

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.**T.Y. M.B.B.S.****Goals and objectives of Allied Subjects****(B) ORTHOPAEDICS****(A) KNOWLEDGE**

The student shall be able to:

1. Explain the principles of recognition of bone injuries and dislocation.
2. Apply suitable methods to detect and manage common infections of bones and joints.
3. Identify congenital, skeletal anomalies and their referral for appropriate correction or rehabilitation.
4. Recognize metabolic bone diseases as seen in this country:
5. Explain etogenesis, manifestations, and diagnosis of neoplasm affecting bones.

(B) SKILLS:

At the end of the course, the student shall be able to:

1. Detect sprains and deliver first aid measures for common fractures and sprains and manage uncomplicated fractures of clavicle, Colles's forearm, phalanges etc.
2. Use techniques of splinting, plaster, immobilization etc.
3. Manage common bone infections, learn indications for sequestration, amputations and corrective measures for bone deformities;
4. Advise aspects of rehabilitation for Polio, Cerebral Palsy and Amputation.

(C) APPLICATION

Be able to perform certain orthopaedic skills, provide sound advice of skeletal and related conditions at primary or secondary health care level.

(D) INTEGRATION**LEARNING METHODS**

Lectures, Tutorials bedside clinics and lecture cum demonstrations

Distribution of Teaching hours -

- ❑ Lectures - 50 hours
- ❑ Tutorials and revision - 50
- ❑ Clinical postings in Orthopaedics

Total clinical Posting of 10 weeks of 180 hours

5th Semester - 4 weeks

6th Semester - 4 weeks

9th Semester - 2 weeks

Course contents and suggested lecture program of Orthopaedics (Total 100 hours)

This is suggested programme and can vary at institute

Total 100 hours of teaching has to be done in Orthopaedics including Tutorials

Details of syllabus is given separately below after distribution as per semester

- | | | |
|----------------------------|------------|----------|
| □ 6 th Semester | Lectures | 1 to 16 |
| □ 8 th Semester | Lectures 1 | 17 to 32 |
| □ 8 th Semester | Lectures 2 | 33 to 48 |

Topic : General Orthopaedics

Lectures

1. Introduction and scope of Orthopaedics Traumatology and Orthopaedic Diseases. Idea about Scheme of Examination.
2. Definition and Classification of Fracture and Dislocation Signs, symptoms and diagnosis of sprain, contusion fracture and dislocation.
3. First aid measures in Poly-trauma patient, spinal cord Injury patients and knowledge about various splints.
4. & 5 Principles of Management of sprain, Fracture and Dislocation with emphasis on various aspects of closed reduction, immobilization including internal fixation and rehabilitation.
- 6,7,8 Complications of fracture and its management with specific reference to malunion Delayed union, Non union, Myositis Ossificans, Sudeck's dystrophy, Volkman's ischaemia, Avascular Necrosis, Fat embolism, secondary Osteoarthritis and injury to Muscles, Tendon, nerve and Blood vessels.
9. Plaster technique, plaster complications and plaster disease.
10. Fracture Healing in cortical and cancellous bones and factors affecting fracture healing.

Topic : Orthopaedic Traumatology

11. Fracture clavicle, scapula, neck humerus and shaft humerus.
12. Supracondylar fracture humerus with complications.
13. Fracture Forearm bones, Monteggia and Galeazzi fracture dislocations, fracture olecranon head and neck radius.
14. Fracture scaphoid, Metacarpals and phalanges.
15. Colles fracture and Complications.
16. Dislocation (Acute and Recurrent) of shoulder and elbow.
17. Fracture of Vertebrae with complications.
18. Fracture of Pelvis with complications.
19. Fracture Neck femur and trochanteric fracture.
20. Fracture shaft femur and fractures around knee.

21. Meniscus and ligaments injury at knee.
22. Fracture Tibia-fibula, fracture in tarsals, Metatarsals and phalanges.
23. Fracture dislocation around ankle,
24. Dislocation of Hip, knee, ankle, tarsals and small bones in foot.

