# ORDINANCE GOVERNING BOT (Bachelor of Occupational Therapy)

**Regulations and Curriculum**

**(4 ½ Year Degree Course)**

**2019**

**Rajiv Gandhi University of Health Sciences, Karnataka**

**4th 'T' Block, Jayanagar, Bangalore 560 041.**

## The Emblem

The Emblem of the Rajiv Gandhi University of Health Sciences is a symbolic expression of the confluence of both Eastern and Western Health Sciences. A central wand with entwined snakes symbolises Greek and Roman Gods of Health called Hermis and Mercury is adapted as symbol of modern medical science. The pot above depicts Amrutha Kalasham of Dhanvanthri the father of all Health Sciences. The wings above it depicts human soul called Hamsa (Swan) in Indian philosophy. The rising Sun at the top symbolises knowledge and enlightenment. The two twigs of leaves in western philosophy symbolises Olive branches, which is an expression of Peace, Love and Harmony. In Hindu Philosophy it depicts the Vanaspathi (also called as Oushadi) held in the hands of Dhanvanthri, which are the source of all Medicines. The lamp at the bottom depicts human energy (kundalini). The script "Devahitham Yadayahu" inside the lamp is taken from Upanishath Shanthi Manthram (Bhadram Karnebhi Shrunuyanadev…), which says "May we live the full span of our lives allotted by God in perfect health" which is the motto of the Rajiv Gandhi University of Health Sciences.

## Vision Statement

The Rajiv Gandhi University of Health Sciences, Karnataka, aims at bringing about a confluence of both Eastern and Western Health Sciences to enable the humankind "Live the full span of our lives allotted by God in Perfect Health."

It would strive for achievement of academic excellence by Educating and Training Health professionals who

- Shall recognize health needs of community,
- Carry out professional obligations Ethically and Equitably and in keeping with National Health Policy,

It would promote development of scientific temper and Health Sciences Research.

It would encourage inculcation of Social Accountability amongst students, teachers and institutions. It would Support Quality Assurance for all its educational programmes

## Motto

"Right for Rightful Health Sciences Education"

**Regulations and Curriculum of Bachelor of Occupational therapy Degree Course (4 ½ Year)**

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**SECTION – 1**

Regulations Governing BOT Degree Course: These ordinances shall be called "The Ordinances, Syllabus and Scheme of Examination pertaining to the Bachelor of Occupational Therapy course, BOT."

The Bachelor of Occupational Therapy 4 1/2 year course can be started at any Medical College with attached Hospital facility.

1. **ELIGIBILITY for students seeking admission:**

1.1.: Qualifying Examination:

A candidate seeking admission to the Bachelor of Science – Occupational Therapy Degree course, shall have studied in English medium for the qualifying examination and:

1.1a. Shall have passed two years Pre-University examination conducted by Department of Pre-University Education, Karnataka state, with English as one of the subject, and physics, Chemistry and Biology as principal/optional subjects. The candidate shall have passed subjects of English, Physics, Chemistry and Biology individually also.

OR

1.1b. Shall have passed any other examination conducted by Boards/Councils/Intermediate Education established by State Governments/Central Government and recognized as equivalent to two year Pre- University examination by the Rajiv Gandhi University of Health Sciences/Association of Indian University (AIU), with English as one of the subjects and Physics, Chemistry and Biology as optional/principal subjects and the candidate shall have passed subjects of English, Physics, Chemistry and Biology individually.

OR

1.1c. Shall have passed intermediate examination in Science of an Indian University/Board/Council of other recognized examining bodies with Physics, Chemistry and Biology, which shall include a practical test in these subjects and also English as compulsory subject. The candidate shall have passed subjects of English, Physics, Chemistry and Biology individually.

OR

1.1d. Shall have passed first year if the three-year degree course of a recognized University with physics, Chemistry and Biology including a practical test in these subjects provided the examination in an 'University Examination' provided that the candidate shall have passed subjects of English, Physics, Chemistry and Biology individually in the pre university or other examinations mentioned in the clauses above.

OR

1.1e. Shall have passed B.Sc Examination of an Indian University, provided that he/she

has passed the B.Sc Examination with not less than two of the following subjects: Physics, Chemistry, Biology (Botany, Zoology) provided the candidate has passed subjects of English, Physics, Chemistry and Biology individually in the qualifying examinations mentioned in clauses 1.a., 1.b., 1.c., and 1.e.,

Note; i. The candidate shall have, passed individually in each of the principal subjects.

**ii.** Candidates who have completed diploma or vocational course through correspondence shall not be eligible for any of the courses mentioned above.

**iii.** Candidates who have Passed "Physical Sciences" instead of Physics and Chemistry as two separate subjects are not eligible for admission to this course.

