Department of health and medical services
Dubai medical college for girls
Clinical faculty

Academic department of surgery

Table of contents

Teaching units (45 minutes) per student
Lectures, seminars and tutorials in
   General surgery
   Traumatology
   Urology
   Orthopaedic surgery
   Cardiothoracic surgery
   Neurosurgery
   Paediatric surgery
   **Ophthalmology**
   **ENT-Head/neck surgery**
   Plastic surgery
   Rehabilitation, physical medicine
   Radiology and imaging
   Forensic medicine
   Anaesthesiology
## Teaching units per student in the academic department of surgery

**Dubai Medical College**

<table>
<thead>
<tr>
<th>Department</th>
<th>Lectures</th>
<th>Seminars</th>
<th>Problem Solving</th>
<th>Tutorials</th>
<th>Clinical Attachment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Surgery</td>
<td>111</td>
<td>28</td>
<td>30</td>
<td>60</td>
<td>60</td>
<td>289</td>
</tr>
<tr>
<td>Urology</td>
<td>10</td>
<td>6</td>
<td>5</td>
<td></td>
<td></td>
<td>21</td>
</tr>
<tr>
<td>Cardiothoracic Surgery</td>
<td>10</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Orthopaedics</td>
<td>29</td>
<td>9</td>
<td>3</td>
<td>11</td>
<td>16</td>
<td>68</td>
</tr>
<tr>
<td>Traumatology</td>
<td>21</td>
<td>3</td>
<td>30</td>
<td>16</td>
<td></td>
<td>70</td>
</tr>
<tr>
<td>Paediatric Surgery</td>
<td>20</td>
<td>6</td>
<td>3</td>
<td>16</td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>Plastic Surgery</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Accident &amp; Emergency</td>
<td></td>
<td>15</td>
<td></td>
<td>16</td>
<td></td>
<td>33</td>
</tr>
<tr>
<td>ENT/HEAD/NCC Surgery</td>
<td>35</td>
<td>7</td>
<td>8</td>
<td>16</td>
<td></td>
<td>65</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>21</td>
<td>6</td>
<td></td>
<td>16</td>
<td></td>
<td>43</td>
</tr>
<tr>
<td>Anaesthesia</td>
<td>20</td>
<td>6</td>
<td></td>
<td>16</td>
<td></td>
<td>42</td>
</tr>
<tr>
<td>Radiology (Imaging &amp; Nuclear Medicine)</td>
<td>20</td>
<td>18</td>
<td></td>
<td>8</td>
<td></td>
<td>46</td>
</tr>
<tr>
<td>Rehabilitation (Physiotherapy)</td>
<td>6</td>
<td>4</td>
<td></td>
<td>8</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>Forensic Medicine</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>332</strong></td>
<td><strong>108</strong></td>
<td><strong>36</strong></td>
<td><strong>117</strong></td>
<td><strong>158</strong></td>
<td><strong>782</strong></td>
</tr>
</tbody>
</table>

A Teaching Unit is defined as:
- A Lecture of 45 minutes
- A Seminar, Tutorial, Problem Solving Session or Conference of 1 hour
- A Clinical Attachment (Wards, Clinics, Theatres, etc)
- An On-Call Duty of 6 hours.
LIST OF LECTURES IN GENERAL SURGERY