Topic : Orthopaedic Diseases

- 25,26 Congenital skeletal anomalies with emphasis on congenital Talipes Equino varus (CTEV). :-
27. Congenital dislocation of hip (CDH), Osteogenesis Imperfecta, spina Bifida and Torticollis.
28. Osteochondritis – various types.
29. Post Polio Residual Palsy with stress on preventive and rehabilitation aspect.
30. Acute Osteomyelitis.
31. Chronic Osteomyelitis.
32. Pyogenic arthritis of Hip, knee.
- 33,& 34. Osteo-articular Tuberculosis with special reference to Tuberculous of Hip, knee and elbow.:-
35. Tuberculosis spine and paraplegia.
36. . Fungal Infections and leprosy in Orthopaedics.
37. Cerebral palsy, Diagnosis and rehabilitation.
38. Rheumatoid arthritis.
39. Degenerative arthritis.
40. Nerve injuries and principles of management.
41. Amputation and Disarticulation – Indications methods and complications.
42. Metabolic bone disease : Rickets, Osteomalacia and Osteoporosis.
- 43,& 44 Tumours of bones and its classification. Benign :- Osteochondroma, Giant cell tumour Unicameral Bone cyst, Aneurysmal cyst.
- 45,46 Malignant- Osteogenic sarcoma, Ewing's tumour, Fibrosarcoma, Chondrosarcoma, Multiple Myeloma, Secondaries from Primary Carcinoma (Metastatic tumours)
- 47 Back ache,
- 48 Frozen shoulder, Tennis Elbow, Dequervain's disease, Dupuytren's Contracture Osgood – Schlatter;s disease, planter fascitis.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.**T.Y. M.B.B.S.****Practical and Lecture cum Demonstration Classes, in MBBS in
Orthopaedics**

Once a week class for two hours in 8th/9th semester.

Topics of Demonstrations :-

1. Plaster technique and splint applications.
2. Traction application, Orthopaedic appliances demonstration, Demonstration of Physiotherapy equipments.
3. Specimens of sequestrum and Tumours, Madura foot etc.
4. Common instruments and Implants.
- 5 to 7. Common X-rays of traumatology, bony infection, joint infection and tuberculosis, Malunited Colle's fracture, forearm or Supracondylar Humerus fracture.
- 8 to 10. Chronic osteomyelitis case, knee effusion case, Non union case, Bony tumour case.

Seminar Topics :-

11. Osteomyelitis.
12. Tuberculosis.
13. Bone tumours
14. First aid and Acute trauma Life saving (ATLS) measures.

Tutorial Topics :-

15. Supracondylar fracture Humerus.
16. Colle's fracture.
17. Fracture neck femur.
18. Spine examination, Pott's spine and paraplegia
19. CTEV.
20. Shoulder, Elbow and wrist examination.
21. Hip examination.
22. Knee, ankle foot examination.
23. Nerve examination and nerve injuries.

Internal assessment:

- Two Term ending examination at the end of Posting of 50 markseach
Total 100 out of 450 marks under general surgery.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.**T.Y. M.B.B.S.****C) ANAESTHESIOLOGY****DEPARTMENTAL OBJECTIVES:**

At the end of the training, the students should be able to:

1. Perform cardio-pulmonary resuscitation with the available resources and transfer the patients to a bigger hospital for advanced life support.
2. Set up intravenous infusion.
3. Clear and maintain airway in an unconscious patient.
4. Administer oxygen correctly.
5. Perform simple nerve block.
6. Exhibit awareness of the principles of administration of general and local anaesthesia.

SKILLS:

1. Start I V line and infusion in adults, children and neonates.
2. Do venous cutdown.
3. Insert, manage a CVP line.
4. Conduct CPR (Cardiopulmonary resuscitation) and first aid in newborns, children and adults including endotracheal intubation.
5. Perform nerve blocks like infiltration, digital and field blocks.
6. Do lumbar puncture.
7. Administer O₂ by mask, catheter, and O₂ tent and be able to handle O₂ cylinder.

