

**ภาควิชาโสต ศอ นาสิกวิทยา**  
**คณะแพทยศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย**

**ประมวลรายวิชา (Course syllabus)**

1. รหัสวิชา (Course Number 3000525 2(1-2-3)
2. จำนวนหน่วยกิต (Course Credit) 2 หน่วยกิต
3. ชื่อวิชา (Course Title) โสต ศอ นาสิกวิทยา
4. คณะ/ภาควิชา (Faculty / Department) แพทยศาสตร์ / ภาควิชาโสต ศอ นาสิกวิทยา
5. ภาคการศึกษา (ต้น/ปลาย/ฤดูร้อน) Semester (First / Second / Summer) Year Course
6. เงื่อนไขรายวิชา
  - 6.1 วิชาที่ต้องเรียนมาก่อน (Pre-requisite) ไม่มี
  - 6.2 วิชาบังคับร่วม (Co-requisite) ไม่มี
  - 6.3 วิชาควบ (Concurrent) ไม่มี
7. สถานภาพของวิชา (วิชาบังคับ/วิชาเลือก) Status (Required / Elective) วิชาบังคับ
8. ชื่อหลักสูตร (Curriculum) แพทยศาสตร์บัณฑิต ปรับปรุง 2555
9. วิทยาระดับ (Degree)ปริญญาตรี
10. จำนวนชั่วโมงที่สอน/สัปดาห์ (Hours / Week)
  - สอนบรรยาย 15-17 ชั่วโมง / Course 2 สัปดาห์
  - สอนปฏิบัติ 30 ชั่วโมง / สัปดาห์
  - ศึกษาค้นคว้าด้วยตนเอง 5 ชั่วโมง / สัปดาห์
11. เนื้อหารายวิชา (Course Description)

พยาธิกำเนิด พยาธิสภาพ พยาธิสรีรวิทยา ระบาดวิทยาคลินิก อาการและอาการแสดง การตรวจทางห้องปฏิบัติการ การวินิจฉัย การวินิจฉัยแยกโรค การส่งการรักษาอย่างสมเหตุสมผลสำหรับโรคหรือภาวะที่พบบ่อยทางโสต ศอ นาสิกวิทยา รวมถึงหลักการดูแลรักษาเบื้องต้นและหลักการส่งต่อผู้ป่วย ทักษะการสัมภาษณ์ประวัติและการตรวจร่างกายด้วยเครื่องมือพื้นฐานและเครื่องมือพิเศษทางโสต ศอ นาสิกวิทยา การบำบัดภาวะหูชั้นกลางโสต นาสิก ลาริงซ์วิทยาและการช่วยผ่าตัดทางโสต ศอ นาสิกวิทยา

**12. ประมวลการเรียนรายวิชา (Course Outline)**

- 12.1 วัตถุประสงค์ทั่วไปและ/หรือวัตถุประสงค์เชิงพฤติกรรม (Learning Objectives / Behavioral Objectives) : ผู้เรียนมีความเข้าใจในพยาธิกำเนิด พยาธิสภาพ พยาธิสรีรวิทยา ระบาดวิทยาคลินิก อาการและอาการแสดง การตรวจทางห้องปฏิบัติการ การวินิจฉัย การ

วินิจฉัยแยกโรค การสั่งการรักษาเบื้องต้นและหลักการส่งต่อผู้ป่วย ทักษะการสัมภาษณ์ ประวัติและการตรวจร่างกายด้วยเครื่องมือพื้นฐานและเครื่องมือพิเศษทางโสต นาสิก ลาริงซ์วิทยา การบำบัดภาวะฉุกเฉินทางโสต ศอ นาสิกวิทยาและการช่วยผ่าตัดทางโสต ศอ นาสิกวิทยา

## 12.2 เนื้อหารายวิชาต่อสัปดาห์ (Learning Contents)

### 12.2.1 Lecture

- Introduction of the otolaryngology
- Ear 1 (Audiology )
- Ear 2 ( External ear diseases , Middle ear diseases)
- Ear 3 (Inner ear diseases, vertigo)
- Ear 4 Facial nerve diseases
- Rhinology I (Allergic rhinitis)
- Rhinology II ( nose and paranasal sinus)
- Disease of pharynx (tonsil and adenoid)
- Disease of the oral cavity and salivary gland
- Disease of the larynx
- Neck mass
- Upper airway obstruction
- Foreign body of airway and food passage
- Epistaxis
- Deep neck infection
- Sleep apnea syndrome
- Head and neck carcinoma

### 12.2.2 Skills

- Examination in Otolaryngology
- Foreign body removal from ear and nose
- Nasal Packing
- Tracheostomy

### 12.2.3 วิธีจัดการเรียนการสอน (Method)

-สอนแบบบรรยาย

-สอนภาคปฏิบัติ ที่แผนกผู้ป่วยนอก , หอผู้ป่วยใน , ห้องผ่าตัด

	8.00 น.	9.00 น.		13.00 – 14.00 น.
จันทร์	Introduction	EAR2	Practice Examination	Lecture รวม
อังคาร	Rhinology 2	OPD / OR		EAR3+4 2 hr
พุธ	Pharynx	OPD / OR		Lecture รวม 1hr
พฤหัสบดี	Oral cavity	OPD / OR		EB
ศุกร์	larynx	OPD / OR		Neck mass