## A. ADMISSION, SELECTION AND TRAINING:

**1.** ELIGIBILITY for students seeking admission:

1.1.: Qualifying Examination:

A candidate seeking admission to the Bachelor of Science - Emergency Medicine Technology Degree course, shall have studied in English medium for the qualifying examination and:

1.1a. Shall have passed two years Pre University examination conducted by Department of Pre-University Education, Karnataka state, with English as one of the subject, and physics, Chemistry and Biology as principal/optional subjects. The candidate shall have passed subjects of English, Physics, Chemistry and Biology individually also.

OR

1.1b. Shall have passed any other examination conducted by Boards/Councils/Intermediate Education established by State Governments/Central Government and recognized as equivalent to two year Pre- University examination by the Rajiv Gandhi University of Health Sciences/Association of Indian University (AIU), with English as one of the subjects and Physics, Chemistry and Biology as optional/principal subjects and the candidate shall have passed subjects of English, Physics, Chemistry and Biology individually.

OR

1.1c. Shall have passed intermediate examination in Science of an Indian University/Board/Council of other recognized examining bodies with Physics, Chemistry and Biology, which shall include a practical test in these subjects and also English as compulsory subject. The candidate shall have passed subjects of English, Physics, Chemistry and Biology individually.

OR

1.1d. Shall have passed first year if the three year degree course of a recognized University with physics, Chemistry and Biology including a practical test in these subjects provided the examination in an 'University Examination' provided that the candidate shall have passed subjects of English, Physics, Chemistry and Biology individually in the pre university or other examinations mentioned in the clauses above.

OR

1.1e. Shall have passed B.Sc Examination of an Indian University, provided that he/she

has passed the B.Sc Examination with not less than two of the following subjects: Physics, Chemistry, Biology (Botany, Zoology) provided the candidate has passed subjects of English, Physics, Chemistry and Biology individually in the qualifying examinations mentioned in clauses 1.a., 1.b., 1.c., and 1.e.,

Note; i. The candidate shall have, passed individually in each of the principal subjects.

**iv.** Candidates who have completed diploma or vocational course through correspondence shall not be eligible for any of the courses mentioned above.

**v.** Candidates who have Passed "Physical Sciences" instead of Physics and Chemistry as two separate subjects are not eligible for admission to this course

1.2: Procedure for Selection of students

The selection of students to a course of Occupational Therapy shall be based on merit provided that:

a). In case of admission based on qualifying examination, a candidate for admission to BOT course must have passed individually in the subjects of Physics, Chemistry, Biology and English and must have obtained not less than 45% marks taken together in Physics, Chemistry and Biology in the qualifying examination.

b) In case of admission based on qualifying examination, the relaxation of the percentage in the qualifying examination shall be as per the rules and regulations of the State Government of Karnataka.

1.3: Age:

A candidate seeking admission to Bachelor of Occupational Therapy course should have completed 17 years of age, as on the last Date of Admission, notified from the RGUHS from time to time.
Every candidate before admission to the course shall furnish to Principal of the Institution a certificate of Medical Fitness from an authorized Medical Board constituted by the Govt of Karnataka, to the effect, that the candidate is physically fit to undergo Occupational Therapy course.

## 2. DURATION OF THE COURSE:

The duration of the BOT Course shall be four and half years including internship of six months.

## 3. MEDIUM OF INSTRUCTION:

English shall be the medium of instruction for all the subjects of study and for the examinations of the BOT Course.

## 4. COURSE OF STUDY - SUBJECTS AND HOUR DISTRIBUTION:

Please refer to Appendix 1-9- semester 1 to 8

## 5. ATTENDANCE:

A candidate is required to attend at least 75 percent of the total classes conducted in each semester in all subjects prescribed for that semester, separately, in theory and practical /clinical sessions to become eligible to appear for the university examination in the first attempt. Principals should notify at their college, the attendance details at the end of each semester without fail, under intimation to the University.

**6. INTERNAL ASSESSMENT:**

It shall be based on evaluation of periodic tests, assignments, clinical presentations etc., (see Annexure -I for example). Regular periodic examinations should be conducted throughout the course. There should be a minimum of two (2) Sessional examinations during each semester. The average of the two examination marks should be reduced to 20 for each Theory and Practical/Clinical, and sent to the University before the University examination as per notification. Proper record which forms the basis of the Internal Assessment should be maintained for all students and should be available for scrutiny. The marks of periodical tests should be displayed on the student notice board by Principals.

A Candidate must obtain a 35% mark in theory and practical examinations separately and in internal assessment to be eligible to write the University examination.

**7. EXAMINATION:**

There will be one examination in each semester, to be conducted as per notification issued by the University from time to time.

These examinations for both theory and practical will be held at the end of each semester. The particulars of subjects for various examinations and distribution of marks are shown separately in Tables V to VIII.

The examination for main subjects shall be conducted by the University and for subsidiary subjects by the respective college.

