MASTER OF MEDICINE (OTORHINOLARYNGOLOGY – HEAD AND NECK SURGERY)

Department of Otorhinolaryngology – Head And Neck Surgery
School Of Medical Sciences
Universiti Sains Malaysia
Health Campus
16150 Kubang Kerian
KelantaN

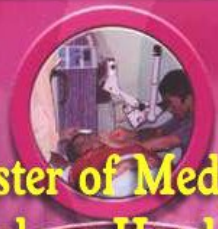
TRAINING CURICULUM FOR TRAINEES AND SUPERVISORS UNIVERSITI SAINS MALAYSIA

-2022-

PPSP/PG/ORL-HNS/CP1/IR1(a)

UNIVERSITI SAINS MALAYSIA

DEPARTMENT OF OTORHINOLARYNGOLOGY-HEAD & NECK SURGERY UNIVERSITI SAINS MALAYSIA, HEALTH CAMPUS



Master of Medicine
Otorhinolaryngology-Head & Neck Surgery

MANUAL FOR CANDIDATES AND SUPERVISORS

EDITION 2021

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MISSION STATEMENT

UNIVERSITI SAINS MALAYSIA

USM is a pioneering, trans-disciplinary research intensive university that empowers future talents and enables the bottom billions to transform their socio-economic well-being

SCHOOL OF MEDICAL SCIENCES

The School of Medical Sciences, USM will strive to be the centre of academic excellence, providing medical services of highest standard and be a leader in research and innovation in the field of medical sciences and technology.

DEPARTMENT'S MESSAGE

Congratulations that you have chosen Department of Otorhinolaryngology- Head and Neck Surgery (ORL-HNS), School of Medical Sciences, Universiti Sains Malaysia as your specialty training ground.

The department is proudly committed to lay out a fertile field for knowledge acquirement. The harvest depends on your versatility, far sightedness and commitment.

Besides the bread and butter of ORL-HNS, practical training in bioethics, statistics and basic surgical skills has been pride of USM. Teleconferencing has made it possible for our candidates to be placed in other hospitals during the first two years.

Peer guidance, self study and group discussion has always helped to mature the training. The consultants' guidance during the 'specialist-in-training' period has made candidates more independent and ready to serve the country and the ever challenging world. Producing an ever versatile 'global ORL-HNS surgeon' is our aim. May God help us.

Good luck.

Prof. Dr Mohd Khairi Md Daud Head of Department,
Department of Otorhinolaryngology-Head & Neck Surgery
School of Medical Sciences
Universiti Sains Malaysia, Health Campus

RSE STRUCTURE

PHASE	YEAR	ROTATION POSTING
I	1	ORL-HNS
		General Surgery (if required)
		PROFESSIONAL I EXAMINATION
II	2	Otology/Neuro-otology Rhinology Laryngology Head & Neck Surgery Pediatric ORL
	3	Maxillofacial Plastic Surgery Neurosurgery Intensive Care (Anestesiology)
III	4	(The list as above)
		PROFESSIONAL II EXAMINATION (FINAL EXAM)

The Master of Medicine (Otorhinolaryngology-Head & Neck Surgery) is a 4 year structured course devided into 3 phases. The first 2 years can either be in-campus or outside in a recognised hospital while the last 2 years is usually in-campus.

1. THE COURSE IS DIVIDED INTO 3 PHASES:

(a) Phase I (Year 1) consists of basic medical and surgical sciences.
(b) Phase II (Year 2 & 3) consists of posting of subspecialties.
(c) Phase III (Final Year) the candidate is groomed as "specialist in training" taking full responsibilities of the patients under the supervision of a consultant

1.1 PHASE I (YEAR I)

(a) Candidate has to have an in-depth knowledge and understanding of relevant anatomy, physiology, medical microbiology and path-ophysiology of diseases.
(b) Enhancing the skills of history taking and physical examination.
(c) Understanding the community problems in relation to ORL-HNS.
(d) Understanding the principles of ORL-HNS operations, surgical complications and rehabilitation.

Placement and learning methods

1.1.1 Candidates will be placed in HUSM or other recognized centers where they will be exposed to basic surgical concepts of ORL-HNS.
1.1.2 Other recognized centers include government hospitals whether in the Ministry of Health or University hospitals and other recognized institutions overseas.
1.1.3 Candidates will work alongside their lectures and specialists to ensure that they acquire the required skill in managing the patients.
1.1.4 To assist in these learning processes, the school will provide the relevant facilities such as audiovisual materials, text books and journals.
1.1.5 Teleconferencing facilities are provided for the teaching of basic sciences.
1.1.6 Two intensive courses are organized every year followed by end of course examinations.

1.2 PHASE II (YEAR 2 AND 3)

This phase is organized based on rotation to the following subspecialties;

1. Otology/Neuro-otology
2. Rhinology
3. Laryngology
4. Head & Neck Surgery
5. Pediatric ORL
6. Audiology & Speech Therapy
7. Maxillofacial Surgery
8. Plastic Surgery
9. Neurosurgery & Neurology
10. Intensive Care & Anesthesiology

Priority is given to the first 6 subspecialties. With these rotations, the phase II candidate will be expected to;

(a) Have a good and thorough workup of the patients consistent with their diagnosis
(b) Manage the patients according to the current and up to date knowledge.
(c) Complete their dissertation, case write-up and log book.

Placement and learning methods

Candidates will undergo the subspecialty rotation in the department of ORL-HNS, HUSM or other recognized hospitals, locally or abroad.

1.3 PHASE III (YEAR 4)

As a specialist in-training, the candidates have to achieve a high standard of patient care and management especially;

(a) Update the management of patients and surgical skills
(b) Managing the support staff
(c) Perform research activities in year 4 and update the requirements of the log book.

