPHARYNX	C3	LEC/SGD	MCQ/SEQ
	• Acute tonsillitis, Chronic tonsillitis, Peri tonsillitis and abscess, Diphtheria, Differential diagnosis of white patch on the tonsil, Tonsil/oral cavity	C3	LEC/SGD	MCQ/SEQ
	• Tumours of tonsil	C3	LEC/SGD	MCQ/SEQ
	• Retro-pharyngeal abscess	C3	LEC/SGD	MCQ/SEQ
	• Pharyngeal abscess acute/chronic	C3	LEC/SGD	MCQ/SEQ
	• Sleep apnea syndrome	C3	LEC/SGD	MCQ/SEQ
	• AIDS	C3	LEC/SGD	MCQ/SEQ
	• Ludwig's angina	C3	LEC/SGD	MCQ/SEQ

Contents	Objectives	Do-main	Strategy	Assess-ment
Module 10: LARYNX				
	• Anatomy, Physiology	C3	LEC/SGD	MCQ/SEQ
	• History, Examination	C3P2A2	WARD/CBD	OSPE
	• Glottic stenosis/larynogocoele, Laryngomalacia	C3	LEC/SGD	MCQ/SEQ
	• Truama, Foreign Body & Infections of Larynx	C3	LEC/SGD	MCQ/SEQ
	• Supraglottitis, Acute laryngitis	C3	LEC/SGD	MCQ/SEQ
	• Laryngotracheobronchitis, Diphtheria	C3	LEC/SGD	MCQ/SEQ
	• Chronic laryngitis, Tuberculosis	C3	LEC/SGD	MCQ/SEQ
	• Syphilis, Leprosy	C3	LEC/SGD	MCQ/SEQ
	• Non specific chronic laryngitis	C3	LEC/SGD	MCQ/SEQ
	• Vocal nodules, Vocal cord paralysis, Functional aphonia	C3	LEC/SGD	MCQ/SEQ
	• Tumuors	C3	LEC/SGD	MCQ/SEQ
	• Papilloma laryrnx	C3	LEC/SGD	MCQ/SEQ
	• Polyp	C3	LEC/SGD	MCQ/SEQ
	• Carcinoma larynx	C3	LEC/SGD	MCQ/SEQ
	• TNM classification	C3	LEC/SGD	MCQ/SEQ
	• Tracheostomy, Indications, Contra indications, Complication, Operation steps, Post op care	C3P2A2	WARD/CBD	OSPE

Contents	Objectives	Domain	Strategy	Assess-ment
Module 11: EAR				
	• Anatomy and physiology	C3	LEC/SGD	MCQ/SEQ
	• History and examination	C3P2A2	WARD/CBD	OSPE
	• Tuning fork tests. Pure tone audiometery/impedance audio metery	C3P2A2	WARD/CBD	OSPE
	• Pre auricular sinus	C3	LEC/SGD	MCQ/SEQ
	• Deafness, Pain in the ear	C3	LEC/SGD	MCQ/SEQ
	• External ear, Perichondritis, Trauma to pinna/haematoma, Wax ear, Foreign body ear, Hyper ostosis, Neoplasia, Boil ear, Fungus, Acute diffuse otitis externa, Malignant otitis externa, Myringitis bulliosa, Traumatic rupture	C3	LEC/SGD	MCQ/SEQ
	• Middle ear	C3	LEC/SGD	MCQ/SEQ
	• Acute otitis media	C3	LEC/SGD	MCQ/SEQ
	• Acute necrotising otitis media	C3	LEC/SGD	MCQ/SEQ
	• Serous otitis media	C3	LEC/SGD	MCQ/SEQ
	• Chronic otitis media (i Tubo tumpanic / ii Mucosal disease / iii Attico antral)	C3	LEC/SGD	MCQ/SEQ
	• Complications Of Otitis Media / Mastoiditis	C3	LEC/SGD	MCQ/SEQ
	• Oto toxicity	C3	LEC/SGD	MCQ/SEQ
	• Acustic trauma	C3	LEC/SGD	MCQ/SEQ
	• Trumatic perforation of tympanic membrane.	C3	LEC/SGD	MCQ/SEQ
	• Deaf child	C3	LEC/SGD	MCQ/SEQ
	• Speech therapy	C3	LEC/SGD	MCQ/SEQ
	• Oto sclerosis	C3	LEC/SGD	MCQ/SEQ
	• Vertigo, Meniere's disease	C3	LEC/SGD	MCQ/SEQ
	• Facial nerve paralysis	C3	LEC/SGD	MCQ/SEQ
	• Eustachean tube dysfunction	C3	LEC/SGD	MCQ/SEQ