1. Approach to patient and history taking
2. Analyzing patients complaints
3. Symptoms and signs I
4. Symptoms and signs II
5. Symptoms and signs III
6. Types of wounds and wound healing
7. Disturbances of wound healing
8. Surgical infections and infections of the hand
9. Arterial disease
10. Arterial disease
11. Compartment syndrome
12. Pathophysiology of shock
13. Clinical aspect and treatment of shock
14. Fat embolism
15. Acute infections of bone
16. Chronic infections of bone
17. Infections of joints
18. Chronic Surgical infections I : Actinomycosis Tuberculosis
19. Chronic Surgical infections II : Syph. Leprae
20. Parasitic surgical infections I
21. Parasitic surgical infections II
22. Anaerobic I infections: Tetanus
23. Anaerobic II infections: Gas gangrene
24. Terms, types, methods & indications for surgical intervention.
25. Preoperative assessment risk factors
26. Postoperative care & complications
27. Auerysms, fistula & vascular injuries I
28. Auerysms, fistula & vascular injuries II
29. Varicose, phlebotrombosis, thrombophlebitis, embolism
30. Oral inflammation, ulcers, tumours of lip & tongue
31. Inflammations, stones & tumours of salivary glands
32. Oesophagus, achalasia, hiatus hernia
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>33.</td>
<td>Reflux oesophagus disease, diverticulosis, strictures</td>
</tr>
<tr>
<td>34.</td>
<td>Peptic ulcer disease, surgical anatomy &amp; physiology</td>
</tr>
<tr>
<td>35.</td>
<td>Clinical pathology of peptic ulcer disease</td>
</tr>
<tr>
<td>36.</td>
<td>Peptic ulcer disease presentation, symptoms, signs &amp; investigation</td>
</tr>
<tr>
<td>37.</td>
<td>Management of peptic ulcer disease</td>
</tr>
<tr>
<td>38.</td>
<td>Complications of peptic ulcer disease</td>
</tr>
<tr>
<td>39.</td>
<td>Cancer of the stomach</td>
</tr>
<tr>
<td>40.</td>
<td>Operations for gastric &amp; duodenal ulcer &amp; cancer</td>
</tr>
<tr>
<td>41.</td>
<td>Haemetemesis &amp; melena I</td>
</tr>
<tr>
<td>42.</td>
<td>Haemetemesis &amp; melena II</td>
</tr>
<tr>
<td>43.</td>
<td>Post operative complications (local)</td>
</tr>
<tr>
<td>44.</td>
<td>Post operative complications (general)</td>
</tr>
<tr>
<td>45.</td>
<td>Hospital acquired infections, types, control</td>
</tr>
<tr>
<td>46.</td>
<td>Prophylaxis &amp; treatment of nasocomial infections</td>
</tr>
<tr>
<td>47.</td>
<td>Prophylaxis &amp; treatment of infections in trauma</td>
</tr>
<tr>
<td>48.</td>
<td>Thyroid – Surgical anatomy, embryology, ectopic cysts &amp; fistula</td>
</tr>
<tr>
<td>49.</td>
<td>Thyroid – physiology, clinical presentation, examination test for function</td>
</tr>
<tr>
<td>50.</td>
<td>Simple Goitre</td>
</tr>
<tr>
<td>51.</td>
<td>Toxic Goitre</td>
</tr>
<tr>
<td>52.</td>
<td>Thyroid carcinoma</td>
</tr>
<tr>
<td>53.</td>
<td>Surgical anatomy of the breast (lobular, structure, blood supply, lymphatic drainage, axillary tail, areola, nipple)</td>
</tr>
<tr>
<td>54.</td>
<td>Physiology (hormonal control of breast function &amp; functional abnormalities, gynaecomastia, hypertrophy)</td>
</tr>
<tr>
<td>55.</td>
<td>Epidemiology of breast disease (frequency, personal + family history, age, distribution, risk factors)</td>
</tr>
<tr>
<td>56.</td>
<td>Symptoms + signs, clinical findings, examinations + self examination techniques + investigations (mammography, fine needle, trucut, excisional biopsy)</td>
</tr>
<tr>
<td>57.</td>
<td>Benign breast disorders (fibroadenosis, serocystic diseases, fibroadenoma, duct papilloma, traumatic fat necrosis, duct ectasia)</td>
</tr>
<tr>
<td>58.</td>
<td>Cellulites, abscess of the breast</td>
</tr>
<tr>
<td>59.</td>
<td>Carcinoma of breast I</td>
</tr>
<tr>
<td>60.</td>
<td>Carcinoma of breast II</td>
</tr>
<tr>
<td>61.</td>
<td>Carcinoma of breast III</td>
</tr>
<tr>
<td>63.</td>
<td>Investigations of the biliary system</td>
</tr>
<tr>
<td>64.</td>
<td>Acute &amp; chronic cholecystitis, cholangitis cancer of the biliary system.</td>
</tr>
</tbody>
</table>
65. Management and complications of cholecystitis and biliary obstruction (obstructive jaundice I & II).
66. Surgical anatomy of the liver related to portal hypertension and haemodynamics.
67. Management of haemorrhage from oesophageal varices, operations for portal hypertension.
68. Liver abscesses and cysts.
69. Tumors of the liver and liver trauma.
70. Surgical anatomy and physiology of the pancreas function tests and investigations.
71. Congenital malformations and injuries of the pancreas, aetiology and classifications of pancreatitis.
72. Acute pancreatitis.
73. Chronic pancreatitis – clinical presentation and management.
74. Cancer and endocrine tumors of the pancreas.
75. Splenic ruptures, hypersplenism and indications for splenectomy.
76. Surgical anatomy of the peritoneum.
77. Peritonitis – causes, pathology and clinical picture.
78. Peritonitis – management.
79. Complications and residual abscess formation.
80. Ascites and neoplasms of the peritoneum.
81. Surgical anatomy of hernial apertures definition, types in general terms (reduction etc) and contents.
82. Hernias in anatomical terms (inguinal, umbilical, epigastric etc).
83. Treatment of hernias.
84. Complications.
85. Surgical anatomy and physiology of small and large intestines.
86. Tumors of the small intestines (benign, malignant, carcinoids) trauma to bowel and mesentery.
89. Appendicitis (treatment and complications).
90. Diverticular disease of the bowel and polyposis.
91. Inflammatory diseases of the bowel (ulcerative and transmural colitis).
94. Intestinal obstruction I.
95. Intestinal obstruction II.
96. Paralytic ileus.
97. Anatomy and physiology of rectum and anus.
98. Haemorrhoids and anal fistula
99. Prolapse, proctitis, strictures and benign tumors
100. Incontinence
101. Carcinoma of the rectum I
102. Carcinoma of the rectum II
103. Perianal conditions and neoplasms
104. Preparation, principles and procedures in bowel, surgery
105. Complications of bowel surgery
106. Acute abdomen, classification and causes
107. Acute abdomen, symptoms, signs, investigations
108. Acute abdomen, differential diagnosis and management
109. Blood transfusion