-สอนในคลินิกเฉพาะทางต่าง ๆ : Audiology Clinic , Neurotology Clinic , Rhinology Clinic , Sleep Disordered Clinic , Tumor Clinic , Facial Plastic และ Laryngology Clinic

-เรียนรู้ด้วยตนเอง

-Case Discussion

#### ตารางการเรียนรู้การสอน

Lecture รวม สัปดาห์ที่ 1, 3, 5

Lecture รวม	1.จันทร์	Rhinology 1	
	1. พุธ	EAR1(audiology)	
	3.จันทร์	Upper Airway Obstruction	
	3.พุธ	Epistaxis	4 พฤหัส OSA
	5.จันทร์	Foreign body of airway and food passage	
	5.พุธ	Deep neck infection	5 พฤหัส Head & Neck carcinoma

วัน /เวลา	8.00 น.	9.00 – 12.00 น.	
จันทร์	Round	OPD / OR	Lecture,- Packing หัตถการ
อังคาร	Round	OPD / OR	Lecture,- FB removed หัตถการ
พุธ	Round	OPD / OR	Lecture
พฤหัสบดี	Round	OPD / OR	EVB
ศุกร์	Round	OPD / OR	สอบ

#### 12.2.4 สื่อการสอน

- Power Point Presentation
- Anatomy Model ต่าง ๆ
- ตำรา หนังสือในห้องสมุดของคุณะ

#### 12.2.5 การมอบหมายงาน ผ่านระบบเครือข่าย (Assignment through Network System)

- Short Answer

#### 12.2.6 การวัดผลการเรียน (Evaluation)

- Letter Grade (A, B+ , B , C+ , C , D+ , D , F)
- รายละเอียดการให้คะแนน
  - MCQ 40%
  - Short answer 10%
  - Case report / Presentation 10%
  - Skill 10%
  - Performance 30%
  - ประเมินค่า MPL 50 %

### 13. รายชื่อหนังสืออ่านประกอบ (Reading List)

#### 13.1 หนังสือบังคับ (Required Text)

- เอกสารประกอบการสอน ภาควิชาสัตวศาสตร์ ศอ นาสิกวิทยา คณะแพทยศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

#### 13.2 หนังสืออ่านเพิ่มเติม (Supplementary Texts)

#### 13.3 บทความวิจัย/บทความวิชาการ (ถ้ามี) Research Articles / Academic Articles (If any)

#### 13.4 สื่ออิเล็กทรอนิกส์ หรือ เว็บไซต์ที่เกี่ยวข้อง (Electronic Media or Websites)

- <http://ent.md.chula.ac.th>

### 14. การประเมินผลการเรียนการสอน (Teacher Evaluation) โปรดระบุการดำเนินการในเรื่องต่างๆ ดังนี้

#### 14.1 การประเมินการสอน

- ใช้รูปแบบการประเมินออนไลน์ของมหาวิทยาลัย (CU-CAS)

- 14.2 การปรับปรุงจากผลการประเมินการสอนครั้งที่ผ่านมา
- ปรับปรุงเนื้อหาใน Power point Presentation
  - ปรับปรุงตาราง Activity
- 14.3 การอภิปรายหรือการวิเคราะห์ที่เสริมสร้างคุณลักษณะบัณฑิตที่พึงประสงค์ของ  
จุฬาลงกรณ์มหาวิทยาลัย
- ได้ดำเนินการคุณลักษณะด้านสติปัญญา / ทักษะวิชาชีพ

Topic : Introduction to Otolaryngology

ผู้สอน : คณจารย์

### Learning objectives

The student should be able to understand/know

1. how to work and learn at otolaryngology ward/ OPD/OR
2. essential surgical anatomy & physiology of the head and neck
3. how to use routine ENT instruments
4. routine ENT examination
5. some special instruments

### Learning contents

1. Instruct about ENT ward work schedule
2. Anatomy / physiology of the ear, nose, paranasal sinus, pharynx, larynx and neck
3. Type and name of ENT instruments
4. Steps of routine ENT examination
5. Clinical anatomy of ENT that students can see when use routine or special instruments
6. Pitfalls of ENT examination

### Learning experience

Lecture 1 hour

### Learning media

Teaching slides

### Evaluation

None

Topic: Demonstration

ผู้สอน: คณาจารย์

#### Learning objectives

1. The student should be able to exam correctly with common ENT instruments
2. The student should be able to use and apply topical drugs that frequently use in ENT examination and treatment
3. The students should be able to use some special ENT instruments and observe demonstrations etc. head mirror, head light, otoscope, suction tip

#### Learning contents

1. Demonstrate ENT examination step by step
2. Instruct types & side effects of topical drugs and indication to use them
3. Students take friend as a partner to practice examinations
4. See the demonstration of some special instruments

#### Learning experiences

1. Lecture and demonstration 20 minutes
2. Students practice under supervision 1.5 hours

#### Learning media

All instruments at OPD

#### Evaluation

Check all steps when the students exam each other

Topic : O.P.D.