Placement and learning method

Candidates will be placed full time in the department or ORL-HNS, USM or other recognized learning institutions.

2. TEACHING AND LEARNING METHODS

2.1 A detailed course curriculum & content is provided.

2.2 The school will make available the lecture notes, text books medical journals and audio visual materials from time to time.

2.3 Schedules of the lectures, seminars, demonstrations, clinics and operations will be made available.

2.4 The school will provide skill laboratories for the purpose of temporal bone dissections and other related skills. They are also encouraged to attend temporal bone courses elsewhere.

2.5 Candidates will have to prepare case write-ups according to the department's discretion.

2.6 Candidates have to attend and take part in all the activities planned by the department.

2.7 The school will establish other appropriate methods from time to time.

2.8 Log Book – An updated log book has to be maintained through out the four years to reflect their continuous medical learning.

2.8.1 Candidates have to fill up the log books according to the operations and procedures done or observed.

2.8.2 The candidates have to get checked their log books by the supervisor from time to time as this is a prerequisite for appearing in the final examination.

2.8.3 The log book will be finally submitted before the exam and will be the property of the university

2.9 Candidate placement

The candidate placement will be decided by the Post Graduate Committee with the advice from the Department of ORL-HNS.

2.10 Dissertation

2.10.1 Dissertation Process for MMed ORL-HNS

TIME	PROCESS
PHASE II (Year 2 & 3)	
0-3 months **4-6 months**	Prepare research proposal Submit to USM Research & Ethical Committee
7-24 months	Collect and analyse data
PHASE III (Year 4)	
25– 30 months	Write up, corrections and submission (6 month before end of Phase III)
31– 36 months	Dissertation examined by examiners

2.10.2 Candidates involvement in research activities will enable them to gain knowledge in research methodologies and data analysis.

2.10.3 Candidates will propose a dissertation topic once they have completed phase I.

The proposal should be ready within 3 month after the phase I exam. Collection of data should only be started once the topic has been approved by the Postgraduate Committee.

2.10.4 A Supervisor will be appointed to supervise the research. Progress report should be submitted to the supervisor and Head of Department every 6 months.

2.10.5 Submission dateline for the dissertation is 6 months before the scheduled dates of final exams i.e. 1st November for the May exams and 30th April for the November examinations. Students will be barred from the exam if they fail to meet the dateline.

The dissertation will have to be presented to the department/external examiner during the examination, in an oral presentation form.

2.10.6 Evaluation of dissertation: At least a "satisfactory" remark is needed in order to sit for the final year exam.

2.10.7 Preparations of dissertation

(i) The topic has to be specific
(ii) The length is between 20,000 – 25,000 words (excluding figures, tasks and references)
(iii) The discussion should be 30% - 40% of the dissertation.

Candidate should refer to the Post Graduate Section for the latest guide for the preparation of dissertation for MMed programme.

2.11 Sequence for the dissertation writing shall be as follows.

i. Acknowledgement
ii. Table of contents
iii. Lists of tables
iv. Lists of figures
v. Lists of pictures / photographs
vi. Lists of abbreviations if used
vii. Lists of definitions / terminologies
viii. Abstract in Malay & in English

Chapter 1 Introduction/Literature review
Related Topics — Anatomy and pathophysiology
Historical background
Treatment ……. Medical and Surgical

Chapter 2 Aims and Objectives

Chapter 3 Methodology
Sample size calculation
Patients selection
Ethical issues
Inclusion criteria
Exclusion criteria
Flow chart
Statistical analysis

Chapter 4 Results
Chapter 5 Discussion
Chapter 6 Conclusion
Chapter 7 Recommendations
Chapter 8 Limitations (if any)
Chapter 9 References
Chapter 10 Proforma (if any)

Permission letter from ethical committee

3. MONITORING AND PROGRESS REPORT

3.1 The school will appoint one ORL-HNS specialist as a supervisor for each candidate

3.2 For phase I and phase II candidates who are outside USM, the school will appoint the specialist in the respected hospitals to be the supervisor.

3.3 These supervisors will have to submit a progress report to the head of department of ORL-HNS every 3 months

3.4 The report will be handed over to the Post Graduate Committee.

4. EXAMINATION AND EVALUATION

4.1 Candidate has to have a continuous "satisfactory" report from the supervisors duly approved by the department in order to sit for the final examination. Interest and active participation in all the academic activities including combined clinics will also be taken into account.

An active participation in the various departmental activities including administrative and clinical duties as assigned by the head of the department is a mandatory part of training.

4.2 Criteria to continue from Phase I to Phase II

1. Pass the professional exam I
2. Approved by the examiner and School Board
3. Approved by the University Senate

4.3 Criteria to continue from Phase II to Phase III

1. Completion of the clinical rotation satisfactorily
2. Satisfactory supervisor report
3. Satisfactory dissertation research progress

4.4 Criteria for passing Phase III

1. Pass the Part 2 exam
   Passing the professional exam (end of Year 4), held conjointly with other universities.
   i. Overall mark of 50% or more
   ii. Passing all components with at least 50% marks
   -Theory
   -Clinical
2. Satisfactory supervisor report
3. Submitted a completed and satisfactory dissertation
4. Satisfactory case reports

4.5 Requirement to sit for the professional exam

i. A satisfactory report from the supervisor regarding attitude, attendance, clinical skills and theoretical knowledge.
ii. A satisfactory log book
iii. Achieving at least 50% of the continuous assessment (supervisor report, subspecialty rotation report and progress chart)
iv. Dissertation completed and accepted satisfactorily
V. Satisfactory completion of case reports

4.6 Phase I evaluation

4.6.1 Assessment system:

Candidates must achieve at least 50% in order to enter the professional I exam course
Professional exam I
Theory : MCQ - 30%
(60 questions of TRUE/FALSE answers; with minus marks for-wrong answers but not carried forward)
Essay:- 30%

Clinical (in OSCE form): 20%
(Short essays in 5 divisions , usually 10 station plus 5 interactive)

Viva : 20%
(In anatomy and physiology panel)
Total 100%

Candidates must pass in all 3 components separately i.e. theory, clinical and viva, while securing at least 50% of the total.