Total 11 Units.
SURGICAL SEMINARS WITH PRESENTATION BY THE STUDENT
(1 SESSION 1 1/2 HOURS PER TOPIC).

1. Swelling, lumps and ulcers
2. Cellulites and abscesses
3. Sinus and fistula
4. Arterial disease and gangrene
5. Diseases of the veins
6. The swollen limb
7. Surgical disorders of the skin
8. Primary assessment and management of the seriously injured
9. Ano-rectal disease
10. Abdominal injuries
11. Disorders of the groin I
12. Disorders of the groin II
13. Chronic large bowel disease
14. Acute abdomen I
15. Acute abdomen II
16. Non-acute abdominal pain I
17. Non-acute abdominal pain II
18. Obstructive jaundice I
19. Obstructive jaundice II

Total 38 Units
LIST OF PROBLEM – SOLVING SESSIONS IN SURGERY
(1 SESSION 1 1/2 HOURS PER TOPIC).

1. Multiple trauma
2. Intestinal hemorrhage (bleeding D.U.).
3. Pancreatitis
4. Large bowel disease
5. Breast cancer
6. Obstructive jaundice
7. Thyroid swelling
8. Intestinal obstruction
9. Lower G.I.T. bleeding
10. Appendicitis

Total 20 Units
LIST OF LECTURES IN TRAUMATOLOGY

1. Fractures (Mechanisms, patterns, displacement, classification).
2. Effect of fractures on the whole organism, complications and "Fracture Disease"
4. Disturbances of fracture healing
5. Principles of conservative treatment of fractures
9. Shoulder and upper extremity (except wrist and fractures in children).
10. Fractures of the wrist and hand (incl. Colle's etc.).
11. Hand injuries (excl. Fractures) soft tissue, ligaments, tendons, nerves).
13. Fractures of the neck of the femur and subtrochanteric fractures.
15. Fractures of the femur and lower leg.
16. Fractures of the ankle and foot
17. Fractures of the spine
19. Fractures in children (upper extremity)
20. Fractures in children (lower extremity)
21. Ligamentous, capsular and meniscal injuries.
22. Blunt and open abdominal trauma

Total 20 Units.
LIST OF SEMINARS IN TRAUMATOLOGY
(SESSION OF 1 1/2 HOURS PER TOPIC).