ผู้สอน : คณบดี

### Learning objectives

The student should be able to

1. take the precise medical history from the ENT outpatients with a doctor-patient relationship
2. correctly use the common instruments for ENT examination
3. properly diagnose the common diseases and problems in ENT from an integration of medical history, physical examinations and investigations
4. mention the proper treatment of common ENT diseases/problems
5. prescribe the proper medication to the patients with common ENT diseases
6. select the special investigation/ advanced instrument for diagnosis
7. evaluate the complicated case for referral

### Learning contents

#### 1. *Medical history*

-Chief complaints:

The patients usually complain of one of these symptoms:-

Otorrhea, otalgia, hearing loss, vertigo, tinnitus, itching, facial nerve paralysis, delayed speech deformity, nasal obstruction, nasal discharge, sneezing, epistaxis, anosmia, foul-smelling nose, headache, facial pain, sore throat, odynophagia, dysphagia, lump in the throat, hoarseness, aphonia, cough, hemotysis, airway obstruction, trismus, abducens palsy, perforation of palate, ptosis, neck mass, pain in the neck, weakness and change of sensation in the neck

-Present history

-Past history with any used medication and previous surgery

-Personal history

-Family history



## 2. *Common ENT instruments*

These includes the basic instruments for routing ENT physical examinations:

- Headlight, head mirror
- Otoscope : therapeutic otoscope, pneumatic otoscope
- Tuning fork 512 Hz, 256 Hz and 1024 Hz
- Barany's masking box
- Nasal speculum, ear speculum
- Forceps: ear alligator forceps, ear cupped forceps, nasal bayonet forceps,

Hartmann's forceps

- Mirror: nasopharyngeal mirror, laryngeal mirror
- Tongue blade (tongue depressor)
- Suction tip: nasal suction tip (No. 10, 12), ear suction tip (Baron type No. 3,5,7)
- Others: cotton applicator, curved pick, alcohol burner

## 3. *Common ENT diseases*

### 3.1 Ear

Eczema of pinna, infected preauricular sinus, foreign body ear canal, furunculosis, otomycosis, acute external otitis (swimming ear), myringitis, traumatic tympanic membrane perforation, acute otitis media, chronic otitis media with effusion (COME), chronic suppurative otitis media (CSOM), cholesteatoma, sensorineural hearing loss, meniere's disease and BPPV

### 3.2 Nose

Allergic rhinitis, non-allergic rhinitis, common cold, acute sinusitis, chronic sinusitis, nasal polyp, epistaxis, foreign, nasal cavity

### 3.3 Throat and larynx

Acute tonsillitis, chronic tonsillitis, quinsy, chronic pharyngitis, foreign body of tonsil, neoplasm of oral cavity and tongue, nasopharyngeal carcinoma, vocal nodule, laryngeal carcinoma

### 3.4 Neck

The neck mass: thyroid nodule, thyroiditis, thyroglossal duct cyst, lymphadenitis, lymphaneopathy, neck metastasis, branchial cleft cyst, TB node, parotid tumor, submandibular salivary gland mass

The deep neck abscess: parapharyngeal, retropharyngeal submental submandibular, Ludwig's angina, prevertebral, mastigator

## 4. *Physical examination in ENT*

### 4.1 The Ear

-Examine by inspection, palpation, and auscultation

The external ear, pinna, pre and post auricular region and the external meatus

-Examine the external ear canal, tympanic membrane (or sometime the middle ear) by otoscopic examination

The therapeutic otoscope is preferred, because the obscured ear wax or discharge has to frequently be removed to see the ear drum

-Tuning fork tests (Rinne test, Weber test, Bing test and Schwabach test) have to be performed to assess the hearing

### 4.2 The Nose

-Examine the anterior nose (anterior rhinoscopy) with head mirror (or headlight) and nasal speculum. Frequently a nasal suction is used to remove the nasal discharge, blood clot and crusting for a better viewing.

-Examine the posterior nose (posterior rhinoscopy) with head mirror (or headlight), tongue depressor and nasopharyngeal mirror

### 4.3 The Throat and Larynx

-Examination of oral cavity, tongue, floor of mouth, buccal cavity, retromolar trigone, palate, gum, teeth, tonsil and pharynx by inspection, palpation, bimanual palpation.

-Examination of base of tongue, valleculae, hypopharynx and larynx by an inspection via laryngeal mirror and palpation of the base of tongue

#### 1.4 The Neck

-Examination of the neck: thyroid, salivary gland, lymph node and mass by inspection, palpation and infrequently auscultation.