ELIGIBILITY CRITERIA

- A candidate is required to attend at least 75 percent of the total classes conducted in each semester in all subjects prescribed for that semester, separately, in theory and practical /clinical sessions to become eligible to appear for the university examination
- A Candidate must obtain a 35% mark in theory and practical examinations separately and in internal assessment to be eligible to write the University examination.

**8. CRITERIA FOR PASS:**

**8.1: Main Subjects:**

A candidate is declared to have passed university examination in a subject, if she/he secures 50 % of the marks in theory and 50 % in practical separately. For computation of marks in theory, the marks scored in the viva shall be added to the University conducted written examination and for a pass in practical, the marks scored in University conducted practical examination and internal assessment [practical] shall be added together.

**8.2: Subsidiary Subjects:**

For a pass in Subsidiary subjects, a candidate shall secure 35% of the total marks prescribed for the subject. The marks obtained should be sent to the University 15 days prior to the commencement of University examination by the college.

**9. SCHEME OF EXAMINATION:**

Please refer to Appendix 1-9-

SUBJECTS AND DISTRIBUTION OF MARKS:

**9.1: Theory:**

- **Main Subjects:** 100 marks divided as 80 marks (written examination at end of semester) and 20 marks (internal assessment based on semester-long work presentation)
- **Subsidiary Subjects:** 50 marks divided as 40 marks (written examination at the end of the semester) and 20 marks (internal assessment based on semester-long work presentation)

**9.2: Practical:**

100 marks divided as 60 marks (practical exam at end of semester), 20 (viva voce), and 20 (internal assessment)

**10. DECLARATION OF CLASS:**

**10.1:** A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 75% of marks or more of grand total marks prescribed will be declared to have passed the examination with distinction.

**10.2:** A candidate having appeared in all subjects in the same examination and passed that examination in the first attempt and secures 65% of marks or more but less than 75% of grand total marks prescribed will be declared to have passed the examination in first class.

**10.3:** A candidate having appeared in all the subjects in the same examination and passed that examination in the first attempt and secures 50% of marks or more but less than 65% of grand total marks prescribed will be declared to have passed the examination in second class.

**10.4:** A candidate passing the university examination in more than one attempt shall be placed in Pass class irrespective of the percentage of marks secured by him/her in the examination.

**10.5:** The marks obtained by a candidate in the subsidiary subjects shall not be considered for award of Class or Rank. [Please note fraction of marks should not be rounded off clauses 10.1, 10.2, and 10.3]

10.6: CARRY OVER BENEFIT

No student shall be admitted to any examination unless he/she fulfills the norms given in above. Academic progression rules are applicable as follows:

A student shall be eligible to carry forward all the courses of I, II and III semesters till the IV semester examinations. However, he/she not be eligible to attend the courses of V semester until all the courses of I and II semesters are successfully completed.

A student shall be eligible to carry forward all the courses of III, IV and V Semesters till the VI semester examinations. However, he/she shall not be eligible to attend the courses of VII semester until all the courses of I, II, III and IV semesters are successfully completed.

A student shall be eligible to carry forward all the courses of V, VI and VII Semesters till the VIII semester examinations. However, he/she shall not be eligible to get the course completion certificate until all the courses of I, to VIII semester are successfully completed.

A student has to complete the course within double the duration of the course other wise the student has to be discharged from the course.

**12. INTERNSHIP:**

**12.1:** There shall be six months (26 weeks) of Internship after the final year examination for candidates declared to have passed the examination in all the subjects. Internship should be done in a teaching hospital where this course is being conducted under RGUHS only.

**12.2:** No candidate shall be awarded degree certificate without successfully completing six months of internship.

**12.3:** The internship should be rotatory and cover clinical branches concerned with Occupational Therapy such as Orthopedics, Cardio-thoracic including ICU, Neurology, Neurosurgery, Pediatrics, General Medicine, General Surgery, Psychiatry (both inpatient and outpatient services).

**12.4:** Successful Completion – The student must maintain a logbook. On completion of each posting, the same will have to be certified by the faculty in charge of the posting for both attendance as well as work done. On completion of four postings, the duly completed

logbook after the signature of the Prof & HOD of the concerned Department, will be submitted to the Principal/Head of program to be considered as having successfully completed the internship program

**Internship program: to be concluded before issuing University Certificate of BOT**

Last 6 months of the Bachelor of Occupational Therapy training will be dedicated to an internship period:

| S.NO. | AREAS | CONTENTS | PRACTICUM HOURS | Credits |
|---|---|---|---|---|
| 1 | MEDICINE | GENERAL MEDICINE, CARDIOLOGY, PULMONOLOGY, NEUROLOGY, NEPHROLOGY, PEDIATRICS | 125 | 4 |
| 2 | SURGERY | GENERAL SURGERY, PLASTIC SURGERY, CARDIAC SURGERY, ORTHOPEDICS, ENT, OB/GYN, | 125 | 4 |
| 3 | MENTAL HEALTH | PSYCHIATRY | 125 | 4 |
| 4 | ELECTIVE | ANY OF THE ABOVE FOR AN EXTENDED PERIOD OF 1.5 MONTHS | 125 | 4 |
| | Total | | 500 | 16 |