LEARNING METHODS

Lectures, Tutorials bedside clinics and lecture cum demonstrations

Distribution of Teaching hours -

- **Lectures - 20 hours**
 - **Tutorials and revision -**
 - **Bedside clinics - 36 hours, one clinical postings**
- 2 weeks in Anaesthesiology**

COURSE CONTENTS:

1. Cardiopulmonary resuscitation (CPR) - basic and advanced, including use of simple ventilators.
2. Anatomy of upper airway, sites of respiratory obstruction and management of airway in an unconscious patient.
3. Various methods of oxygen therapy and its indications.
4. The pharmacology of local anaesthetics, their use and how to perform simple nerve blocks like - Infiltration anaesthesia, digital block, ankle block, pudendal and paracervical blocks.
5. Management of complications of regional anaesthesia. The principles of administration of general anaesthesia.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.**T.Y. M.B.B.S.****D) Radiology :Diagnosis & Imaging****Goals :**

- ❑ Realisation of the basic need of various radio-diagnostic tools.
- ❑ Radio-diagnostic Techniques to be adopted indifferent clinical situations in diagnosis of ailments.

Objectives :**❑ Knowledge: -**

The student shall be able to

1. Understand basics of X-ray / USG production, its utility and hazards
2. Appreciate and diagnose radiological changes in diseases of Chest, Abdomen, Skeletal system, Gastro-intestinal system, Genito-urinary System & CNS
3. Learn about various Imaging techniques like nuclear medicine, computerised tomography (CT), Ultrasound, magnetic resonance imaging (MRI), conventional & Digital subtraction Angiography (DSA).

Skills: -

At the end of the course the student shall be able to

1. Interpret various radiological findings and their consequences
2. Use basic protective techniques during various Imaging procedures
3. Advice appropriate Diagnostic procedures to arrive at an appropriate diagnosis.

LEARNING METHODS

Lectures, Tutorials bedside clinics and lecture cum demonstrations

Distribution of Teaching hours -

- ❑ Lectures - 20 hours
- ❑ Tutorials and revision -
- ❑ Bedside clinics - 36 hours, one clinical postings
2 weeks in Radiology

I : BONES & JOINTS :

Congenital dislocation of hip, congenital syphilis, Achonodroplasis, Osteogenesis Imperfecta.

Infection : Osteomyelitis, Tuberculosis of Bone & Spine.

Lesions of Joints : Septic / Tuberculous Arthritis, Rheumatoid, Arthritis, Ankylosing Spondylitis, Osteo-Arthritis, Gout.

Bone Tumours: Ewing's, Osteogenic Sarcoma, Giant Cell Tumour Neurofibroma.

Lymphoreticular system & Haemopoietic Disorders : Thalassemia, Sickle Cell disease, Lymphomas, Multiple myeloma, plasmacytoma, Haemophilia.

Metabolic & Endocrine Disorders of Bone: Rickets & Osteomalacia, Scurvy, Osteoporosis, Acromegaly, and Hyperparathyroidism.

Skeletal trauma: General Principles.

II: Chest:

Methods of examination, Normal X-ray Chest, Bronchopulmonary Segments.

Interpretation of Abnormal Chest X-ray : Silhouette sign, Air Bronchogram,

Interstitial Shadows, Alveolar Shadows, Honeycomb Lung, Cavitations, Calcification, Hilar Shadow, Mediastinum, Pleura.

Bronchography.

Bronchogenic Carcinoma.

Miliary Shadows, Pulmonary Tuberculosis, Solitary Pulmonary Nodule, Bronchiectasis, Primary complex.

III : CARDIO-VASCULAR SYSTEM

Normal Heart : Methods of examination.

Cardiomegaly, Pericardial Effusion.

Acquired Heart Diseases: Valvular Heart Disease, Ischaemic Heart Disease.

Congenital Heart Disease.

Aortic Aneurysms, Co-arctation of Aorta.

IV : GASTRO-INTESTINAL TRACT & ABDOMEN :

Barium Examination of GI Tract.

Acute Abdomen.

Oesophagus: Carcinoma, Strictures, Varices, Achalasia, and Hiatus Hernia.

Stomach & Duodenum : Ulcer disease, Malignancy.