4.7 Phase II evaluation

4.7.1 The assessment is done through out the phase through;

i. End of clinical rotation supervisors report
ii. Short essays - Year 2
Year 3
Iii. Progress of case reports and dissertation

4.8 Phase III evaluation

Marking system: Continuous assessment: a requirement to enter exam. Must achieve at least 50% in Year 2, Year 3 and Year 4.

"Satisfactory" supervisors report for the conduct, training and dissertation progress.

4.8.1 Profesional exam II

i.	Theory		40%
	MCQ :	20%	
	Essays :	20%	
ii.	Clinical		40%
	Long Case:	20%	
	Short Case:	20%	
iii.	Viva (2 sessions)		20%
	Viva I:	10%	
	Viva II:	10%	
	Total:		100%

A candidate must pass securing (at least 50% marks) in every 4 components separately i.e. Theory, Long Case, Short Case and Viva. In addition, for the short case, a candidate is considered fail if he/she: gets mark less than 50% in at least 2 rooms or gets mark less than 40% in at least one room.

4.9 Grading System

Grade	Marks	
A	>70%	Excellent
B	60-69%	Pass with credit
C	50-59%	Pass
F	<50%	Fail

A candidate who has obtained 70% and more will be awarded an excellent pass or grade A.

4.10 Remedial Exam

A candidate who has failed the professional exam, may be permitted to sit for the remedial examination after six months or 1 year depending on the decision made by the school board.

5. **PERIOD OF CANDIDATURE**

The minimum period of candidature is 4 years and the maximum period is 7 years. However, extension of maximum period may be considered by the University Senate based upon the recommendation of the School of Medical Sciences under circumstances.

6. **POSTPONEMENT OF COURSE**

The candidate may ask for the postponement of course with or without penalty for reasons accepted by the School Board and University Senate. However, postponement only can be taken twice during the course and the total duration of postponement shall not be more than one year.

7. TERMINATION

A candidate may be asked to withdraw from the course by the University Senate upon the recommendation of the School Board if;

7.1 His/ her performance during any part of the course was found to be unsatisfactory by the School Board, after consultation with the Supervisors and Head of Department of ORL-HNS.

7.2. A breach of discipline relating to the University or Hospital regulations had been incurred.

7.3. Malpractice or criminal intent was proven

7.4. He/she fails to register annually without prior written permission from the University

7.5 He/she had presented himself/herself more than three occasions for the same examination

7.6 He/she had been deregistered by the Malaysian Medical Council

7.7 The physical and mental condition of the candidate does not allow him/her to function effectively

B. LEVEL OF COMPETENCE ACCORDING TO PHASE

LEVEL OF COMPETENCE ACCORDING TO PHASE

A. PHASE I

Candidates are required to understand the basic sciences which includes anatomy, physiology, pathology, microbiology, pharmacology and principles of surgery and their application in the daily management of ORL-HNS cases. By the end of the posting they are required to be able to do the basic operations stated below and to gain mastery in history taking especially with reference to ORL-HNS diseases and problems. They should be able to do and correct ORL-HNS examination and related findings.

B. PHASE II

Candidates are exposed to management of more complex cases. They are required to assist or perform the operation under the guidance of a specialist.

C. PHASE III

Candidates are considered as specialist-in-training. They are required to manage complex cases and surgery with specialist guidance. As a senior candidates they are required to work as registrars, second on-call and to guide the junior candidates regarding academic and technical skills.

Title of the list

I. PHASE I (YEAR I)

1. Submucous diathermy of inferior turbinates
2. Antral washout
3. Antrostomy
4. Intranasal polypectomy + Biopsy
5. Trimming of inferior turbinates
6. Nasopharyngoscopy
7. Oesophagoscopy + F.B. Removal
8. Direct laryngoscopy
9. Tracheostomy
10. Aural polypectomy
11. Myringotomy
12. Gromet insertion
13. Tonsillectomy/Adenoidectomy
14. Excision biopsy of neck lumps
15. Auricular cysts and sinus excision

II. PHASE II (YEAR 2 & 3)

As first assistant or surgeon:

1. First 3 months as above (in phase I)
2. Myringoplasty + other tympanoplasty procedure
3. Meatoplasty
4. Mastoidectomy - Cortical
   - Modified radical
   - Radical
5. Bronchoscopy
6. Parotidectomy – Superficial & Total
7. Other Salivary Gland Surgery
8. Glossectomy & Repair
9. Ethmoidectomy -Intranasal
   -External
10. Frontal Sinus Surgery
11. Lateral Rhinotomy
12. Rhinoplasty
13. Septorhinoplasty
14. Transantral – vessel Ligation
15. Transpalatal Procedures
16. Maxillectomy - Partial
    - Total
    - With Orbital Exenteration
17. Thyroidectomy
18. Laryngectomy
19. ELMS/Laser laryngeal surgery
20. Neck Dissection
21. Lateral Pharyngotomy
22. Facial Fracture Reductions
23. Flaps and Fistula Closure
24. Temporal bone lab. work
25. Laryngotracheal reconstruction

III. PHASE III (YEAR 4)

Candidates are encouraged to perform operations of phase II themselves or under the supervision of a consultant.