**Minimum Standard Requirements to start BOT course:**

For annual intake of 20 **students.**

1. Occupational Therapy course can be started by any **Medical Teaching College.**
2. Along with the course, the college will be expected to start an Occupational Therapy Department to provide Occupational Therapy services to patients and provide clinical experience to students
3. *The Head of this department will have to be a certified Occupational Therapy practitioner with a minimum of master's degree in Occupational Therapy. To be a Professor, one has to put at least four years of teaching experience as Associate professor in the field of Occupation therapy in a medical college and three years as assistant professor in the department of Occupational therapy at a medical college.
4. *Associate Professor – one should have put an experience of 3 years as Assistant Professor in the Department of Occupational Therapy at a medical college.
5. *Assistant Professor – should have qualified with MOT.
   Note * from 2109 to 2024, MOT with 5 years' experience in the field of Occupational therapy can be accepted as Assistant professor. And to start this course minimum 6 faculty are required with the minimum qualification and experience as stipulated above till 2024. After 2024, there must be Professor-1, Associate Professor-2 Assistant Professor -4 are required to start/renewal of intake of affiliation.
6. The faculty of the department of Occupational Therapy will have a dual responsibility of running the clinical work along with conducting lectures and practical for the students.

Infrastructural Requirements:

| S. No. | Description of clinical/service area | Area in sq.ft |
|---|---|---|
| 1 | Musculoskeletal and Hand Rehabilitation Unit | 400 |
| 2 | Neurological Rehabilitation Unit | 400 |
| 3 | Child Habilitation Clinic | 500 |
| 4 | Splinting/Assistive Technology Clinic/Lab | 250 |
| 5 | Psychosocial Rehabilitation Clinic | 250 |
| 6 | Activities of Daily Living Unit | 500 |
| 7 | Work Rehabilitation Clinic | 400 |
| 8 | Standard Evaluation Lab | 200 |

Non-clinical space requirement:

| S. No. | Description of non-clinical space | Area in sq. ft. |
|---|---|---|
| 1 | Classroom (One classroom to be added each subsequent year) | 300 |
| 2 | Demonstration room | 300 |
| 3 | Staff cubicles (4 to begin with) | 64 |
| 4 | Office room | 250 |
| 5 | HOD room | 100 |
| 6 | Students common room, separated gender wise | 300 |

Occupational Therapy Department Equipment List:

1. Hand therapy lab : Musculoskeletal

| S. No. | Equipments | Required quantity |
|---|---|---|
| 1. | Jebson Taylor Hand Function Test | 01 |
| 2. | Purdue Pegboard Test | 01 |

| | | |
|---|---|---|
| 3. | Pinchometer | 01 |
| 4. | Dynamometer | 01 |
| 5. | Isolated finger exerciser | 01 |
| 6. | Grip exercisers | 01 |
| 7. | Crawford small part dexterity test | 01 |

2. Functional restoration lab & Assistive technology lab:

| S. No. | Equipment | Required quantity |
|---|---|---|
| 1. | Functional assessment kit for ADL | 01 |
| 2. | Ergonomically devised adapted equipments for home, work place and leisure | 01 |
| 3. | Self-help adapted equipment | 01 |
| 4. | Wheelchair modifications | 01 |
| 5. | Mobility aids | 04 |
| 5. | Electrical Drill machine | 01 |
| 6. | Sewing Machine | 01 |
| 7. | Heat Bath | 01 |
| 8. | Heat Gun | 01 |
| 9. | Bench Vice | 01 |
| 10. | Tools for orthotics | 1 set |

3. Work assessment, simulation, and hardening lab: Community based and Industrial rehab:

| S. No. | Equipments | Required quantity |
|---|---|---|
| 1. | Tailoring equipment | 01 |
| 2. | Carpentry Tools | 01 |
| 3. | Typewriter/Computer | 02 |
| 4. | Printing press | 01 |
| 5. | Work sample tests | 01 |
| 6. | Staircase | 01 |
| 7. | Work simulator | 01 |

5. Cognitve-perceptual lab & Sensory motor therapy: Neuro OT:

| S. No. | Equipments | Required quantity |
|---|---|---|
| 1. | Cognition & Perception Testing Batteries | 01 |
| 2. | Sensory Assessment Kits | 01 |
| 3. | Balance Assessment Tools | 01 |
| 4. | Neuro-therapeutic modalities | 01 |
| 5. | Stability Trainers | 01 |

