Baba Farid University of Health Sciences

Ordinances & Syllabus

Bachelor of Science in
Orthopaedic Assistant & Plaster Techniques
B.Sc.(OAPT)

(3 Years Degree Programme)

(Applicable w.e.f. academic session 2019-20)

Faridkot -151203

Ordinances
Bachelor of Science in Orthopaedic Assistant & Plaster Techniques
B.Sc. (OAPT)

1. Duration of course

Duration of course shall be 3 years.

2. Admission criteria and qualifications:

The students shall be admitted as per the admission criteria and qualifications prescribed in the Notification issued by the Government of Punjab or by Baba Farid University of Health Sciences, from time to time.

3. Medium of Instructions

The medium of instruction during the course and examinations shall be English.

4. Examination Schedule

4.1 The examination shall be held twice a year in the months of May/June and November/December or on such other dates as may be decided by the Board of Management on the recommendation of Faculty of Medical Sciences and Academic Council.

4.2 Normally, the University shall conduct not more than two examinations in a year, for any subject, with an interval of not less than four and not more than six months between the two examinations.

4.3 Normally, the last dates for receipt of examination form and late fee in the University Office shall be as under:-

Examination Session	Date for without late fee	Date with late fee of Rs.200/-	Date with late fee of Rs.500/-	Date with late fee of Rs.1500/-
May/June	March 1	March 15	March 31	April 15
Nov./Dec.	Sept. 15	Sept. 30	Oct. 15	Oct. 31

4.4 In the case of late declaration of result due to any reason, the last dates for receipt of examination form and fee in the University Office shall be as under:-

Up to 15 days from the date of declaration of result	Up to 30 days from the date of declaration of result	Up to 45 days from the date of declaration of result	Up to 60 days from the date of declaration of result
Without Late Fee	With a late fee of Rs.200/-	With a late fee of Rs.500/-	With a late fee of Rs.1500/-

Note: 1. Examination Fee including cost of form should be submitted in the shape of Demand Draft in favour of "The Registrar, BFUHS" payable at Faridkot.

2. The Vice chancellor may permit acceptance of admission form and fee ten days before the commencement of examination with a late fee of Rs.5000/.

5. First Year B.Sc. Orthopaedic Assistant & Plaster Techniques Examination:

The First Year B.Sc. Orthopaedic Assistant & Plaster Techniques Examination shall be open to a person who

a) has been enrolled for one academic year preceding the examination in a College of Health Sciences affiliated to this University.

b) has his/her name submitted to the Registrar by the Principal of the college with the following certificates:-

i) of having attended separately in theory and practical/clinical not less than 75% of the lectures delivered and practicals conducted in each of the subjects prescribed for the examination provided that deficiency in the number of lectures delivered and practicals conducted may be condoned by the Principal to the extent of 5% of the lectures delivered.

ii) of having secured at least 35% marks of the total marks fixed for internal assessment in each subject, separately, in order to be eligible to appear in all University examinations.

iii) of good moral character.

Note: If a candidate fulfils the condition laid down in clause 5(a) & (b) above for one or more subject (s) he/ she may be allowed to take the examination in such subject (s) in which he/ she fulfils the requirements.

(c) The First Year B.Sc. Orthopaedic Assistant & Plaster Techniques Annual Examination shall be held in May/June and the supplementary within six months of the annual examinations.

d) The First Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination shall be in the following subjects and candidate shall be required to pass all the subjects:-

Sr. No.	Subject	Theory				Practical			Grand Total
		Marks	Int. Assessment	Oral/Viva	Total	Marks	Int. Assessment	Total	
1.	Anatomy	80	20	20	120	60	20	80	200
2.	Physiology	80	20	20	120	60	20	80	200
3.	Microbiology	80	20	20	120	60	20	80	200
4.	Introduction to Computer*	50	-	-	50	50	-	50	100
5.	English*	80	20	-	100	-	-	-	100

*Note: The Examination in the subject of Introduction to Computers and English will be conducted at College level and minimum pass marks in the subject of English shall be 35% and marks will be sent to the University for final inclusion in the result.