Intestine: Intestinal Obstruction, Volvulus, Ulcerative Colitis,

Intussusceptions, Malignancy, Hirschsprung's Disease, Koch's Abdomen Diverticular Disease, Polyp's.

V : HEPATO-BILARY SYSTEM, PANCREAS :

Liver : Abscess, Hepatoma, Cirrhosis, Portal Hypertension, and Spenoportography.

Gall-Bladder : Calculus Disease, Malignancy, PTC, ERCP.

Pancreas : Pancreatitis, Malignancy.

VI : URORADIOLOGY:

Method of Examination : Intravenous Urography (IVP)

Calculus Disease, PUJ Obstruction, PU Valves, Renal Artery Stenosis,

Wilm's Tumour, Renal Cell Carcinoma, GU Koch's.

VII : OBSTETRICS & GYNAECOLOGY :

Hysterosalpingography (HSG), Intra-Uterine Foetal Death, Fibroid, Ovarian Tumours, Ultrasonography & Transvaginal US.

VII: CENTRAL NERVOUS SYSTEM :

Raised Intracranial Tension, Intracranial Calcification, Head Injury, Cerebrovascular Accident, Ring Enhancing Lesions in Brain, Spinal Neoplasms, Myelography.

IX: MISCELLANEOUS:

Radiation Hazards, Radiation Protection.

Imaging Modalities :

USG, CT, MRI : Principles, Applications, Advantages, Limitations, Developments.

Angiography : Seldinger Technique, Conventional Angiogram, DSA, Carotid, Coronary, Renal Angiograms, Aortogram.

Contrast Media : Barium Sulphate, Water Soluble & Oily Contrast.

Interventional Radiology : Developments, Angioplasty, Embolisation.

Mammography: Principles & Applications.

Internal assessment:

- Term ending examination at the end of Posting of 50 marks out of Total 450 marks under general surgery.

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VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.**T.Y. M.B.B.S.****Dentistry for MBBS students under Surgery****GOALS**

- Comprehensive understanding of Dentistry, Orofacial structures, the Dentition, Maxillary and Mandibular jaws and the Diagnosis, Treatment, Prevention, Restoration and Rehabilitation of the common dental problems

OBJECTIVES.**A. KNOWLEDGE**

- Various Diseases, Syndromes, Lesions, Disorders manifesting and affecting the Oral cavity, the Jaws and the TM joint.
- Effects of Dental Caries, Gingival and Periodontal diseases and Malocclusion.

B. SKILLS

- Examination of the Oral cavity and the TM Joint
- Local Anaesthesia Administration. Dental block
- Exodontia.
- Emergency management of Maxillofacial Trauma.
- Plaque control and Oral health care regimen.

Learning methods

- Total teaching hours: 10
- Theory lectures: 10 in 7th Semester
- Clinical Postings; 2weeks each in 7th semester

Internal assessment:

- Term ending examination at the end of Posting of 50 marks out of Total 450 marks under general surgery.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.**T.Y. M.B.B.S.****COURSE****III MBBS, 7Th SEMESTER LECTURES:****10 Hours.**

1. Scope of Dentistry
Introduction of various branches of Dentistry.
Basic Understanding of Dental Epidemiology
Effects of deleterious Habits on Dentition and Orofacial structures.
2. Development and Growth of Jaws & Orofacial structures.
Development & Eruption of teeth, Deciduous & Permanent.
Occlusion.
Preventive Care in Paediatric patients.
3. Dental Caries
Gingival & Periodontal Diseases.
Developmental Anomalies.
Cysts & Tumours of Oral cavity.
Neoplasms of Oral cavity.
Oral Microbiology.
4. Orofacial Pain & its Management
5. Maxillofacial Trauma and Management of patient.
6. Oral Medicine
Systemic diseases, the relevance of medications prescribed & their Oral Manifestations.
Infections of Orofacial structures esp. periodontal diseases & their Manifestations in Systemic conditions. Relationship between Oral and systemic health. Women's Oral health care in Reproductive phase.
7. Interdisciplinary team approach in the management of a patient in Dentistry involving Paediatrics, Plastic surgery, ENT Surgery, Neurosurgery, Ophthalmic surgery, Gen. Surgery, Medicine, Orthopaedics, Dermatology, Endocrinology and OB-GYN.
8. Rehabilitation of lost Oral structures. Implantology.
9. Dentofacial Deformities and Surgical corrections.
10. Biomaterials used in Dentistry.
Emerging technologies in Contemporary Dentistry.
Molecular Dentistry.
Integration with anatomy, surgery, pathology radiology and Forensic Medicine be done.