6. Psycho-social remedial lab: OT for Mental Health:

| S. No. | Equipments | Required quantity |
|---|---|---|
| 1. | Reaction time machine | 01 |
| 2. | Tests for fine motor skills and motor accuracy | 01 |
| 3. | Psychomotor activities | 01 |

| | | |
|---|---|---|
| 4. | Indoor and Outdoor Games | 01 |
| 5. | Cognitive Retraining activities | 01 |

9. Developmental Therapy: Paediatric:

| S. No. | Equipments | Required quantity |
|---|---|---|
| 1. | Cerebral Palsy Chairs | 05 |
| 2. | Floor Mats | 04 |
| 3. | Play Equipments | Lots |
| 4. | Vestibular-Proprioceptive equipment | 01 |
| 5. | Puzzles/Books | Lots |
| 6. | Fine-motor Games | Lots |
| 7. | Art activities | Lots |
| 8. | Perception assessment tools | 01 |

Cardiovascular:

| S. No. | Equipments | Required quantity |
|---|---|---|
| 1. | Basic tools of assessment for Cardio-pulmonary parameters | 01 |
| 2. | Bicycle Ergometer | 01 |
| 3. | Treadmill | 01 |
| 4. | Fat pad measurement tools | 01 |
| 5. | Spirometer | 01 |

General:

| S. No. | Instruments | Required quantity |
|---|---|---|
| 1. | Goniometers | 05 |
| 2. | Wobble Board | 02 |
| 3. | Exercise mattress (Large) | 02 |
| 4. | Exercise Mattress (Small) | 02 |
| 5. | Wall Bar | 01 |
| 6. | Slings and ropes (suspension apparatus) | 01 |
| 7. | Parallel Bars | 01 |
| 8. | Medicine Balls | 02 |
| 9. | Tilt Table | 01 |
| 10. | Axillary crutches (Adult & Pediatrics) | 02 each |
| 11. | Wheel chair (Big and Small) | 02 |
| 12. | Walker (Adult and Baby walker) | 02 each |
| 13. | K-Walker (Adult and baby) | 02 each |
| 14. | Shoulder ladder | 02 |
| 15. | Wrist roller | 01 |
| 16. | Static cycle (Bicycle fretsaw) | 02 |
| 17. | X-ray viewer | 01 |
| 18. | Rowing machine | 02 |
| 19. | Elbow crutches | 02 |
| 20. | Mattress for mat exercise | 02 |
| 21. | Posture examining device | 01 |

| | | |
|---|---|---|
| 22. | Pelvic level device | 01 |
| 23. | Pelvic traction kit | 01 |
| 24. | Cervical traction kit | 01 |
| 25. | Weighing machine | 01 |
| 26. | De-Lorme's Metal Weight Shoe | 01 |
| 27. | Shoulder pulley, ladder, wheel | 01 |
| 28. | Joggers (Manual Treadmill machine) | 01 |
| 29. | Quadriceps springs | 01 |
| 30. | BP apparatus | 01 |
| 31. | Skinfold calipers | 01 |
| 32. | Walking stick adjustable | 02 |
| 33. | Tripodstick adjustable | 02 |
| 34. | Vestibular ball (cotton) | 02 |
| 35. | Torch | 02 |
| 36. | Tendon hammer | 02 |
| 37. | Handgrip dynamometer | 01 |
| 38. | Multiexerciser | 01 |
| 39. | Physioroll 34 inches | 01 |
| 40. | Examination Table | 05 |
| 41. | Dumbells | 10 |
| 42. | Weights | 09 pairs |
| 43. | Weight bars with weight pans | 2+2+2 |

| | | |
|---|---|---|
| 44. | Sand bags | 10 |
| 45. | Peak flow meter | 01 |
| 46. | Therabands | 04 |
| 47. | Full length mirror | 01 |
| 48. | Inclined & horizontal sand boards | 05 |
| 49. | Sandblocks, weights, and pulleys | 05 |

Provisional Item list for setting up OT Department:

| S. No. | Department | Items Needed |
|---|---|---|
| 1 | Splinting | Brass Handle Scissor, Heat Gun, Taparia cutting Pliers, Taparia Nose Pliers, Bench Vice, Grinder, Drill Machine and Bit Set, Tin Cutter, Hock Saw Frame, Cast Steel Anvil, Wooden Mallet, Adjustable Projector Trolley, Files, Ball Pen Hammer, Water Bath, Wire Cutter, Riveting/Bending Rolling Tool, Small Heating Pan, Merrit Foot Machine, Heavy Duty Shear, All-purpose Snip, Hole Punch, Centre Punch, Metal Scales |
| 2 | Mobility Aids | Rehab Aid Quadripod, Rehab Aid Tripod, Wheel Chairs, Walking Aid Folding (Adjustable), Walker infant, Walker Scissors Gait Prevention (junior size), Wooden Walking cane, Walker Folding 4wheel, Various types of crutches |
| 3 | Teaching Aids | Skeleton and stand, X-ray lobby viewing box, Hand Splinting set, Orthosis set, Prosthesis Set, Adaptive Device Set |