6. Second Year B.Sc. Orthopaedic Assistant & Plaster Techniques Examination:

The Second Year B.Sc. Orthopaedic Assistant & Plaster Techniques Examination shall be open to a person who

a) has been enrolled for one academic year preceding the examination in a College of Health Sciences affiliated to this University.
b) has previously passed the First Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination of this University or an examination of any other recognized University/Institution in India considered equivalent for the purpose by the University.
c) has his/her name submitted to the Registrar by the Principal of the college with the following certificates:-

i) of having attended separately in theory and practical/clinical not less than 75% of the lectures delivered and practicals conducted in each of the subjects prescribed for the examination provided that deficiency in the number of lectures delivered and practicals conducted may be condoned by the Principal to the extent of 5% of the lectures delivered.
ii) of having secured at least 35% marks of the total marks fixed for internal assessment in each subject, separately, in order to be eligible to appear in all University examinations.
iii) of good moral character.

Note: If a candidate fulfils the condition laid down in clause 6 (a), (b) and (c) above for one or more subject (s) he/ she may be allowed to take the examination in such subject (s) in which he/ she fulfils the requirements.

(d) The Second Year B.Sc. Orthopaedic Assistant & Plaster Techniques Annual Examination shall be held in May/June and the supplementary within six months of the annual examinations.

(e) The Second Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination shall be in the following subjects and candidate shall be required to pass all the subjects:-

Sr. No.	Subject	Theory				Practical			Grand Total
		Marks	Int. Assessment	Oral/Viva	Total	Marks	Int. Assessment	Total	
1.	Basic Operation Theatre Technique including CSSD	80	20	20	120	60	20	80	200
2.	Orthopaedics Trauma	80	20	20	120	60	20	80	200
3.	Orthopaedics Pharmacology	80	20	20	120	60	20	80	200

7. Third Year B.Sc. Orthopaedic Assistant & Plaster Techniques Examination:

The Third Year B.Sc. Orthopaedic Assistant & Plaster Techniques Examination shall be open to a person who

a) has been enrolled for one academic year preceding the examination in a College of Health Sciences affiliated to this University.

b) has previously passed the Second Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination of this University or an examination of any other recognized University/Institution in India considered equivalent for the purpose by the University.

c) his/her name submitted to the Registrar by the Principal of the college with the following certificates:-

i) of having attended separately in theory and practical/clinical not less than 75% of the lectures delivered and practicals conducted in each of the subjects prescribed for the examination provided that deficiency in the number of lectures delivered and practicals conducted may be condoned by the Principal to the extent of 5% of the lectures delivered.

ii) of having secured at least 35% marks of the total marks fixed for internal assessment in each subject, separately, in order to be eligible to appear in all University examinations.

iii) of good moral character.

Note: If a candidate fulfils the condition laid down in clause 7 (a), (b) & (c) above for one or more subject (s) he/ she may be allowed to take the examination in such subject (s) in which he/ she fulfils the requirements.

(d) The Third Year B.Sc. Orthopaedic Assistant & Plaster Techniques Annual Examination shall be held in May/June and the supplementary within six months of the annual examinations.

(e) The Third Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination shall be in the following subjects and candidate shall be required to pass all the subjects:-

Sr. No.	Subject	Theory				Practical			Grand Total
		Marks	Int. Assessment	Oral/Viva	Total	Marks	Int. Assessment	Total	
1.	Advance Operation Theatre Technique	80	20	20	120	60	20	80	200
2.	Orthopaedics Diseases	80	20	20	120	60	20	80	200
3.	Basic Physiotherapy & Rehabilitations	80	20	20	120	60	20	80	200

8. Internal Assessment

i) Internal Assessment shall be submitted to the University at least two weeks before the commencement of theory examinations or within one week from the issuance of Roll Numbers by the University. All the colleges shall adopt uniform criteria for Internal Assessment as follows:-

a) Attendance above 90% to be acknowledged with 10% extra weight-age for Internal Assessment.

b) At least two tests to be held in each year in addition to the pre-final (send up) examination. The Internal Assessment should be the average of all awards of these tests taken together.

c) Criteria for calculation of Internal Assessment

i)	House Examinations	- 80%
ii)	Attendance (above 90%)	- 10%
iii)	Subject assessment (candidate's conduct and extra curricular participation)	- 10%

d) Additional mandatory requirement for Internal Assessment to be observed by all colleges.

i) All test marks obtained by candidates will be displayed on Notice Boards of respective departments as and when they are awarded.

ii) All computations of Internal Assessment of the entire class made by the HOD of the department shall be displayed on the notice board of the department showing individual test marks, advantage of all tests, attendance advantage and subjective assessment and the total Internal Assessment thus derived for at least one week before sending the awards to the Principal's office.