CLINICAL POSTING in DENTISTRY - 2 WEEKS

1. L.A. Administration, Techniques for different Blocks.
2. Exodontia
3. Preliminary Management of Maxillofacial Trauma
4. Pathological conditions of Oral cavity.
5. Oral and Maxillofacial Radiography & Imaging
6. Maxillo Facial Prosthodontics

Criteria of passing in various surgical subjects at III MBBS Examination

Demonstration of Clinical Procedures in Dental Clinics.

	Subject	Theory Paper ./ Oral/ Practical / Internal Assessment		Maximum Marks in each of the subject	Minimum marks required to pass in each part of any subject		Minimum marks required to pass in each subject out of
01)	Otorhinolaryngology	a) Theory	Paper - I	40	20	25	<div>50</div> <div>100</div>
		b) Oral		10			
		c) Practical		30		15	
		d) Internal Assessment	Theory	10		10	
Practical	10						
02)	General Surgery	a) Theory	Paper I	60	60	70	<div>150</div> <div>300</div>
			Paper II	60			
		b) Oral		20			
		c) Practical		100		50	
		d) Internal Assessment	Theory	30	30		
		Practical	30				
03)	Obstetrics and Gynaecology	a) Theory	Paper1	40	40	50	<div>100</div> <div>200</div>
			Paper2	40			
		b) Oral		20			
		c) Practical		60	30		
		d) Internal Assessment	Theory	20	40		
		Practical	20				
04)	Ophthalmology	a) Theory	Paper - I	40	20	25	<div>50</div> <div>100</div>
		b) Oral		10			
		c) Practical		30		15	
		d) Internal Assessment	Theory	10		10	
		Practical	10				

It is compulsory to obtain 50% marks in theory.

It is mandatory to obtain 50% marks in theory+ viva/oral.

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT.**T.Y. M.B.B.S.****FINAL MBBS EXAMINATION IN SURGERY****Evaluation : Methods – Internal assessment, Theory, Practical and Viva**
Internal Assessment (Formative Assessment)

Theory – 30 Practical - 30 Total 60

- Marks of Internal Assessment should be sent to University before the commencement of Theory examination.
- Passing in internal assessment is essential for passing ,as Internal assessment is separate head of passing. in examination.
- It will also be considered for grace marks as per existing rules
- Combined theory and practical of internal assessment will be considered for passing in internal assessment.
- Student will be allowed to appear for both theory and practical exam independent of marks obtained in internal assessment but he if fails in that head even after including the grace marks he will be declared **“Fail in that Subject”**

Internal assessment in Theory -***Examinations during semesters:***

This will be carried out by conducting two theory examinations during 6th and 8th semesters (100 marks each).

Total of 200 marks to be converted into 15 marks.(A/15)

Prelim examination :

This shall be carried out during 9th semester. Two theory papers of 60 marks each as per university examination Pattern

Total of 120 marks to be converted into 15 marks. (B/15)

Total marks of Internal assessment for Theory will be addition of A and B.

Internal assessment in Practical***Examinations at end of Clinical postings:***

There will be practical examination at the end of each clinical posting of General Surgery. (3rd, 5th, 7th and 8th semester) Each examination will be of 50 marks.

Total of 4 examinations - 200 marks.

These marks and marks from Orthopaedics 100, Radiology 50, Dentistry 50 and Casualty 50 will be added. - Total 450 marks will be converted to 15 marks.(C/15)

Prelim examination:

This will be conducted for 120 marks as per university pattern and marks will be converted to 15 (D/15).

Total marks of Internal assessment for Practical will be addition of C and D.