| | | |
|---|---|---|
| 4 | Assessment Tools | Sphygmomanometer, Jamar Pinch Gauge Hydraulic, LOCTA, Biofeedback, Tuning Fork, Knee Hammer, Replacement Probe Hot/Cold, Tracker – Hand Evaluation Kit, Visual Choice Reaction Inner, Jebson-Taylor Hand Function Test, Tremor Quantifier, COPM Kit, Dyslexia Adult Screening Test, Movement ABC-2 Complete Set, Bennett's Hand Tool Dexterity Comp Set, CSPDT Complete Set, E- MOHO (CD - OPHI-II, CD – Educational Version), Goniometer Set, Jamar Hand Evaluation Kit, Evaluation Tool of Children's Handwriting, TVPS: R Kit, Weight Discrimination, Infant Toddler Sensory Profile, O'Conner Dexterity Test, DOTCA - CH, Touch Test Sensory Evaluation, Hand Evaluation Kit, BADS C-Kit, Berry Visuo-Motor Integration, TEA CHKIT, Children's Memory Scale Complete Kit, Aesthsiometer Monofilament |
| 5 | Therapeutic Items | Rehab Trainer - Sammons Preston Rolyon Ergometer, Mirror ( 5' X3.5" , 5 mm0 |
| 6 | Furniture | Tables, Chairs (classroom/office), Cupboards, Pin-up Board, Notice Board, Treatment Plinth Low/ High, Revolving Stools, Lockers, Storage Furniture |
| 7 | Pediatric Unit | Adaptable Seat Position Durable Metal, Framer Rope Ascender, Proner Swing, Plain Disc Swing, Platform Swing, Roll Swing, Thick Frame Set: Hammock Swing, Vestibular Swing System, Jumping Stand, Sit and Spin, Sand and Walker Table, Music Player, Wedges, Wooden Beads, Rocker and Wobble Boards, Infant Adaptation Kit, Balance Beams, Scooter Boards, Therapy Balls, Oro-motor Sets, Variety Toys and Games |
| 8 | Adult Unit | Commode Chair, Tramble with ramp attachment, Arm/leg combo skate with hand, Skacking cones, Digiflex set of 5, Pegboards, Kitchen Set, Grooming Set, Power Pump, Hand Assembly Training Device, Rebounder, Stability Trainer, Soft Iron Dumb-bells, Rehab WT Bar Set, Medicine Ball Set, Rolyon Resist Prehension Bench, Rolyon Weight Cuff, Elgin Leg Ankle Exerciser, Work Hardening Set, Desensitization Set, Delux Pedal Exerciser, ADL Set, Scar Suction Pump, Grip Exerciser, Multi Exerciser Therapy Unit |

**Comprehensive list of books for Occupational Therapy 4 ½ year Bachelor course (BOT)**

1. Willard and Spackman's Occupational Therapy by Elizabeth Blesedel Crepeau, Ellen S Cohn, Barbara A Boyt Schell. Published by Lippincott Williams & Wilkins
2. Occupational Therapy – Practice Skills for Physical Dysfunction by Lorraine Williams Pedretti. Published by Mosby

3. Occupational Therapy for Physical Dysfunction by Catherine A Trombly, Mary Vining Randomski, Published by Lippincott Williams & Wilkins
4. Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice by Annie Turner, Marg Foster, Sybil E Johnson, Published by Churchill Livingstone
5. Therapeutic Exercise by John V Basmajian & Steven L Wolf. Published by Williams & Wilkins
6. Therapeutic Exercise, Foundation, & Techniques by Carolyn Kisner, & Lynn Allen Colby. Published by F A Davis Company
7. Muscle Testing & Function by F P Kendall
8. Daniel's & Worthingham's Muscle Testing
9. Measurement of Joint Motion: A Guide to Goniometry by C C Norkin & D J White
10. Principle of Exercise Therapy by Dena Gardiner
11. Joint Structure and Function – A comprehensive analysis by C C Norkin, P K Levangie
12. Biomechanics of human motion by Williams Lissner
13. Physical Rehabilitation Assessment & Treatment by O'Sullivan
14. An introduction to Occupational Therapy by A Turner
15. Closed Functional Treatment of Fractures by A Sarmiento, L Latta
16. Hand and Upper extremity Splinting: Principles & methods by E E Fess, C A Phillips, Gettle K S & Jasonji
17. Rehabilitation Medicine by Goodgold
18. Rehabilitation of Hand by Wynn & Parry
19. Rehabilitation of Hand: Surgery and Therapy by Hunter
20. Pulmonary rehabilitation, guidelines to success – Hodgkin T E
21. Work Physiology by Mac Ardle
22. Textbook of Work Physiology: Astrand P A, Rodahe K
23. Human Performance: Fitts P M, & Posner M I
24. Ergonomics for Therapists by Karen Jacobs
25. Ergonomics – Man in his working environment by Mural K F
26. Time and Motion Study by Mundel
27. Treatment and Rehabilitation of Fractures by S Hoppenfield and V L Murthy