iii) Professor Incharge/HOD preparing Internal Assessment shall certify that the detailed assessment of the entire class has been displayed on the department Notice Board for at least one week prior to its being submitted for onward transmission to the University and that adequate opportunity has been given to all the students to file any objections and that the same have been addressed satisfactory.

iv) The Principal forwarding the Internal Assessment to the University shall countersign the above referred certificate of the HOD/Professor Incharge preparing the Internal Assessment.

e) The re-appear/fail students may be re-assessed for improvement in the Internal Assessment and awards of Internal Assessment of all the re-appear/fail students will be submitted to the University every time.

9. Promotion and number of attempts allowed

a) A candidate who fails in all the subjects in the First Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination shall not be promoted to Second Year class.

b) The candidate who will absent himself/herself from the examination will be deemed to have been failed in that subject.

c) A candidate who passes in at least one subject of University level First Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination will be permitted to attend classes of Second Year. However, he/she will be allowed to appear in the Second Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination only after passing all the subjects of First Year B.Sc. Orthopaedic Assistant & Plaster Techniques Examination.

d) Candidate who passes in one or more subjects of First Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination shall be exempted from appearing in these subject at a subsequent examination, but the candidate must pass the examination in a maximum of four attempts (including first attempt, as a regular candidate), failing which he/ she shall not be allowed to continue his studies.

e) A candidate who fails in all the subjects in the Second Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination shall not be promoted to Third Year class.

f) A candidate who passes in at least one subject of University level Second Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination will be permitted to attend classes of Third Year. However, he/she will be allowed to appear in the Third Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination only after passing all the subjects of Second Year B.Sc. Orthopaedic Assistant & Plaster Techniques Examination.

g) Candidate who passes in one or more subjects of Second Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination shall be exempted from appearing in these subject at a subsequent examination, but the candidate must pass the examination in a maximum of four attempts including first attempt, as a regular candidate plus one mercy chance at the discretion of the Vice-Chancellor, failing which he/ she will have to appear in all the subjects of the examination.

h) Candidate who passes in one or more subjects of Third Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination shall be exempted from appearing in these subject at a subsequent examination, but the candidate must pass the examination in a maximum of four attempts (including first attempt, as a regular candidate), failing which he/ she will have to appear in all the subjects

10. Appointment of Examiners:

The examiners shall be appointed by the University on the recommendations of the Board of Studies in Medical Sciences (Undergraduates)/Faculty of Medical Sciences.

i) There shall be four examiners – two internal and two external.

ii) Professor& Head of the Department shall be the Convener. The second Internal Examiner will be appointed by annual rotation from amongst the Professors/Associate Professors/Assistant Professor with at least 3 years post PG teaching experience. In case of non-availability of Professors/Associate Professors/Assistant Professor in the department the teacher working in another Medical College affiliated to this University, who fulfils the minimum requirements as per MCI norms for appointment as examiner may be appointed as Internal Examiner.

iii) The examiners shall be appointed by the University from the teachers working in the Medical Colleges affiliated to it, preferably from the colleges where this course is being run, on the recommendations of the Board of Studies in Medical Sciences and Faculty of Medical Sciences.

iv) In case of non-availability of External Examiners from amongst the affiliated colleges of BFUHS, External Examiners may be appointed from the colleges which are not affiliated to BFUHS, Faridkot, in and outside the State of Punjab.

11. Paper setting and moderation of Question Papers

Each theory paper shall be of three hours duration. The paper setting and moderation of Question Papers will be got done under the direction of the Vice-Chancellor, if necessary.

The question paper covering the entire course shall be divided into two sections.

Section A:

Question 1: This will consist of five short answer questions with answer to each question up to 250 words in length. All questions will be compulsory. Each question will carry 5 marks total weight-age being 25 marks.

Question 2: This will consist of two long answer questions with answer to each question up to 1000 words in length in length. Two questions will be set by the examiner and the candidate will be required to attempt one. Each question will carry 15 marks.

Section B

Question 1: This will consist of five short answer questions with answer to each question up to 250 words in length. All questions will be compulsory. Each question will carry 5 marks total weight-age being 25 marks.

Question 2: This will consist of two long answer questions with answer to each question up to 1000 words in length. Two questions will be set by the examiner and the candidate will be required to attempt one. Each question will carry 15 marks.