C. CURRICULUM GUIDELINES

PHASE 1 (YEAR 1)

1. PHYSIOLOGY

OBJECTIVE: To equip the candidate with sufficient physiological knowledge in areas related to Otorhinolaryngology-Head & Neck Surgery.

TOPICS:

1. Physiology of hearing
2. Physiology of equilibrium
3. Physiology of the nose and paranasal sinuses including mucosal secretions.
4. Physiology of the ears and paranasal sinuses in diving and flying.
5. Physiology of the salivary glands
6. Physiology of deglutition
7. Physiology of respiration
8. Physiology of smell and taste
9. Physiology of wound healing
10. Physiology of speech
11. Neurophysiology
12. Physiology of pain
13. Regulation of respiration
14. Cardiovascular regulation
15. Acid-base regulation
16. Nutrition and metabolism
17. Temperature regulation

2. ANATOMY

OBJECTIVE: To equip the candidate with adequate anatomical knowledge of the head, ear, nose, throat, neck and other related areas.

TOPICS:

Embryology

1. General embryology of the head and neck including development of Bronchial apparent

2. Head and Neck

- 2.1 Skull
- 2.2 Face
- 2.3 Eye and Orbit
- 2.4 Ear and temporal bone
- 2.5 Nose and paranasal sinuses
- 2.6 Neck
- 2.7 Larynx & Pharynx
- 2.8 Central Nervous System
- 2.9 Cranial nerves
- 2.10 Blood supply & Lymphatics
- 2.11 Oral cavity

3. Abdomen

- 3.1 Stomach
- 3.2 Oesophagus
- 3.3 Colon
- 3.4 Liver, spleen and kidneys

4. Thorax

- 4.1 Thoracic cage
- 4.2 Respiratory system
- 4.2 Mediastinum

5. Histology

- 5.1 Cell, Epithelium
- 5.2 Muscular tissue
- 5.3 Connective tissue
- 5.4 Nervous tissue
- 5.5 Skin and mucous membrane
- 5.6 Circulatory & Lymphatic Systems
- 5.7 Digestive
- 5.8 Respiratory system including nose and paranasal sinus and nasopharynx
- 5.9 Special senses

3. **PATHOLOGY**

OBJECTIVE: To equip the candidate sufficiently in the pathology related to ORL-HNS

1. Inflammation
    - 1.1 Basic
    - 1.2 Resolution & Progression
    - 1.3 Sequelae

2. Granulomatous inflammation
    - 2.1 Concepts
    - 2.2 Tuberculosis
    - 2.3 Syphilis and fungi

3. Degenerations & Infiltrations
    - 3.1 Types
    - 3.2 Fatty change
    - 3.3 Amyloidosis

4. Thrombosis
    - 4.1 The process
    - 4.2 Factors
    - 4.3 Effects

5. Wound healing and repair
    - 5.1 Process of wound healing
    - 5.2 Sequelae and complications
    - 5.3 Healing of fracture & nerve

6. Circulatory disturbances
    - 6.1 Congestion, hyperaemia, shock
    - 6.2 Embolism
    - 6.3 Ischaemia & infiltration

7. Immune response
    - 7.1 Humoral response
    - 7.2 Cell mediated immunity
    - 7.3 Complement

8. Radiation Injury
    - 8.1 Radiobiology
    - 8.2 Early effects of radiation
    - 8.3 Late effects of radiation

3.9 Dysplasia & Neoplasia
- i. Definition, nomenclature
- Ii. Carcinogenesis
- Iii. Oncogenes

3.10 Neoplasia
- i. Why tumours metastasise
- ii. Immunity & neoplasia
- iii. Tumour markers, concepts & applications

3.11 Bone & soft tissue tumours
- i. Benign neoplasms of bone & cartilage
- ii. Malignant neoplasms of bone & cartilages
- Iii. Common soft tissue tumours

2.12 Principles of Transplantation
- i. Various types of transplants & indications
- ii. Outline of technique, preparation of patient & donors
- iii. Complication

2.13 Disorder of white cells
- i. Normal haemopoiesis
- ii. Benign disorder of WBC
- iii. Malignant disorders of WBC

3.14 Normal haemopoiesis & disorders of red cells
- i. Normal Haemopoiesis
- ii. Anaemia – different types
- iii. Clinical effects & management of patients

3.15 Platelet function, coagulation defects & DIVC
- i. Normal Haemostasis
- ii. Hereditary coagulation disorders
- iii. Acquired Coagulation disorders including DIVC

3.16 Medical Genetics - I
- i. Basic DNA structure & function
- ii. Methods of inheritance
- iii. Recombinant DNA technology

3.17 Medical Genetics - II
- i. Chromosomal abnormalities
- ii. Abnormalities of genes
- iii. Genes and cancer

3.18 Principles of blood transfusion
i. Component therapy – concept, preparation, storage
ii. Issue of blood product transfusions (red cells, platelets, plasma products)
iii. Clinical problems associated with blood transfusions

3.19 Protein & steroid hormone receptors
i. Hormone receptors
ii. Action on cells
iii. Receptor assay and their significance

4. MEDICAL MICROBIOLOGY

OBJECTIVE: To equip the candidate with sufficient microbiological knowledge in areas related to ORL-HNS

TOPICS:

1. Pathogenesis and virulence in bacterial infections.
2. Bacteriology of wound infections
3. Antimicrobial therapy
4. Chronic and apportunistic infections
5. Head and neck infections
6. Basic concepts of viral infections
7. Viral hepatitis
8. HIV infections
9. Intrauterine Infections
10. Disinfections & Sterilization
11. Prevention & Control of Hospital Infections
12. Fungal Infections

5. **PRINCIPLES OF SURGERY**

OBJECTIVE: To equip the candidate with basic medical sciences to enable him to provide good patient care

TOPICS:

1. Investigations in surgical practice
2. Principles of organ imaging
3. Surgical endoscopy
4. Water and electrolyte balance
5. Surgical metabolism and nutrition
6. Surgical hematology and transfusion practice
7. Surgical infections
8. Pharmacology for surgeons
9. Prosthetic material and grafts
10. Preoperative assessment and management
11. Laser and diathermy
13. Principles of general anesthesia
14. Hazards and precautions in operating theatre
14. Principles and anatomy of surgical access
15. Principles of surgical egress
16. Post operative care and complications
17. The intensive care unit
18. Principles of vascular surgery
19. Surgical oncology and radiotherapy
20. Psychosocial problems in surgery
21. Surgical epidemiology

PHASE II (YEAR 2 AND 3)

1. SYSTEMIC LECTURES/SEMINAR

1.1 EAR

1. Development of the Ear the & Temporal Bone
2. Anatomy of the Ear
3. Physiology of hearing and equilibrium
4. Radiology of Temporal Bone
5. Symptoms of Ear diseases and principles of local aural treatments
6. Otitis External & Otalgia
7. Deafness
8. Acute inflammation of middle ear, investigation and management
9. Chronic middle ear disease, etiology and pathology
10. Management of Chronic Middle ear disease
11. Complications of middle ear disease
12. Acute & Chronic Mastoiditis
13. Sensorineural deafness and deafness of sudden onset
14. Vertigo – Classification, etiology and investigation, pathology and principle of treatment
15. Facial nerve palsy investigation and management

1.2 NOSE & SINUSES

1. Anatomy of nose, paranasal sinuses, pterygomaxillary & pituitary fossa.
2. Physiology of nose, paranasal sinuses and pituitary gland.
3. Cosmetic facial surgery – Rhinoplasty, Post traumatic facial reconstruction.
4. Diseases of the nasal septum
5. Rhinitis – Allergic including immunology
6. Non allergic rhinitis
7. Intrinsic rhinitis
8. Sinusitis – acute
9. Sinusitis – chronic
10. Radiology of the nose paranasal sinuses & pituitary fossa
11. Epistaxis
12. Nasal Polyposis
13. Fungal rhinusitis
14. Tests for allergy
15. Facial injuries – soft tissue and skeletal injuries

1.3 HEAD AND NECK

1. Anatomy of the neck
2. Neck lumps
3. Metastatic neck glands
4. Anatomy of the Thyroid gland
5. Diseases of the Thyroid gland
6. Radiotherapy in Head & Neck & its complications
7. Tracheotomy, Intubation & Tracheostomy – indications and management
8. Dysphagia and its management
9. Anatomy of the pharynx & fauces
10. Tumours of nasopharynx
11. Tumours of oropharynx
12. Diseases of tonsils
13. Anatomy of the oral cavity & floor of the mouth
14. Anatomy of the larynx
15. Physiology of respiration & larynx
16. Hoarseness of voice – approach
17. Infections of the larynx & trachea
18. Obstructive Airway Disease – Assessment & Management
19. Tumours of larynx

1.4 AUDIOLOGY & VESTIBULOMETRY

1. Basic Acoustic Physics
2. Electronic and Electroacoustic Technology
3. The Normal Hearing
4. Basic Audiometry
5. Advanced Audiometry
6. Vestibular function and testing
7. Hearing screening
8. Pediatric audiology

1.5 PAEDIATRIC ORL

1. Infective paediatric diseases
2. Paediatric airway
3. Common congenital craniofacial anomalies in ORL
4. Paediatric hearing and speech problems
5. Sleep apnoea

1.6 SPEECH THERAPY

1. Communication methods in hearing impaired
2. Voice disorders
3. Conservation of Speech
4. Articulation therapy
5. Speech in cleft lip and palate
6. Vocal hygiene

1.7 GENERAL

1. Intensive care
2. Laboratory investigation of intensive care
3. Pharmacology in ORL
4. Foreign Bodies
5. ORL-HNS Emergencies

2. OPERATIVE SURGERY (LECTURES/SEMINARS)

2.1 EARS

1. Meatoplasty & surgery of exostosis
2. Myringoplasty principles & techniques
3. Standard incision for exploration of middle ear cleft
4. Cortical Maastoidectomy
5. Cortical Mastoidectomy with exposure of facial nerve and ossicular chain from posteriorly
6. Radical mastoidectomy
7. Modified radical mastoidectomy
8. Combined approach tympanoplasty
9. Anterior and posterior epitympanotomy

2.2 NOSE & SINUSES

1. Removal of foreign bodies
2. Diathermy coagulation for nasal obstruction
3. Septal correction
4. Surgery of the Turbinates
5. Operation for epistaxis – ligation of surgical management for epistaxis ligation of:-
    a) Ethmoidal artery
    b) Maxillary artery
    c) External carotid artery
6. Management of Acute nasal fractures
7. Removal of rhinophyma
8. Choanal atresia and stenosis
9. Operation for sinonasal tumours
    a) Benign tumours - Angiofibroma
        - Popillopmas (everted & inverted)
        - Haemagiomas
    b) Malignant tumours:
        i. Nose
        ii. Sinus
10. Surgical management of nasal polyposis
11. Antral puncture
12. Intranasal autrostomy
13. Caldwell Luc's operation
14. External ethomoidectomy
15. Trephining of Frontal Sinus