## 2. *Investigations*

### 1.1 Special investigations in ENT diagnosis includes

- Audiometry and tympanometry for patients with hearing problem tinnitus, vertigo and facial paralysis
- Vestibular function tests for patients with vertigo, hearing loss and facial paralysis
- Facial function tests for patients with facial nerve paralysis, vertigo, hearing loss and tinnitus
- Endoscopy for patients with nasosinus diseases, hypopharynx and laryngobronchial diseases

### 1.2 Radiologic examinations includes

- Plain film sinus series, mastoid series, soft tissue of neck, facial bone
- Contrast studies-esophagogram, silography, angiography, cisternography
- Ultrasound study-neck mass, thyroid
- CT scan
- MRI
- Radio isotope study, thyroid scan, total body scan, bone scan

### 1.3 Blood tests / chemistry study

### 1.4 Microbiological studies include bacterial, fungal, TB stain and culture from tissue, exudate and aspirate obtained from ENT regions

### 1.5 Tissue biopsy studies include fine needle aspiration (FNA), direct biopsy from ear, throat, nasopharynx, nose and wound and excision biopsy of lymph node and mass

## **2. Treatment of common ENT diseases/condition**

### **2.1 Medication**

The common medication in ENT includes: antimicrobials, antihistamines, nasal decongestants, antitussives, mucolytics, topical nasal steroid, ear drops, antivertigenous drugs

### **2.2 Surgical procedures**

2.2.1 First aid procedures include anterior nasal packing, airway management, removal of foreign body from ear, nose and throat, and incision/drainage of quinsy

2.2.2 Definite outpatient procedures include cautery of anterior epistaxis, myringotomy and antral wash out

### **Learning experiences**

Practice in small group (7-10 persons) under the guidance of ENT staff 3 hrs/day. Each student will have a total of 15-20 practice hours and will examine 6-10 patients during the course.

### **Learning media**

ENT instrument set and ENT outpatients

### **Evaluation**

Skill examination

Topic: Ward Round

ผู้สอน : คณบดี

### Learning objectives

The student should be able to understand

1. how to take history and exam ENT inpatients
2. how to assess the patients of common ENT inpatient diseases
3. how to treat the patients of common ENT inpatient diseases

### Learning contents

1. Symptoms & signs of common ENT inpatient diseases
2. Assessment of the patients of common ENT inpatient diseases
3. Treatment of the patients of common ENT inpatient diseases
4. Common ENT inpatient diseases: upper airway obstruction, sinusitis, chronic otitis media, chronic tonsillitis, head and neck carcinoma and foreign body in air and food passage etc.

### Learning experiences

Bedside learning/PBL

### Learning media

Inpatient cases

### Evaluation

- Case report
- Portfolio

Topic: Experience in operative room

**ผู้สอน** : คณบดี

### Learning objectives

The student should be able to understand

1. the common ENT procedure i.e. tonsillectomy, tracheotomy, tympanoplasty
2. operation room sterile technique
3. routine sterile technique
4. some special procedure
5. operation room team work technique

### Learning contents

1. Observe the common ENT procedure
2. Concepts about surgical management
3. Method of surgery
4. Some knowledge about ENT instruments
5. Sterile technique

### Learning experiences

Observe in operating room 3 hrs per day for 2-3 days

### Learning media

Surgical case in operation room

### Evaluation

- Case report
- Portfolio

Topic: practice of foreign body removal from the ear, nose and throat

**ผู้สอน** : คณมาจารย์

### Learning objectives

The student should be able to know

- 1 the types of foreign body and the pathophysiology.
- 2 the symptom and sign of the foreign in the ear, nose and throat.
- 3 Know and select the appropriate equipments for removal
- 4 remove the foreign bodies from the ear, nose and throat

### Learning contents

- 1 The types of foreign body
- 2 The symptom and sign of the foreign body in the ear, nose, and throat
- 3 Practice to remove the foreign bodies in different sites with the appropriate equipment.

### Learning experiences

Observe and practice in the manikins

### Learning media

Foreign bodies, ENT examination sets, equipments for remove foreign body and manikins

### Evaluation

Skill evaluation

Topic: practice of nasal packing to control the epistaxis

ผู้สอน : คณบดี

### Learning objectives

The student should be able to

- 1 the etiology, pathology and pathophysiology of epistaxis.
- 5 Properly manage the patient with epistaxis
- 6 Know and select the appropriate equipments
- 7 Control anterior and posterior nasal bleeding
- 8 Propriate initial bleeding control and refer for complicated epistaxis

### Learning contents

- 4 The types of epistaxis
- 5 The management of different types of epistaxis
- 6 The instruments for control the epistaxis
- 7 Practice of anterior and posterior nasal packing

### Learning experiences

Observe and practice in the manikins

### Learning media

Foreign bodies, ENT examination sets, equipments for nasal packing and manikins

### Evaluation

Skill evaluation



Topic: Upper airway obstruction

ผู้สอน : คณบดี

### Learning objectives

The student should be able to understand

1. how to assess the patient of respiratory failure
2. how to assess the patient of upper airway obstruction
3. how to treat the patient of upper airway obstruction
4. how to perform tracheostomy, prevent & treat complication from tracheostomy

### Learning contents

1. Symptoms & signs of respiratory failure
2. Symptoms & signs of airway obstruction (upper & lower)
3. Assessment & investigation in the patient of upper airway obstruction
4. Airway care for upper airway obstruction
5. Tracheostomy (indication, surgical technique, complication)