12. Evaluation of Answer Books

The answer books shall be got evaluated by putting fictitious roll numbers thereon or spot evaluation (table marking) or any other method under the direction of the Vice-Chancellor.

13. Minimum pass marks:

The minimum number of marks to pass the examination shall be 50% in theory including Internal Assessment & Oral/Viva and 50% in practical including Internal Assessment in each subject separately except in the subject of English where minimum pass marks shall be 35%.

A successful candidate on the basis of theory and practical marks taken together shall be classified as under: -

Second Class : A candidate obtaining 50% or more marks but less than 60% marks
First Class : A candidate obtaining 60% or more marks
First Class with Distinction : A candidate obtaining 80% or more marks

14. Grace Marks:

That the grace marks up to 5 (five) be given to the best advantage of the students irrespective of Theory or Practical examinations.

15. Declaration of Result

The Registrar/Controller of Examinations shall publish the result after the examination. The candidates shall be issued Detailed Marks Certificate through their Principals.

16. Award of Degree

On successfully passing the Third Year B.Sc. Orthopaedic Assistant & Plaster Techniques examination the students shall be awarded the Degree of Bachelor of Science in Orthopaedic Assistant & Plaster Techniques.

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SYLLABUS

First Year B.Sc. Orthopaedics Assistant & Plaster Techniques

Paper - I

ANATOMY

Theory: 70 Hours
Practical: 20 Hours

General Introduction

1) Histology – Theory & microscopic section of loose connective tissue, dense connective tissue (tendons & ligamentum nuchae), epithelium, areolar tissue, adipose tissue, hyaline, elastic & fibrous cartilage, compact & spongy bone marrow, skeletal, smooth & cardiac muscle, nerve, lymph node etc.
2) Osteology – Theory of structure, function, growth, fracture & repair of bones. Physical study of all bones in the body. Also general features & functions of cartilage, tendon, ligament, articular capsule, synovial membranes, bursae, menisci, intra-articular cartilages. Classification of joints with their examples & specific features.
3) General Embryology – Development of muscles, bones, joints & nerves etc.

Basic introduction to systems of the human body, nomenclature of important organs, their location and relations

1) Cardio- Vascular system
2) Respiratory system
3) Digestive system
4) Urogenital system
5) Endocrine system
6) Integumentary system
7) Central nervous system and peripheral nerves

Musculo Skeletal system

1) Myology
   a) The fascia and muscles of upper limb
   b) The fascia and muscles of lower limb
   c) The fascia and muscles of trunk & neck
2) Osteology & Arthrology
   a) General structure and classification of bones
   b) Classification of joints
   c) Bones and joints of upper limb and their movements
   d) Bones and joints of lower limb and their movements
   e) Pelvic girdle
   f) Spine (cervical, dorsal & lumber) and its movements

Surface & Radiological Anatomy

1) Surface Anatomy of the upper limb, lower limb, pelvis and spine.
2) Radiographic appearance of skeletal system of upper limb, lower limb & spine.

Radiographs: Normal Radiographs of Chest, Upper Limb, Lower Limb, pelvis & spine.

ANATOMY PRACTICAL

1 Surface Anatomy: To study, identify and mark the surface land marks on human body.
2 To study the muscles of trunk, upper and lower extremities on a dissected body.
3 To study the bones of human body with special emphasis on origin and insertion of muscles & ligaments.
4 To study the anatomy of joints of upper and lower extremities and vertebral column on a dissected human body.

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SYLLABUS

First Year B.Sc. Orthopaedics Assistant & Plaster Techniques

Paper - II

PHYSIOLOGY

Theory: 70 Hours
Practical: 20 Hours

General Introduction

1) Cell introduction: Outline of basic concept of cell structure, function of components and transport across membrances.
2) Skin: Functions, blood of flow and temperature regulation.
3) Blood and lymph: Cell renewal system, haemoglobin, erythrocyte, granulocyte, lymphocyte. Coagulation, fluid distribution and exchange.

Brief introduction to physiology of the system of the body

1) Circulation: Cardio-vascular system, mechanical and electro-physiological of the heart, regulation of heart, coronary circulation, haemodynamics, circulation through brain, skin and skeletal muscle.
2) Respiration: Respiration gases, pulmonary gas exchange, control and mechanics of breathing, hypoxia, asphyxia, dyspnoea, oxygen therapy and resuscitation.
3) General metabolism: Carbohydrate, protein & fat.