16. Operation for mucocoeles
17. Partial maxillectomy
18. Total maxillectomy

2.3 HEAD & NECK

1. Principles of Cancer surgery
2. Principles of recontruction
    a) skin grafting
    b) normal care plasty
    c) muscle & myocutaneous flaps
3. Pre op consideration
4. Operative techniques
5. Tracheostomy, intubation and care
6. Complications of Head & Neck Surgery
7. Neck Lumps
8. Metastatic Neck glands
9. Radical neck dissection
10. Tumours of Nasopharynx
11. Tumours of Larynx
12. Tumours of Salivary glands
13. Radiotherapy in Head and Neck and complications
14. Chemotherapy
15. Endolaryngeal microsurgery
16. Total laryngectomy
17. Endoscopies (fibre-optic & rigid):
    - Sinuscopy
    - Nasopharyngoscopy
    - Laryngoscopy
    - Bronchoscopy
    - Oesophagoscopy
18. Thyroid
19. Superficial parotidectomy
20. Submandibular gland surgery
21. Removal of calculi from submandibular duct
22. Partial resection of tongue
23. Resection of lateral border of tongue
24. Flaps (Reconstruction)
    - Fore-head - Delto-pectoral
    - Nape of Neck - Postero lateral - Naso-labial

2.4 PEDIATRIC ORL

1. Operation for pediatric airway
2. Surgery for craniofacial anomalies
3. Pediatric otology operation
4. Surgery for pediatric infective diseases
5. Pediatric sleep apnoea

3. TUTORIAL (INCLUDING DEMONSTRATIONS)

3.1 AUDIOLOGY TESTING

1. Pure Tone audiometry
2. Speech audiometry
3. Free field audiometry
4. Distraction test
5. Play audiometry
6. Tympanometry and stapedial reflex
7. ABLB, LDC, SISI & tone decay
8. Hearing aids analyser
9. Auditory Brains Response (ABR)
10. Otoacoustic emissions (OAE)

3.2 VESTIBULAR TESTING

1. Positional testing
2. Caloric tests
3. Rotational tests
4. Optokinetic test
5. Electronystagmography
6. Posturography
7. Exercises for dizziness

3.3 SURGERY (DAY CARE)

1. Superficial cautery of nasal turbinate
2. Submucous cautery of nasal turbinates
3. Biopsy from postnasal space
4. Myringotomy
5. Myringotomy and grommet insertion
6. Microscopic suction clearance of ear
7. Antral washout
8. Fibreoptic endoscopy

3.4 FACIAL NERVE TESTING

1. Schirmer's Tests
2. Eletrogustometry
3. Stapedial reflex
4. Nerve Stimulation tests
5. Electromyography

3.5 ALLERGY TESTING

4. PRACTICALS

4.1 AUDIOLOGY

1. Pure Tone Audiometry
2. Speech Audiometry
3. Free Field Audiometry
4. Distraction test
5. Play Audiometry
6. Tympanometry and stapedial reflex
7. ABLB, LDC, SISI & tone decay
8. Auditory Brainstem Response
9. Otoacoustic emission
10. Hearing aids analyzer

4.2 VESTIBULAR

1. Positional Testing
2. Caloric Test
3. Rotation Tests
4. Optokinetic Test
5. Electronystagmopgraphy
6. Postunography

4.2 SPEECH THERAPY

4.3 SURGERY (Day Care)

4.4 FACIAL NERVE TESTING

5. JOURNAL SESSION (EVERY WEEK)

6. MICROSURGERY PRACTICALS

7. PATHOLOGY REVIEW

8. RADIOLOGY REVIEW

9. CASE PRESENTATIONS

PHASE III (YEAR 4)

1. LECTURES (SEMINARS)

1.1 EAR

1. Congenital malformation of external ear and their correction
2. Injury of ear (outer, middle and inner)
3. Eustachian tube function, methods of investigations and management
4. Tympanosclerosis and management
5. Otosclerosis – Pathology, diagnosis and treatment
6. Management of complications of middle ear disease
7. Tumours of the ear
8. Congenital malformation of middle ear & its management
9. Unilateral sensory neural deafness
10. Noise induced deafness, industrial noise and its management
11. Deafness of old age and ototoxicity
12. Vertigo its classification, etiology and investigation, pathology and principles of treatment
13. Congenital deafness
14. Facial nerve palsy investigation and management

1.2 NOSE & SINUSES

1. Cosmetic facial surgery – Rhinoplasty
2. Cosmetic facial surgery
   - Mentoplasty
   - Blepharoplasty
   - Dermabrasion
   - Rhytidectomy
3. Complications of sinus diseases
4. Tumours of the nose & sinuses
5. Dental & ORL-HNS
6. Orbit & ORL-HNS
7. Tumours of pituitary gland
8. Rhinomanometry
9. Rhinophyma, Furunculosis, Foreign Bodies, Rhinoliths,
10. Choanal atresia – Posterior & Anterior
11. Management of facial pains
12. Facial pain
13. Antral fistula and management
14. The catarrhal child

1.3 HEAD & NECK AND LARYNX

1. Diseases of salivary glands
2. Tumours of salivary glands
3. Tumours of the Thyroid gland
4. Tumour Immunology
5. Laryngeal diseases in infants & children
6. Complicaitons of Head & Neck surgery & their management
7. Carcinoma of Oesophagus
8. Neck injuries
9. Vocal cord palsy & management
10. Ulcers of oral cavity
11. Tumours of oral cavity & floor of mouth
12. Diseases of Laryngopharynx
13. Tumours of Laryngopharynx
14. Cleft palate & cleft lip

1.4 AUDIOLOGY

1. Industrial noise, effects, criteria and control
2. Hearing service
3. Evoked Response Audiometry
4. Frequency specific evoked response audiometry