### Learning experiences

Lecture

### Learning media

Slide Presentation

### Evaluation

MCQ

Topic: Foreign Body in Upper Aerodigestive Tract

ผู้สอน : คณมาจารย์

### Learning objectives

The student should be able to understand

1. signs and symptoms of foreign body in upper aerodigestive tract
2. different type of foreign body
3. special investigation
4. management

### Learning contents

1. Foreign body in nasal cavity
  - 1.1 type of foreign body
  - 1.2 symptoms
  - 1.3 technique in pediatric approach
  - 1.4 instruments
  - 1.5 foreign body remove technique
2. Foreign body in oral cavity and oropharynx
  - 2.1 type of foreign body
  - 2.2 symptoms
  - 2.3 instruments
  - 2.4 foreign body removal technique
3. Foreign body in esophagus
  - 3.1 type of foreign body
  - 3.2 symptoms
  - 3.3 instruments
  - 1.4 foreign body removal technique

#### 4. Foreign body in tracheobroncheal tree

4.1 type of foreign body

4.2 symptoms

4.3 instruments

4.4 foreign body removal technique

#### Learning experiences

PBL (Case in the word)

Lecture

#### Learning media

Slide presentation

#### Evaluation

MCQ

Topic: Deep Neck Infection

ผู้สอน : คณาจารย์

### Learning objective

The student should be able to understand

1. the significance of cervical fascia of head and neck area
2. the clinical importance and complication of deep neck infection
3. the manifestation of deep neck infection
4. the management of deep neck infection

### Learning contents

1. The anatomy of cervical fascia of the neck
2. Types of deep neck infection :- retropharyngeal space, parapharyngeal space, submandibular space, masticator space, parotid space and peritonsillar space abscess
3. Symptoms and signs of deep neck infection
4. Investigation of deep neck infection
5. Treatment of deep neck infection
6. Complication of deep neck infection

### Learning experiences

PBL (Case in the word)

Lecture

### Learning media

Slide presentation

### Evaluation

MCQ

Topic : Epistaxis

ผู้สอน : คณมาจารย์

### Learning objectives

The students have to

1. know the etiology of each type of epistaxis
2. properly manage the patients with epistaxis
3. can perform anterior and posterior epistaxis
4. know when they have to refer the patient

### Learning contents

1. What is epistaxis?
2. Type of epistaxis
3. Etiology of anterior and posterior epistaxis
4. How to manage the patient with epistaxis
5. Treatment options for epistaxis
6. The instruments for controlling epistaxis
7. How to perform anterior and posterior epistaxis

### Learning experiences

PBL (Case in the word)

Lecture

### Learning media

Slide presentation

### Evaluation

MCQ

Topic : Clinical audiology

ผู้สอน : คณาจารย์

### Learning objectives

The student should be able to :

1. explain screening test and interpretation of hearing loss
2. test hearing by tuning fork and interpretation
3. explain electric routine audiometry, types of audiogram and hearing interpretation

### Learning contents

1. Screening test
  - Behavioral observation audiometry (BOA)
2. Tuning fork test
  - Weber test
  - Rinne test
  - Bing test
  - Schwabach test
3. Electric routine audiometry
  - Speech reception threshold (SRT)
  - Speech discrimination score (SDS)
  - Air conduction threshold (ACT)
  - Bone conduction threshold (BCT)
  - Types of audiogram

### Learning experiences

Lecture 1 hour

### Learning media

Teaching slides

### Evaluation

MCQ

Topic : Disease of the external ear

ผู้สอน : คณาจารย์

**Learning objectives :**

The student should be able to :

1. understanding common symptomatology of the ear
2. approach to otorrhea, otalgia, hearing loss, vertigo, facial palsy, tinnitus and itching of the ear
3. understanding diseases of the ear which includes : anatomy and common diseases

**Learning contents**

1. Common symptoms in diseases of the ear
  - Otorrhea, Otagia, Hearing loss, Vertigo, Facial paralysis, Tinnitus, Itching
2. Disease of the external ear
  - 2.1 anatomy of the external ear
  - 2.2 diseases and treatment :
    - hematoma
    - perichondritis
    - furunculosis
    - acute diffuse external otitis
    - malignant otitis externa
    - bullars myringitis
    - otomycosis
    - tumor : benign and malignant

**Learning experiences**

Lecture 30 Minutes

**Learning media**

Teaching slides

Sheet

**Evaluation**

MCQ

Topic : Diseases of the middle ear

ผู้สอน : คณบดี

### Learning objectives

The student should be able to :

1. describe the symptoms, signs, laboratory findings in various middle ear and mastoid diseases.
2. provide the correct diagnosis for the middle ear and mastoid diseases using symptoms, signs and investigations
3. give a specific plan of treatment of each middle ear and mastoid diseases including the first aid treatment