28. Orthopaedic Physical Assessment by David Magee
29. Clinical Orthopaedic Rehabilitation by Brent Brotzman
30. Krusen's Handbook of Physical Medicine & Rehabilitation
31. Occupational Therapy in Short Term Psychiatry by M Wilson
32. Occupational Therapy in Long Term Psychiatry by M Wilson
33. Occupational Therapy: a communication process by G S Fidler and J W Fidler
34. Quick reference to Occupational Therapy by K Reed
35. Occupational Therapy and Mental Health by J Creek
36. Mental Health concepts and techniques for Occupational Therapy Assistants by M B Early
37. Textbook of social and Preventive medicine by Park
38. Disabled Village Children by David Werner
39. WHO's ICF 2001
40. Guidelines for evaluation of various disabilities and procedure for certification – By Ministry of Social Justice and Empowerment, Govt of India (Notification 2001)
41. Objective Evaluation of Impairment and Ability in Locomotor Handicapped – Dr. Sabapathyvinayagam Ramar

**For Reference:**

1. A manual for evaluation and treatment of perceptual and cognitive deficits – B Zoltan, E Siev, B Freishtat
2. Neurological Rehabilitation – A U Darcy
3. Occupational Therapy for Children – J CaseSmith and A Pratt
4. Community Based Rehabilitation by Malcolm Peat

# SEMESTER ONE

**Theory:**

| Sl no | Code | Course title | No. of Notional Learning Hours | ***Pre-requisite Unit, if any** | Credits |
|---|---|---|---|---|---|
| 1 | OT101NQ2017 | Introduction to Occupational Therapy Process | 105 | NIL | 4 |
| 2 | OT102NQ2017 | Human Anatomy | 105 | NIL | 4 |
| 3 | OT103NQ2017 | Human Physiology and Biochemistry | 105 | NIL | 4 |
| 4 | OT104NQ2017 | Introduction to Public Health for Occupational Therapist | 105 | NIL | 4 |
| Total | | | 420 | 16 | |

**Practicum:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT105NQ2017 | Occupational Therapy Techniques | 225 | NIL | 6 |
| 2 | OT106NQ2017 | Applied Anatomy, Physiology, and vital signs | 225 | NIL | 6 |
| Total | | | 450 | | 12 |

**Field work:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT107NQ2017 | Public Health: Visit to Health Centers and Seminar Presentation | 50 | NIL | 2 |

**Theory:**

**OT101NQ2017: Introduction to Occupational Therapy Process: 105 Hours**

| S.NO | Areas | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | History and Scope of OT | **1)History**: Development of OT during world War; arts and crafts movement; moral treatment;<br>**2)Scope:**<br>a)Definition of Occupational Therapy and its scope in rehabilitation<br>Definition of rehabilitation<br>Philosophy of rehabilitation with reference to principles of physical medicine.<br>b) Team interaction models: Rehabilitation team and the role of different team members.<br>Intra disciplinary, interdisciplinary and multidisciplinary models of interaction | 5 |
| 2 | Occupational Science | **Theory of Occupation and Occupational Science:**<br>Definition of Occupation,<br>Forms of Occupation,<br>Occupation as an evolutionary trait,<br>Biological, social, psychological dimensions of Occupation.<br>Introduction to Occupational<br>science, Linkage between<br>Occupational science and<br>Occupational Therapy | 10 |
| 3 | Principles and methods of assessment; and diagnostic tools in OT | **1)Joint Range Of Motion- Upper Limb, Lower Limb, Spine & TM joints):**<br>Principles and procedures in joint measurement.<br>Definitions of terms in joint measurement.<br>Methods of joint measurements.<br>Functional ROM<br>Total Active motion<br>Indications and contraindications of recording.<br>**2)Muscle Strength:**<br>Definition of muscle Power and strength<br>Principles of muscle testing Indications & contraindications of muscle testing. Gross muscle testing in normal and clinical conditions.<br>(muscles of upper extremity & lower<br>extremity) Precautions in manual<br>muscle testing<br>**3)Muscle Tone:** | 30 |