2. OPERATIVE

2.1 EARS

1. Pinnaplasty & operation for bat ear
2. Technique for repair of cauliflower ear
3. Technique of otoplasty
4. Surgery of glomus jugulare tumours
5. Tympanoplasty & ossiculoplasty – principles & techniques
6. Facial nerve exploration, decompression and reconstruction
7. Cortical mastoidectomy with exposure of endolymphatic sac
8. Stapedectomy – pistons
9. Stapedectomy – fat & wire techniques
10. Reconstruction of radical mastoidectomy and sound conducting mechanism
11. Excision of pinna and reconstruction for cancer of pinna
12. Approach to Internal Auditory Meatus
    - Middle fossa approach
    - Trans-labyrinthine approach
13. Surgery of petrous apex
14. Radical surgery and reconstruction for tumours of ear

2.2 NOSE AND SINUSES

1. Rhinoplasty – post traumatic
   - cosmetic
2. Trans-antral Vidian Neurectomy
3. Reconstruction of external nose and face after total Maxillectomy
4. Transmaxillary approach to Pterygomaxillary fossa
5. Management of fistula
   i. Oroantral
   ii. Alveolar
   iii. Palatine
6. Radical operation on frontal sinus
7. Osteoplastic flaps for frontal sinus disess
8. Medial maxillectomy
9. Trans-sphenoidal hypophysectomy
10. Functional Endoscopic Sinus Surgery (FESS)

2.3 HEAD & NECK AND LARYNX

1. Partial laryngectomy – supraglottic
   — glottic
2. Surgery of vocal cord palsy
3. Surgery of laryngeal stenosis
4. Surgery of laryngeal fracture
5. Total parotidectomy with preservaton of facial nerve
6. Facial nerve reconstruction by autogenous nerve graft
7. Thyroidectomy – Subtotal
   —Total
8. Partial resection of tongue
9. Resection of lateral border of tongue
10. Cervical sympathectomy
11. Cryo surgery in ORL-HNS
12. Laser in ORL-HNS
13. Operation for hemifacial spasm
14. Microsurgery in Head and Neck
15. Tumours of cervical trachea & management
16. Tumours of hypopharynx & management
17. Tumours of lip, oral cavity & fossa
18. Tumours of Oropharynx
19. Cancer of Oesophagus
20. Immunology of Head & Neck tumours
21. Surgery of skin defects in face, chin and lips
22. Cleft lip & cleft palate repair

23. Surgery of injury of soft tissue of face
24. Surgery of injury of facial skeleton
    i. Fracture Mandible
    ii. Fracture Upper jaw
    iii. Fracture Zygoma

25. Surgery of maxilla and mandible
    i. Tumours
    ii. Corrective
    iii. Osteotomies
    iv. Correction of chin
    v. Operation of Tempero-mandibular joint

3. **JOURNAL SESSIONS**

4. **MICROSURGERY PRACTICALS**

5. **PATHOLOGY REVIEW**

6. **RADIOLOGY REVIEW**

7. HEAD & NECK—ONCOLOGY COMBINED CLINIC

8. COCHLEAR IMPLANTS CLINICS

RECOMMENDED TEXT BOOK REFERENCES

Logan Turner's Diseases of ENT-by AGD Maran. 11th Edition (1999), Butterworth –Heinemann

Scott Brown's Otolaryngology, 6th Edition, 6 volumes, (1997) by Alan G. Kerr. Butterworth International edition

Mawson's Diseases of the Ear, 5th Edition (1988) by Harold Ludman.
Edward Arnold Co.

Clinical Rhinology (1990) by AGD Maran and V.J. Lund Goerge Thieme Verlag Co.

Synopsis of Operative Surgery (1992) by B.J.G. Bingham and Maurice Hawthorne, Butterworth. Heireman Oxford

Rob and Smith Operative 3rd Edition (1978) by J.C. Ballantyne and DFN Harrison. (Vol. Ear, Nose and Throat, Head and Neck I & II) Butter- worth and company Ltd.

Diseases of ENT by K.J.Lee, 7th Edition

Otolaryngology, 4 volumes (1991), by Paparella and Shumrick W.B. Saunders & Company

Surgery of the ear, IIIrd edition (1980), by Shambaugh and Glasscock W.
B. Sunders Company, Philadelphia

Otolaryngology – Head and Neck Surgery, 4 vol. 2nd Edition (1993) by Charles W. Cummings, Mosby – year book Inc (USA)

Clinical Audiology. The Jerger perspective, (1993) by Bobby.R., Alford.
Singular publishing Group Inc.

Neoplasms of the Larynx. (1993) by Alfio Ferlito Churchill Livingstone, New York

The larynx and Hypopharynx, (1988) by Kleinsasser, O. Thieme Medical
Publisher Inc. New York.

Stell and Maran's head and neck Surgery, 4th ed (2000), Butterwoth- Heinemann

Surgical anatomy of the head and neck, (2000) Lippincott Williams & Wilkins

LIST OF RECOMMENDED MEDICAL JOURNALS

Journal of Laryngology and Otology, Haedley Brothers, U.K

Laryngoscope. Editor – Spector J.G, The Triological Foundation Inc. (USA)

Archieves of Otolaryngology – Head and Neck Surgery, American Medical Association

International Journal of Paedtrics ORL. R.J. Ruben, Elsevier Publisher Amsterdam

Annals of Otolaryngology, Rhinology and Laryngology, Editor Maccabe, Annals, publishing Company-ST Louis.

ENT Journal – Editor Jack Pulec, Midquest communication Inc, USA

Clinical Otolaryngology. Editor J. Hibbert, Blackwell Science Ltd. Oxford.

American Journal of Rhinology. Co editors: David W. Kennedy and Phil- ip Fireman.