### Learning contents

1. Diseases of the middle ear and mastoid
  - 1.1 Infectious disease
    - Acute otitis media
    - Acute mastoiditis
    - Chronic otitis media with effusion. (COME)
    - Chronic suppurative otitis media
    - Chronic adhesive otitis media
    - Cholesteatoma
    - Chronic mastoiditis
  - 1.2 complications of otitis media and mastoiditis
    - intracranial complications : meningitis epidural abscess, subdural abscess, temporal lobe abscess, cerebellar abscess, lateral sinus thrombophlebitis
    - intratemporal complications : facial nerve paralysis, labyrinthitis
    - extracranial complications : postauricular abscess, zygomatic abscess, Bezold's abscess, postauricular fistula
  - 1.3 Tumors of the middle ear
    - glomus jugulare
    - glomus tympanicum
    - other tumors



#### 1.4 Conductive hearing loss with intact tympanic membrane

- Tests for conductive hearing loss
- Diseases that cause conductive hearing loss
- Chronic otitis media with effusion
- Middle ear mass and tumor
- Cholesterol granuloma
- Ossicular chain disruption
- Otosclerosis

#### 1.5 Otosclerosis

- Pathogenesis
- Symptoms / signs / investigations
- Diagnosis and treatment

#### Learning experiences

Lecture 40 mins

#### Learning media

Slides

#### Evaluation

MCQ

Topic : Disease of the facial nerve

ผู้สอน : คณาจารย์

### Learning objectives

The student should be able to :

1. explain embryology ; anatomy and physiology of the facial nerve
2. explain common symptoms and signs, causes of diseases, investigation , and treatments of facial nerve ;

### Learning contents

1. Embryology of facial nerve
2. Anatomy of facial nerve
3. Physiology of facial nerve
4. Investigation, topographic study, prognostic test
5. Diseases of facial nerve
  - 5.1 Congenital disorder of facial nerve
  - 5.2 Bell's palsy
  - 5.3 Temporal bone fracture
  - 5.4 Herpes zoster oticus ( Ramsey hunt syndrome)
  - 5.5 Surgical trauma of facial nerve
  - 5.6 Facial nerve neuroma

### Learning experiences

Lecture 1 hour

### Learning media

Teaching slides

### Evaluation

MCQ

Topic : Diseases of the inner ear

ผู้สอน : คณบดี

### Learning objectives

The student should be able to :

1. describe embryology anatomy and physiology of the inner ear
2. describe the symptoms, signs and laboratory findings in various inner ear diseases
3. provide the correct diagnosis for the inner ear diseases using symptoms, signs and investigations
4. describe specific plan of treatment of each inner ear disease

### Learning contents

1. Embryology of inner ear
  - Formation of membranous labyrinth
  - Formation of osseous labyrinth
2. Anatomy of inner ear
  - Membranous labyrinth
    - Utricle
    - Sacculle
    - Semicircular canals
    - Cochlear duct
    - Endolymphatic duct and sac
    - Ductus reuniens
  - Bony labyrinth
    - Vestibule
    - Bony semicircular canals
    - Bony cochlea
3. Physiology of hearing
  - 3.1 Conductive portion
    - External ear
    - Middle ear
  - 3.2 Perception portion

Hair cells, perilymph, endolymph, tectorial membrane and cochlear nerve

### 3.3 Central connection

## 4. Physiology of vestibular system

Macular of utricle

Crista ampularis

Central connection fibers

Ascending fibers

Descending fibers

Semicerebello-vestibular connection

## 5. Diseases of inner ear

### 5.1 Symptoms of inner ear disease

Semicircular hearing loss

Vertigo : subjective vertigo, objective vertigo

Tinnitus

Fullness in the ear

Tullio phenomenon

### 5.2 Signs of inner ear disease

Increase hearing threshold, recruitment, auditory fatigue, nystagmus, fistula sign, falling, past pointing, Romberg's sign, tandem gait

### 5.3 Sensorineural hearing loss in children

5.3.1 classification of deafness

5.3.2 detection and management of childhood deafness

5.3.3 differential diagnosis of sensorineural hearing loss in children

### 5.4 Infections and inflammations of inner ear

5.4.1 causes of labyrinthitis; bacteria, virus, toxin, syphilis

5.4.2 symptoms and signs of labyrinthitis

5.4.3 investigation of labyrinthitis

5.4.4 management of labyrinthitis

## 5.5 Ototoxicity

5.5.1 causes of ototoxicity

5.5.2 predisposing factors

5.5.3 symptoms and signs

5.5.4 treatment

## 5.6 Labyrinthine ischemia

5.6.1 causes of labyrinthine ischemia

5.6.2 symptoms and signs

5.6.3 treatments

## 5.7 Trauma

5.7.1 classification of temporal bone trauma

5.7.2 symptoms and signs of temporal bone trauma

5.7.3 investigations

5.7.4 treatments

## 5.8 Acoustic neuroma

5.8.1 symptoms and signs

5.8.2 investigations

5.8.3 treatments

## 5.9 Meniere's disease

5.9.1 causes

5.9.2 symptoms and signs

5.9.3 investigations

5.9.4 treatments

## 5.10 Presbycusis

5.10.1 causes

5.10.2 symptoms and signs

5.10.3 investigations

5.10.4 treatments

### 5.11 Cochlear otosclerosis

- 5.11.1 causes
- 5.11.2 symptoms and signs
- 5.11.3 investigations
- 5.11.4 treatments