Muscle Physiology

1) Structure and function of skeletal muscle.
2) Physiology of muscle contraction.

Physiology of bone

1) Function
2) Classification
3) Parts
4) Composition
5) Structure
6) Types of cells in bone
7) Bone growth
8) Bone remodelling
9) Repair of bone after fracture
10) Applied physiology – Diseases of bone

Physiology of exercise and work

1) Neuromuscular activity, human movement, physiological mechanism in movement behaviour, strength, endurance, analysis of movement.
2) Circulatory and respiratory response to exercise including effects on the heart blood circulation body fluid changes, pulmonary – ventilation, gas exchange and transport, etc.
3) Fitness and health – age sex, body type, race, stress and medical aspects of exercise.

PHYSIOLOGY PRACTICAL

To study the following physiological phenomena:

Identification of blood cells and different counts:

1) W.B.C. count.
2) R.B.C. count.
3) Haemoglobin percentage and colour index.
4) E.S.R. and blood group.
5) Bleeding time and clothing time.
6) Artificial respiration and C.P.R.
7) Pulse rate, heart rate and measurement of blood pressure.
8) Respiratory rate and auscultation.
9) Reflexes – superficial deep.
10) Sensations.

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SYLLABUS

First Year B.Sc. Orthopaedics Assistant & Plaster Techniques

Paper - III

MICROBIOLOGY

Theory: 70 Hours
Practical: 20 Hours

1. Introduction and history of microbiology.

2. Micro – organisms.
   (a) Classification
   (b) Shape and arrangement.
   (c) Special characteristics – spores, capsules, enzymes, motility, reproduction.

3. Disinfection and antiseptics.

4. Sterilization and asepsis.

5. Antibacterial agents – fundamental aspect, susceptibility tests.

6. Immunity – natural and acquired.

7. Infection – source of infection, portals of entry, spread of infection.
   i) Wound infection
   ii) Infection of Bone
      a) Pyogenic
      b) Tubercular
      c) Fungal
   iii) Leprosy
   iv) Anaerobic infections
   v) Respiratory tract infection
   vi) Urinary tract infections
   vii) Hospital acquired infections
   viii) Virus infections hepatitis, Poliomyelitis and rabies.

8. Allergy and hypersensitivity.

SYLLABUS

First year B.Sc. Orthopaedic Assistant & Plaster Techniques

PAPER - IV

INTRODUCTION TO COMPUTERS

Theory : 35 hours
Practicals : 35 hours

COURSE CONTENT:

Introduction to computer – I/O devices – memories – RAM and ROM – Different kinds of ROM – kilobytes. MB, GB their conversions – large computer – Medium, Micro, Mini computers – Different computer languages – Number system – Binary and decimal conversions – Different operating system – MS DOS – Basic commands – MD, CD, DIR,TYPE and COPY CON commands – Networking – LAN, WAN,MAN(only basic ideas)

Typing text in MS word – Manipulating text – Formatting the text – using different font sizes, bold, italics – Bullets and numbering – Pictures, file insertion – Aligning the text and justify – choosing paper size – adjusting margins – Header and footer, inserting page No's in a document – Printing a file with options – Using spell check and grammar – Find and replace – Mail merge – inserting tables in a document.

Creating table in MS-Excel – Cell editing – Using formulas and functions – Manipulating data with excel – Using sort function to sort numbers and alphabets – Drawing graphs and charts using data in excel – Auto formatting – Inserting data from other worksheets.

Preparing new slides using MS-POWERPOINT – Inserting slides – slide transition and animation – Using templates – Different text and font sizes – slides with sounds – Inserting clip arts, pictures, tables and graphs – Presentation using wizards.

Introduction to Internet – Using search engine – Google search – Exploring the next using Internet Explorer and Navigator – Uploading and Download of files and images – E- mail ID creation – Sending messages – Attaching files in E- mail – Introduction to "C" language – Different variables, declaration, usage – writing small programs using functions and sub – functions.