1. Fractures in general
2. Shoulder
3. Elbow and forearm
4. Wrist and hand
5. Hip
6. Knee
7. Lower leg, Ankle
8. Spine, pelvis
9. Plasters, splints, dressings
10. Surgical, instruments
11. Approach to emergencies
12. Shock and resuscitation
13. Unconsciousness
14. Effects of extreme temperature poisoning
15. Burns and scalds.
16. Bites
17. Wounds, Hamorrhage, foreign bodies
18. Asphyxia
19. Handling and transfer

Total 40 Units
LIST OF TUTORIALS IN "FRACTURES AND LOCOMOTOR INJURIES"
(1 1/2 HOUR PER SESSION)

1. Fractures in general
2. Shoulder
3. Elbow- Forearm
4. Wrist- Hand
5. Hip
6. Knee
7. Lower leg, ankle, foot
8. Spine, Pelvis
9. Plasters of paris, splints, bandages, dressing
10. Surgical instruments.

Total 20 Units.

LIST OF TUTORIALS IN "EMERGENCIES"
(1 1/2 HOURS PER SESSION)

1. Approach to emergencies
2. Shock and resuscitation
3. Unconsciousness
4. Burns and scalds
5. Snake bites and others
6. Wounds, foreign bodies, haemorrhage
7. Asphyxia
8. Effects of extreme temperatures
9. Poisoning
10. Handling and Transfer

Total 20 Units.
LIST OF LECTURES IN UROLOGY

1. Anatomy and physiology

2. Investigations, symptoms and signs
   - clinical
   - Chemical and laboratory
   - Technical

3. Diseases of the upper urinary tract
   a) Congenital anomalies
      - renal anomalies
      - Ureteral anomalies
      - Reflux
   b) Traumatic lesions "neural and ureteral"
   c) Urolithiasis.
   d) Infections and parasitological diseases.
   e) Tumors and cysts

4. The Bladder
   a. congenital anomalies
   b. Injuries
   c. Infections and Parasitology
   d. Vesical calculi
   e. Diverticula
   f. Fistula
   g. Tumors
   h. Bladder neck obstruction
   i. The neurogenic bladder

5. Diseases of the prostate
   b) Infections
   c) Prostatic calculi
   d) Tumors of the prostatic gland
6. Diseases of the urethra
   b) Congenital anomalies of the urethra
   c) Injuries of the Urethra
   d) Infections
   e) Urethral structures
   f) Urethral calculi
   g) Tumors "male and female"

7. Diseases of the male genital system.
   b) The penis
   c) The Testis
   d) Spermatic cord.

Total 11 Units.

LIST OF SEMINARS IN UROLOGY
(1 SESSION OF 1 1/2 HOURS PER TOPIC)

1. Urological complaints, symptoms and signs
2. Specific urological, investigations
3. Retention of urine
4. Haematuria

Total 8 Units
LIST OF LECTURES IN ORTHOPAEDIC SURGERY

1. Scoliosis
2. Unspecific low back pain
3. Prolapsed intervertebral disc
4. Facet arthropathy of the spine
5. Spondylolysis and spondylolisthesis
6. Congenital dislocation of the hip
7. Perthes disease and "Observation hip"
8. Slipped capital femoral emphysis
9. Idiopathic necrosis of the head of the femur and other osteonecrosis
10. Degenerative osteoarthritis in general
11. Osteoarthritis of the hip
12. Osteoarthritis of the knee
13. Talipes equino-varus and other congenital foot deformities
14. Congenital limb defects and other congenital malformations
15. Growth problems and limb length inequality
16. Flat foot and painful foot
17. Rheumatoid arthritis
18. Non-rheumatoid collagen disease
19. Metabolic diseases
20. Systemic bone and joint diseases
21. Bone tumours
22. Erb's palsy and brachial plexus injuries in the perinatal period.
23. Poliomyelitis
24. Cerebral palsy
25. Nerve-and root compression syndromes
26. Shoulder pain
27. Anterior knee pain
28. Bone and joint tuberculosis
29. Standard orthopaedic procedures

Total 29 Units.
LIST OF SEMINARS IN ORTHOPAEDIC SURGERY
(1 SESSION 1 1/2 HOURS PER TOPIC)

1. Assessment of joint mobility and muscle function.
2. Gait analysis and limping
3. Stiffness and contracture
4. Spastic and flaccid paralysis
5. Nerve and root compression syndromes
6. Problem solving: knee pain

Total 12 Units.