Contents	Objectives	Domain	Strategy	Assess-ment
Module 12: HEAD & NECK				
	• Cleft palate, Hare lip	C3	LEC/SGD	MCQ/SEQ
	• Thyroglossal cyst / sinus, Pre auricular cyst / sinus, D/D of mass neck	C3	LEC/SGD	MCQ/SEQ
	• Lesions of salivary glands	C3	LEC/SGD	MCQ/SEQ
Module 13: CLINICAL SKILLS				
	• Demonstrate the use of the head mirror for adequate illumination of the nasal cavity	C3P2A2	WARD/CBD	OSPE
	• Examine the oropharynx and the neck	C3P2A2	WARD/CBD	OSPE
	• Examine Larynx by indirect laryngoscopy	C3P2A2	WARD/CBD	OSPE
	• Examination of postnasal space by posterior rhinoscopy.	C3P2A2	WARD/CBD	OSPE
	• SPECIAL SKILLS:	C3P2A2	WARD/CBD	OSPE
	• Use the tongue blade to aid inspection of the buccal/cavity.	C3P2A2	WARD/CBD	OSPE
	• Use the finger palpation examination of the oral cavity and tongue	C3P2A2	WARD/CBD	OSPE
	• Palpate the neck to assess the lymph-nodes and salivary glands in the neck.	C3P2A2	WARD/CBD	OSPE
	• Examination of cranial nerves	C3P2A2	WARD/CBD	OSPE
	• Identify structures (of the neck, sinuses and ear) on X-ray (MRI, CT Scan)	C3P2A2	WARD/CBD	OSPE
	• Demonstrate the appropriate use of nasal speculum	C3P2A2	WARD/CBD	OSPE
	• Demonstrate the use of otoscope to aid in examination of the external auditory canal and the tympanic membrane.	C3P2A2	WARD/CBD	OSPE
	• Learn pneumatic otoscopy. (Use of Seigle's speculum)	C3P2A2	WARD/CBD	OSPE
	• Demonstrate the use of tuning fork and interpret the findings	C3P2A2	WARD/CBD	OSPE
	• Interpret pure tone and speech audiometry	C3P2A2	WARD/CBD	OSPE
	• Syringing of ear.	C3P2A2	WARD/CBD	OSPE
	• Removal of wax from ear	C3P2A2	WARD/CBD	OSPE
	• Anterior nasal packing	C3P2A2	WARD/CBD	OSPE

Contents	Objectives	Domain	Strategy	Assess-ment
Module 14: INSTRUMENTS				
	• Ear instruments like myringotome and ear speculum	C3P2A2	WARD/CBD	OSPE
	• Walsham's Forceps, Ashe's Forceps	C3P2A2	WARD/CBD	OSPE
	• Trocar and Cannula	C3P2A2	WARD/CBD	OSPE
	• Nasal Speculum	C3P2A2	WARD/CBD	OSPE
	• Freer elevator	C3P2A2	WARD/CBD	OSPE
	• Suction Tube	C3P2A2	WARD/CBD	OSPE
	• Lucl's forceps	C3P2A2	WARD/CBD	OSPE
	• Tilly Nasal Dressing Forceps	C3P2A2	WARD/CBD	OSPE
	• Bayonet Nasal Forces	C3P2A2	WARD/CBD	OSPE
	• Myle's Retrograde Perforator.	C3P2A2	WARD/CBD	OSPE
	• Nasal Snare	C3P2A2	WARD/CBD	OSPE
	• Balenger Swivel Knife	C3P2A2	WARD/CBD	OSPE
	• Eustachean Catheter	C3P2A2	WARD/CBD	OSPE
	• Sinus forceps	C3P2A2	WARD/CBD	OSPE
	• Endotracheal tube, cuffed, non-cuffed	C3P2A2	WARD/CBD	OSPE
	• Mcgill forceps	C3P2A2	WARD/CBD	OSPE
	• Tracheostomy tubes	C3P2A2	WARD/CBD	OSPE
	• Tracheal dilator	C3P2A2	WARD/CBD	OSPE
	• Retractors	C3P2A2	WARD/CBD	OSPE
	• Crecoid hook	C3P2A2	WARD/CBD	OSPE
	• Endoscopes	C3P2A2	WARD/CBD	OSPE
	• Laryngoscopes, Bronchoscopes, Oesophagoscopes, Nasopharyngoscope (Rigid/flexible)	C3P2A2	WARD/CBD	OSPE
	• Adenoid curette	C3P2A2	WARD/CBD	OSPE
	• Boyle Davis mouth gag	C3P2A2	WARD/CBD	OSPE
	• Tonsil holding forceps	C3P2A2	WARD/CBD	OSPE
	• Tonsilar artety forceps	C3P2A2	WARD/CBD	OSPE
	• Tonsil snare	C3P2A2	WARD/CBD	OSPE
	• Knot pusher			

Domain	Level
Knowledge	**C1** Knowledge **C2** Comprehension **C3** Application **C4** Analysis **C5** Synthesis **C6** Evaluation
Psychomotor	**P1** Observe **P2** Practice **P3** Adjust **P4** Master **P5** Develop **P6** Construct
Affect	**A1** Receiving **A2** Responding **A3** Valuing **A4** Organization **A5** Characterization