LIST OF ONLINE JOURNAL

USM Health Campus Library
http://www.pustaka.kk.usm.my/

WHO'S WHO IN ORL-HNS

JABATAN OTORINOLARINGOLOGI-PEMBEDAHAN KEPALA & LEHER

PUSAT PENGAJAN SAINS PERUBATAN

DEKAN, PU;;PENGAJIAN SAINS PERUBATAN

PROFESOR DR ABDUL RAZAK SULAIMAN

KETUA JABATAN

PROFESOR DR MOHD KHAIRI MD DAUD

PROFESOR (VK7)

PROFESOR MAOYA (OU)

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PEMBM'TU TADBIK (S>\MBILAN)

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Mentransformasikan Pengajian Tinggi untuk Kelestarian Hari Esok
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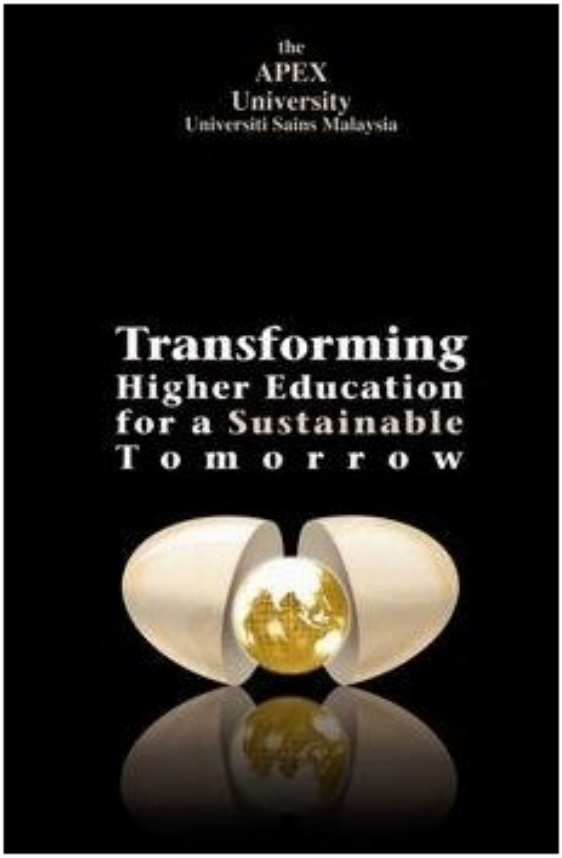
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Universiti Sains Malaysia
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Higher Education
for a Sustainable
Tomorrow

GRADUATION DAY

MMED ORL-HNS

Department of Otorhinolaryngology-Head & Neck Surgery
School of Medical Sciences
Universiti Sains Malaysia

APPENDIX I-SUPERVISORS REFORT FORM

SUPERVISOR'S REPORT FORM

SCMOOL OFMEDICAL SCIEIICES
UliIVt:RSITI 81\IIIS MAIAYSIA

MASTER OF MEDICINE
(OtorInolarIngology)

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Hospital/Institution

Specialty

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Please rate candidate's performance/abilities in the fdlaNing areas and return the completed form.

Scale	(1-4)	(5-6)	(7 - 8)	(9·10)
Ranking :	Poor	Sallsfactoiy	Good	

The pass mark is 50%

A. ACADEMIC
(Coro knowledgo, case presontalion)

2 3 4 5 7 8 10

B. **PROfESS!ONAI SK!LL**
(Communication skill, clinical judgement and decision, emergency care)

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C. NTERPERSONAi SKI!I
(Doc1orJPaintrdalionship, toam rdaticnships)

3 5 8 g 10

D. PERSONAi!TY IAIT!T!/Df
(Sense of responsibility, initiative, leadership, honesty, enthusiasm, punctuality, professional ccnduct)

3 4 5 8 10

Appendix I-SUPERVISORS REPORT FORM

E. CONTINUING MEDICAL EDUCATION
(Participation in education programme, journal reading, teaching skill)

2 3 4 5 6 9 10

F. TECHNICAL SKILLS. PRACTICAL PROCEDURES

2 3 4 5 6 8 9 10

OVERALL PERFORMANCE:

Total score = ——— — x 100 = %
60

Comments:

Specific recommendations:

Supervisors Name: .

Signature: .... Date:.

Head of Department:

Name:

Signature : .... Date :.

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supervisor report form/part/kaart

Appendix 2- DISSERTATION SUBMISSION FORM

LAMPIRAN 1

PUSAT PENGAJIAN SAINS PERUBATAN
UNIVERSITI SAINS MALAYSIA

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Sekian, terima kasih.

(Tandatangan Calon)

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Tnll!O'T .

(Nama dan tandatangan Penyelia)

Isi mana yang berkenaan

Appendix 2-DISSERTATION SUBMISSION FORM

LAMPIRAN 2

PUSAT PENGAJIAN SAINS PERUBATAN
UNIVERSITI SAINS MALAYSIA

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(Nama dan tandatangan Penyelia)

Appendix 3—AWARDS

i. AWARDS FOR BEST SURGICAL MMED CANDICATES Ii. AWARDS FOR BEST OVERALL MMED CANDIDATES

Criteria for Best Overall MMED Candidates

1. *Academic*
2. *Publication (local and international)*
3. *Presentation (local, national and International)*
4. *Awards*
5. *Positions in various society*
6. *Community services*
7. *Sports*

The marks allocated to each above criteria will soon be revised by the Post Graduate Committee. This is to accommodate academic achievement as the major area to be followed by publication and presentation.

Regarding publication, articles published will be given full mark whereas those accepted or sent for publication will get partial mark. Similarly, presentation at the national and international forum will have different marking scheme.

Regarding sport, only 1 mark will be allowed what so ever number of sports competition a candidate may have won.

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Prepared by
Che Ismail Che Lah, Prof. Baharudin Abdullah, Assoc. Prof. Dr Ramiza Ramza Ramli, Dr Norasnieda Md Shukri (May 2015)
Dept. of Otorhinolaryngology-HNS, USM Health Campus