LIST OF SEMINARS IN THORACIC SURGERY
(2 SESSIONS OF 1 1/2 HOURS PER TOPIC).

1. Thoracic injuries, clinical and radiological presentation.
2. Thoracic injuries management

Total 4 Units.
LIST OF LECTURES IN NEUROSURGERY

1. Intracranial pressure
2. Focal (localizing) signs
3. Non-Traumatic space occupying lesions I (Brain tumours, CNS infections, pseudo-tumour cerebri).
4. Non-Traumatic space occupying lesions II.
5. Head injuries I
6. Head injuries II
7. Haemorrhagic brain lesions
8. Congenital conditions
9. Traumatic lesions of the peripheral nervous system
10. Traumatic lesions of the spinal cord
11. Neurosurgical diagnostic procedures

Total 12 Units.

LIST OF SEMINARS IN PAEDIATRIC SURGERY

(1 SESSION OF 1 1/2 HOURS PER TOPIC).

1. Abdominal mass in infants and children
2. Intestinal obstruction in neonates and children
3. Neonatal emergencies
4. Inguino-scrotal swellings.

Total 8 Units.
LIST OF LECTURES IN OPHTHALMOLOGY

1. Anatomy and examination
2. Eye lids: Diseases and treatment
3. Disorders of lacrimal drainage apparatus
4. Disorders of conjunctiva I
5. Disorders of conjunctiva II
6. Disorders of the cornea and sclera I
7. Disorders of the cornea and sclera II
8. Disorders of the uveal tract I
9. Disorders of the uveal tract II
10. Glaucoma and examination of visual fields
11. Diseases of the vitreous
12. Glaucoma and examination of visual fields
13. Diseases of the retina I
14. Diseases of the retina II
15. Ocular pharmacology
16. The principles of refraction and general optics
17. Ocular manifestation of systemic disease
18. Strabismus and disorders of the mobility of the eyes
19. The crystalline lens
20. Diseases of the orbit
21. Ocular manifestation of the disorders of the nervous system.

Total 21 Units.

LIST OF SEMINARS IN OPHTHALMOLOGY
(1 SESSION OF 1 1/2 HOURS PER TOPIC)

1. Specific ophthalmological investigations
2. The "Red eye"
3. Impairment of vision
4. Double vision

Total 8 Units.
LECTURES IN ENT-HEAD/NECK SURGERY

1. Applied clinical anatomy & physiology hearing test.
2. Ear trauma and management
3. Diseases of external ear and otitis externa
4. Acute otitis media
5. Chronic otitis media
6. Complications of otitis media
7. Otosclerosis
8. Meniere's disease
9. Deafness
10. Vertigo
11. Applied clinical anatomy, physiology, septal haematoma & foreign body in the nose
12. Nasal and sinus trauma and management
13. Nasal obstruction and septal deviation
14. Rhinitis
15. Nasal allergy and polyp
16. Epistaxis
17. Acute sinusitis
18. Chronic sinusitis and complications
19. Tumour of the nose and paranasal sinuses
20. Tumour of the nasopharynx and postnasal space
21. Acute tonsillitis and differential diagnosis of sore throat, chronic tonsillitis
22. Pre-operative consideration and assessment of the patient with head and neck disease.
23. Post-operative care
24. Local and general complications after head and neck surgery.
26. Mass in the neck-differential diagnosis and management (Two lectures).
27. Tumour of the Hip, tongue, oral cavity and oropharynx.
28. Tumour of hypopharynx and diverticuli of the pharynx.
29. Tumour of the larynx and (cervical trachea).
30. Vocal cord paralysis.
31. Trauma and stenosis of the larynx and cervical trachea
32. Tracheostomy and tracheotomy post-operative care and complications.
33. Neoplastic and non neoplastic diseases of salivary glands.
34. Foreign body in the bronchus and oesophagus
35. Tumours and perforation of oesophagus.