### 5.12 Benign paroxysmal positional vertigo (BPPV)

- 5.12.1 causes
- 5.12.2 symptoms and signs
- 5.12.3 investigations
- 5.12.4 treatments

### 5.13 Noise- induced hearing loss

- 5.13.1 classification
- 5.13.2 prevention of noise-induced hearing loss

#### Learning experiences

- |                                    |         |
|------------------------------------|---------|
| 1. Embryology, anatomy, physiology | 5 นาที  |
| 2. Inner ear diseases              | 50 นาที |
| 3. Question / answer               | 5 นาที  |

#### Learning media

1 slides

#### Evaluation

MCQ

Topic : Rhinology I : Rhinology and Allergy Clinic

ผู้สอน : คณาจารย์

Learning objectives

The students

know the common diseases in rhinology and allergy discussion

how to manage the patients with rhinologic and allergic complaints

know when they can manage the patients themselves and when they have to refer the patients

with rhinologic and allergic complaints

understand how to do the allergy skin testing and immunotherapy

Learning contents

Important history for rhinologic and allergic complaints

Important physical examinations for rhinologic and allergic complaints

How to approach and manage the patients with rhinologic and allergic complaints

How to do the allergy skin testing and immunotherapy

Clinical practise guideline for allergic rhinitis

Learning experiences

PBL (Case in the word)

Lecture 1 hour

Learning media

Slide presentation

Evaluation

MCQ

Topic : Diseases of the paranasal sinuses

ผู้สอน : คณาจารย์

### Learning objectives

The student should be able to :

1. explain symptoms and signs, underlying factors, investigation, and treatment of all types of rhinosinusitis.
2. explain symptoms and signs, investigation, and treatment of the common tumors of the paranasal sinuses (eg. squamous cell carcinoma and inverted papilloma)

### Learning contents

1. Rhinosinusitis
  - 1.1 Definition, classification, symptoms, and signs
  - 1.2 Underlying factors that cause rhinosinusitis
    - 1.2.1 Sinus ostial obstruction eg. nasal polyps, deviated nasal septum, allergic rhinitis, etc.
    - 1.2.2 Mucociliary clearance defect
    - 1.2.3 Systemic factors
    - 1.2.4 Others
  - 1.3 Investigation or radiograph eg. plain film, CT scan, and MRI
  - 1.4 Medical management
  - 1.5 Surgical management
    - 1.5.1 Indication
    - 1.5.2 Common types of surgery eg. antral wash out, Caldwell Luc operation, endoscopic sinus surgery, Lynch operation, external sinus surgery.
  - 1.6 Uncommon paranasal sinuses infection eg. fungal infection
2. Tumors
  - 2.1 Malignant tumors : squamous cell carcinoma
    - 2.1.1 Symptoms and signs
    - 2.1.2 Investigation
    - 2.1.3 Management



## 2.2 Benign tumors : Inverted papilloma

2.1.1 Symptoms and signs

2.1.2 Investigation

2.1.3 Management

### Learning experiences

Lecture – Rhinosinusitis 40 minutes

- Tumor 10 minutes

Question / answer 10 minutes

### Learning media

Teaching slides

### Evaluation

MCQ

Topic : Diseases of the pharynx

ผู้สอน : คณบดี

### Learning objectives

The students should be able to understand :

1. the anatomy and physiology of the nasopharynx ,oropharynx and hypopharynx
2. the common diseases of the nasopharynx, oropharynx and hypopharynx
3. medical and surgical treatment of common disease of the pharynx

### Learning contents

1. Nasopharynx
  - 1.1 Anatomy of nasopharynx
  - 1.2 Abnormalities and inflammatory diseases of nasopharynx
  - 1.3 Tumors of nasopharynx
  - 1.4 Treatments of squamous cell carcinoma of nosopharynx.
2. Oropharynx and hypopharynx
  - sore throat
  - dysphagia
  - pharyngitis
  - tonsillitis and adenoiditis
  - อื่น ๆ เช่น diphtheria, infectious mononucleosis, Vincent' s angina
  - benign and malignant tumors

### Learning contents

1. Symptomatology in common diseases of the throat
2. Anatomy and physiology of the nasopharynx, oropharynx and hypopharynx
3. Infectious diseases of the nasopharynx, oropharynx and hypopharynx
4. Indication for tonsillectomy and / or adenoidectomy
5. Tumor of the nasopharynx, oropharynx and hypopharynx

### Learning experiences

Lecture 1 hr.

### Learning media

Teaching slides

### Evaluation

MCQ

Topic : Diseases of the oral cavity and salivary gland

ผู้สอน : คณมาจารย์

### Learning objectives

The students should be able to understand :

4. the anatomy and physiology of the oral cavity and salivary gland
5. the common diseases of the oral cavity and salivary gland
6. medical and surgical treatment of common oral cavity and salivary gland diseases

### Learning contents

3. The oral cavity
  - 3.1 Anatomy of the oral cavity
  - 3.2 Infective conditions of the oral mucosa
  - 3.3 Miscellaneous conditions causing oral ulceration
  - 3.4 Benign swelling of the oral cavity
  - 3.5 Benign tumor of the oral cavity
  - 3.6 Cancer of the oral cavity
  - 3.7 Treatments of diseases of the oral cavity
2. Disease of salivary glands
  - Sialolithiasis
  - Sialadenitis
  - Neoplasms of salivary glands

### Learning experiences

Lecture 1 hr.