PRACTICAL

- Typing a text and aligning the text with different formats using MS-Word
- Inserting a table with proper alignment and using MS-Word
- Create mail merge document using MS-word to prepare greetings for 10 friends
- Preparing a slide show with transition, animation and sound effect using MS-Powerpoint
- Customizing the slide show and inserting pictures and tables in the slides using MS-powerpoint
- Creating a worksheet using MS-Excel with data and sue of functions Using MS-Excel prepare a worksheet with text, date time and data Preparing a chart and pie diagrams using MS-Excel
- Using Internet for searching, uploading files, downloading files creating e-mail ID
- Using C language writing programs using functions

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SYLLABUS

First year B.Sc. Orthopaedic Assistant & Plaster Techniques

PAPER – V

ENGLISH

Theory : 35 hours

Communication:-

Role of communication Defining Communication Classification of communication Purpose of communication
Major difficulties in communication Barriers to communication
Characteristics of successful communication – The seven Cs Communication at the work place
Human needs and communication "Mind mapping" Information communication

Comprehension passage:-

Reading purposefully
Understanding what is read
Drawing conclusion
Finding and analysis

Explaining:-

How to explain clearly
Defining and giving reasons
Explaining differences
Explaining procedures
Giving directions

Writing business letters:-

How to construct correctly
Formal language
Address
Salutation
Body
Conclusion

Report writing:-

Reporting an accident
Reporting what happened at a session
Reporting what happened at a meeting

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SYLLABUS

Second Year B.Sc. Orthopaedics Assistant & Plaster Techniques

Paper - I

Basic Operation Theatre Techniques Including CSSD

Theory: 70 Hours
Practical: 20 Hours

1. Splints: Definition, role of splints and advantages.
2. Splints: Various materials used for splints and methods of splintage.
3. Plaster of paris: properties, why use POP, advantage, limitations
4. Preparing the patients for POP cast of splint
5. Precautions for application of cost
6. Principles in casting
7. Care of the cast
8. Patient education, awareness regarding cast
9. Complications of cast: short term, long term. How to identify complications, steps to prevent/treat/manage
10. Removal of casts
11. Practical demonstration and hand on training for various Slabs and casts:- U slab, Hanging cast, Colles'cast, thumb spica, AK BK cylinder cast, AK cast, BK cast, PTB
12. Moulding for CTEV with special ref to ponsetti Method
13. Orthopaedic Table
14. Positions
15. Traction Unit assemble
16. Clean and preparation in Orthopaedics
17. Tourniquet: Use, Sizes, Pressures, Precautions, Handling and Storage
18. OT: Specifications, Properties Etc
19. OT Discipline
20. OT Setup
21. Asepsis (Hand washing, gloving, non touch handling etc)
22. Handling of Bio waste and Hazardous body fluids and parts.
23. Environment
24. Control of infection
25. Sterilisation and disinfection of equipment
26. Duties of nursing staff
27. Nursing in the theatre
28. Positions for surgery
29. Preparation of operation site
30. Suture materials
31. Incisions
32. Disposalable materials
33. Radiation sources
34. Hazards
35. Anaesthesia
36. Orthopaedics instruments

SYLLABUS

Second Year B.Sc. Orthopaedics Assistant & Plaster Techniques

Paper - II

Orthopaedic Trauma

Theory: 70 Hours
Practical: 20 Hours

1. Anatomy of bone, fracture healing
2. Treatment of fractures :General Principles
3. Splints & Tractions
4. Recent advances in treatment of fractures
5. Approach to a patient with limb injury
6. Complications of fractures
7. Upper limb fractures - Fracture Clavicle
8. Dislocation shoulder
9. Fracture humerus
10. Fractures around elbow
11. Fracture of forearm
12. Wrist Injuries
13. Hand injuries
14. Injury to Joints: Dislocation/ Subluxation
15. Fractures in children
16. Peripheral nerve injuries
17. Deformities & Management
18. Treatment of Orthopaedics disorders- A general review
19. Pelvic fractures
20. Injuries around the hip
21. Fracture shaft if femur
22. Injuries around the knee
23. Injuries to the leg, ankle & foot
24. Spinal Injuries
25. Traumatic Paraplegia

SYLLABUS

Second Year B.Sc. Orthopaedics Assistant & Plaster Techniques

Paper - III

Orthopaedic Pharmacology

Theory: 70 Hours
Practical: 20 Hours

1) General Action of drugs
2) Drug allergy and idiosyncrasy
3) Drug toxicity
4) Metabolic fats of drug
5) Methods of administration
6) Chemical character of drugs
7) Common drugs acting on central nervous system, peripheral nervous system, neuromuscular junction and muscles
8) Common drugs on Cardio-respiratory system
9) Vitamins & nutritional supplements
10) Antibiotics and antiseptics
11) Anti tubercular drugs
12) Cancer Chemotherapy
13) Anti Osteopetrotic drugs including hormone therapy
14) Anti allergic drugs, Anti gastritis drugs
15) Steroids
16) Non Steroidal anti inflammatory drugs including topical preparations