Total 35 Units.

LIST OF SEMINARS IN ENT-HEAD/NECK SURGERY
(1 SESSION OF 1 1/2 HOURS PER TOPIC)

1. Pain in the ear
2. Nasal, obstruction
3. Hoarseness of voice
4. Dysphagia
5. Sore throat

Total 10 Units.

LECTURE LIST OF REHABILITATION
AND PHYSICAL MEDICINE

1. Definition, scope and team work in physical medicine and rehabilitation.
2. Natural physical means in physiotherapy.
3. Artificial physical means in Physiotherapy
5. Means of rehabilitation
6. Prosthetics and orthotics

Total 6 Units.
LIST OF SEMINARS IN PHYSICAL MEDICINE AND REHABILITATION
(3 SESSIONS OF 1 1/2 HOURS ON)

1. Assessment of patients' complaints.
2. Impairment of function and disability.

Total 6 Units.

LIST OF LECTURES IN RADIOLOGY AND IMAGING

1. X-ray physics
2. Radiation protection
3. The normal chest x-ray
4. Pathological conditions of the chest.
5. The normal x-ray of the gastrointestinal tract, (plain abdomen and contrast procedures).
   * Pathological conditions of the gastrointestinal tract.
6. The normal image of liver, biliary system and pancreas scans, USS, contrast procedures.
7. Pathological images of liver, biliary system and pancreas.
8. The normal images of the urinary system, x-rays, scans and contrast procedures.
9. Cardiovascular radiology
10. Radiology of the genital system
11. Mammography
12. The normal x-ray and imaging of the nervous system scans and contrast procedures.
13. Pathological x-rays and images of the nervous system
14. Normal x-rays and images of bone and joints
15. Pathological x-rays and images of bone and joints
16. Introduction to nuclear medicine
17. Nuclear physics of the endocrine system
18. Nuclear physics of the cardio-vascular system

Total 20 Units.
LIST OF SEMINARS IN RADIOLOGY
(2 SESSION OF 1 1/2 HOURS PER TOPIC)

1. Respiratory system  
2. Gastro-intestinal tract  
3. Musculo-skeletal system  
4. Genito-Urinary system  
5. Nuclear medicine (cardio-vascular, urinary system).  
6. Nuclear medicine (endocrine and skeletal system).

Total 12 Units.

LIST OF LECTURES IN FORENSIC MEDICINE

1. Identification  
2. Death and post mortem changes  
3. Medico legal examination of blood stains  
4. Wounds  
5. Head injuries  
6. Asphyxia  
7. Burns  
8. Fire arm injuries  
9. Sexual offences  
10. Infanticide  
11. Pregnancy and abortion  
12. Medical ethics and medical malpractice

Total 12 Units.
LECTURE PROGRAMME FOR ANAESTHEISA

1. O₂ and CO₂ carriage in the blood and regulation of respiration.
2. Pharmacology of I.V. anaesthetic agents
4. Introduction to anaesthesia
5. Pre-anaesthetic assessment
6. Pre-medication
7. Choice of anaesthesia
8. Tracheal intubation
9. Pain and peri-operative pain relief
10. Mechanical ventilation
11. Ventilators
12. Normal neuromuscular transmission
13. Neuromuscular blocking drugs
14. Pharmacology of local anaesthetics
15. Local anaesthetic techniques
16. Intensive care general principles
17. Fluid therapy: crystalloids, colloids and blood transfusion
18. Central venous cannulation and parenteral nutrition.
19. Monitoring and diagnostic procedures in the ICU.

Total 20 Units.

LIST OF SEMINARS IN ANAESTHEISOLOGY

(1 SESSION OF 1 1/2 HOURS PER TOPIC)

1. Acid/base balance and derangements.
2. Pulmonary functions
3. Acute pulmonary failure
4. resuscitation (NCPR).

Total 8 Units.