### Learning media

Teaching slides

### Evaluation

Mcq

Topic : Diseases of the larynx

ผู้สอน : คณบดี

### Learning objectives

The student should be able to :

1. explain anatomy and physiology of larynx
2. explain the clinical approach to hoarseness
3. explain the clinical presentations, investigations, and treatments of laryngeal

diseases listed below

#### 3.1 Congenital anomalies

Laryngomalacia

#### 3.2 Inflammatory diseases

Acute laryngitis

Acute laryngotracheobronchitis or croup

Acute epiglottitis

Diphtheria

Chronic laryngeal disorder

#### 3.3 Vocal cord paralysis

Unilateral vocal cord paralysis

Bilateral vocal cord paralysis

#### 3.4 Tumor of the larynx

Benign tumor – laryngeal papilloma

Malignant tumor of the larynx

### Learning contents

1. Anatomy and physiology of larynx
2. Clinical approach to hoarseness of voice
3. Diseases of larynx ( as above)

**Learning experiences**

Lecture 1 hr.

**Learning media**

Teaching slides

**Evaluation**

MCQ

Topic : Neck masses, Salivary gland, Thyroid nodules

ผู้สอน : คณาจารย์

### Learning objectives

#### Neck masses

The student should be able to :

1. explain approach to neck mass
2. describes the symptoms and signs, laboratory findings in diseases that patients present with neck mass
3. Give plan of management of neck mass

#### Salivary glands

The student should be able to :

1. describes the symptoms and signs, laboratory findings in salivary gland's diseases
2. explain etiologies and management of salivary gland diseases

#### Thyroid nodules

The student should be able to :

1. explain approach to thyroid nodules
2. give plans of management of thyroid nodules

### Learning contents

1. Approach to neck mass
2. Etiologies and management
  - 2.1 Congenital neck mass
    - Thyroglossal duct cyst
    - Dermoid cyst
    - Cystic hygroma
    - Branchial cleft cyst
  - 2.2 Inflammatory neck mass
    - Viral lymphadenitis
    - Bacterial lymphadenitis
    - Tuberculous lymphadenitis
  - 2.3 Neoplastic neck mass
    - Benign neoplasm

Primary malignant neoplasm

Metastatic lymphadenopathy

3. Disease of salivary glands

Sialolithiasis

Sialadenitis

Sialoadenosis

Neoplasms of salivary glands

4. Approach and management of thyroid nodules

**Learning experiences**

Lecture 1 hr.

- |                     |        |
|---------------------|--------|
| 1. Neck masses      | 30 min |
| 2. Salivary glands  | 10 min |
| 3. Thyroid nodules  | 10 min |
| 4. Question/ answer | 10 min |

**Learning media**

Teaching slides

**Evaluation**

MCQ

Topic : Obstructive Sleep Apnea (OSA)

ผู้สอน : คณาจารย์

**Learning Objective:**

The student should be able to understand/know

1. Common manifestations of obstructive sleep apnea
2. Risk factors of obstructive sleep apnea
3. Physical findings suggesting of obstructive sleep apnea
4. Indication for polysomnography in obstructive sleep apnea
5. Initial treatment and indication for referral in obstructive sleep apnea

**Learning Content:**

1. Definition and risk factors of obstructive sleep apnea
2. Differences between standard polysomnography and portable home sleep
3. Polysomnographic findings of obstructive sleep apnea
4. Treatment modalities of obstructive sleep apnea
5. Adverse clinical outcomes of obstructive sleep apnea

**Learning experience**

Lecture 1 hour

**Learning media**

Teaching slides

**Evaluation**

MCQ



Topic : Head and neck carcinoma

ผู้สอน : คณาจารย์

**Learning Objective:**

The student should be able to understand/know

- 1.The common head and neck carcinoma
  - Nasopharyngeal carcinoma
  - Oral cavity carcinoma
  - Laryngeal carcinoma
- 2.The manifestation of the head and neck carcinoma
- 3.The investigations for the diagnosis of head and neck carcinoma

**Learning Content:**

- 1.The common head and neck carcinoma
  - Nasopharyngeal carcinoma
  - Oral cavity carcinoma
  - Laryngeal carcinoma
- 2.The symptoms and signs of nasopharyngeal carcinoma, carcinoma of tongue and Laryngeal carcinoma
- 3.The investigations for head and neck carcinoma
  - FNA , biopsy
  - Ultrasound , CT and MRI
- 4.The treatment options for the head and neck carcinoma
  - Surgery
  - Radiation
  - Chemotherapy
  - Other

**Learning experience**

Lecture 1 hour

**Learning media**

Teaching slides

**Evaluation**

MCQ