SYLLABUS

Third Year B.Sc. Orthopaedics Assistant & Plaster Techniques

Paper - I

Advance Operation Theatre Techniques

Theory: 70 Hours
Practical: 20 Hours

1. Basic trauma instruments sets: Nomenclature and functions
2. Handling
3. Sterilization
4. Cleaning
5. Storage
6. Usage
7. Infection control and sterilization: Measures and method of sterilization
8. Wounds and their Managements
9. Patient handling, transfer and safety
10. Patient positioning (safety, cushions, pads and posts)
11. Surgical site preparation
12. Instruments Nomenclature and Handling, prevent misuse
13. Trolley set up and asepsis
14. Suture materials
15. Handling of C-arm and radiation safety : Sources of radiation, handling of C-arm, Precautions, Batch (TLD), C-arm positioning, Orthogonal views.
16. Components of Arthroscope: Camera, Light, Shaver, Recording Module
17. Care and handling of arthroscope
18. Sterilisation
19. Cleaning
20. Storage
21. Spinal Surgery Instruments
22. Joint replacement Instruments

SYLLABUS

Third Year B.Sc. Orthopaedics Assistant & Plaster Techniques

Paper - II
Orthopaedics Disease

Theory: 70 Hours
Practical: 20 Hours

1. Infections of Bone & Joints
2. Tuberculosis of Bone & Joints
3. Infections of the Hand
4. CTEV (Congenital Talipes Equino Varus)
5. Congenital Dislocation of Hip
6. Poliomyelitis & other Neuromuscular disorders
7. Bone Tumors
8. Prolapsed Intervertebral disc
9. Scoliosis & other spinal deformities
10. Approach to patient with back pain
11. Arthritis & related disorders
12. Degenerative disorders
13. Affections of soft tissues
14. Metabolic bone diseases
15. Miscellaneous affections of bone
16. Miscellaneous regional diseases
17. Amputations, Prosthetics & Orthotics
18. Sports Medicine & Arthroscopic Surgery
19. Joint Replacement Surgery
20. Orthopaedic Instruments & Implants

SYLLABUS

Third Year B.Sc. Orthopaedics Assistant & Plaster Techniques

Paper - III

Basic Physiotherapy and Rehabilitation

Theory: 70 Hours
Practical: 20 Hours

Unit – I : Introduction to Electrotherapy

Indications, contraindications, precautions, operational skills of equipment and patient preparation:

1) Moist heat and electrical heating pads
2) Short Wave Diathermy
3) Infra-red rays
4) Ultra-violet rays (UVR)
5) Ultra sonic therapy
6) Transcutaneous Electrical Nerve stimulation (TENS)
7) Interferential Therapy (IFT)
8) Electrical Muscle Stimulation
9) Paraffin Wax Bath

Unit – II : Introduction of Exercise Therapy

Describe the types, technique of application, indications, contraindications, effects and uses of the following:-

1) Active movement
2) Passive movement
3) Active assisted movement
4) Resisted movement
5) Manual muscle testing
6) Soft tissue manipulation
7) Relaxation
8) Therapeutic Gymnasium
9) Hydrotherapy
10) Traction
11) Stretching exercises
12) Strengthening exercises
13) Joint mobilization

Unit – III : Introduction of Exercise Therapy

1) Conceptual framework of rehabilitation, roles of rehabilitation team members, definitions and various models of rehabilitation.
2) Epidemiology of disability with emphasis on locomotor disability, its implications – individual, family, social, economic and the state.
3) Preventive aspects of disability and organizational skills to manage it.
4) Community Based Rehabilitation and outreach programmes to rehabilitate persons with disabilities living in rural areas.

5) Statutory provisions, scheme of assistance to persons with disability
6) Role of NGOs in rehabilitation to persons with disabilities
7) Principles of Orthotics – Types, indications, contraindications, assessment
8) Fabrication of simple splints and self-help devices for upper and lower extremity – indications and application.
9) Principles of Prosthetics – Types, indications, contraindications, assessment.

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