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| | | Definition of tone.<br>Normal Muscle tone<br>Abnormal Muscle tone<br>Muscle tone assessment-<br>Modified Ashworth Scale/Pearsons rating of mild, moderate severe spasticity.<br>**4) Coordination:**<br>Definition<br>Characteristics of coordinated movements<br>Inco-ordination, Cerebellar signs, Extra pyramidal signs<br>Assessment of co-ordination<br>**5) Sensation:**<br>Definition.<br>Classification of sensations.<br>Techniques and methods of Sensory evaluation. Specific sensory testing<br>**6) Perception:**<br>Definition.<br>Components and description of each component. Assessment methods<br>**7) Cognition:** Definition.<br>Evaluation of cognitive Skills: Attention, Orientation, Memory (Immediate, Short term and<br>Long term Memory), problem solving and Executive functions.<br>**8) Endurance:**<br>Definition. Importance of Endurance in performance. Factors affecting endurance. Relation to activity tolerance.<br>**9) Hand Functions & Evaluation Methods**:<br>Types of Hand functions-<br>Prehension<br>Grasp patterns<br>Grip<br>Pinch.<br>In hand manipulation.<br>Theoretical aspects of Assessment.<br>Total active motion.<br>Functional evaluation of hand.<br>Edema assessment methods | |

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| 4 | Therapeutic modalities in OT | 1)Therapeutic Exercises:<br>a)Introduction to exercises:<br>History, definition,<br>principles, purposes,<br>prerequisites, precautions,<br>general indications and<br>contraindications of<br>Therapeutic exercises.<br>b) Therapeutics of muscle contractions:<br>Types of movements,<br>muscle contractions used in therapeutic exercises.<br>c) Exercise classification.<br>Types of therapeutic<br>exercises,<br>Progressive Resistive<br>Exercise (PRE).<br>Regressive Resistive<br>Exercise (RRE).<br>Brief Repetitive Isometric<br>Maximal Exercise<br>(BRIME). Indications,<br>Contraindications and<br>precautions in therapeutic<br>milieu<br>d) Objectives of therapeutic exercises:<br>Objectives -<br>Improve Range of Motion.<br>Improve Muscle Strength<br>and Power,<br>Improve General & Muscle Endurance.<br>Improve Co-ordination.<br>Reset Soft tissue length<br>2)Other therapeutic modalities in Occupational Therapy:<br>a) Media, methods and modalities: Definition and Description.<br>b) Activity analysis:<br>Definition and description.<br>Principles of activity analysis in respect to biomechanical, sensory-motor & socio-cultural aspects.<br>Criteria for selection of an activity.<br>Adapting & grading activity.<br>Activity Analysis :<br>Shoulder Wheel<br>Inclined Sanding<br>Bicycle Fret Saw<br>Eating. | 30 |
| 5 | ADL and Return to Work | **Activities of Daily Living:**<br>1) Evaluation &Gradation of<br>Activities of daily living (ADL):<br>Definition & classification of ADL. (BADL & IADL)<br>Levels of assistance: [dependent | 30 |

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| | | to independent]<br>2) Introduction and application of ADL scales:<br>Theoretical understanding of<br>standardized ADL scales,<br>components and application of<br>Functional Independence<br>Measure (FIM)<br>Functional Assessment<br>Measure (FAM)<br>Assessment of Motor and<br>Process Skills (AMPS)<br>Modified Barthel Index<br>Spinal Cord Independence Measure (SCIM)<br>3) Compensatory principles in ADL:<br>Explaining the principles in<br>ADL related to: Weakness,<br>Low endurance,<br>Limited ROM,<br>Inco-ordination,<br>Loss of use of one side of body,<br>Limited vision,<br>Decreased sensation<br>**Return to Work:**<br>1)Definition and Elements of Work:<br>Definition of work<br>Work behavior, Work skills, Work aptitudes, Physical demands<br>2) Work assessments:<br>Functional Capacity Evaluation<br>Physical Capacity Evaluation<br>Work Capacity Evaluation<br>Work evaluation tools<br>Work site evaluations<br>Situational Assessments<br>Psychometric instruments<br>Work Samples- Actual,<br>Simulated,<br>Single trait, Cluster Trait<br>3) Product Lines:<br>Work Conditioning<br>Work Hardening<br>Vocational Training<br>4) Job analysis:<br>Assessment needs<br>&components in analysis.<br>Analysis of-<br>Tailoring.<br>Data entry on computers.<br>Carpentry.<br>Driving | |

**OT102NQ2017: Human Anatomy: 105 Hours**

| S.NO | REGIONS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | General Anatomy & Histology | **General Anatomy:**<br>i. Surface Anatomy<br>ii. Fascia<br>iii. Muscles<br>iv. Bones<br>v. Joints<br>vi. Nerve<br>vii. Vessels<br>**General Histology:**<br>i. Epithelial<br>ii. Connective tissue<br>iii. Muscle<br>iv. Bone and cartilage<br>v. Nerve and vessels<br>vi. Embryology. | 15 |
| 2 | Musculoskeletal System | **1.Upper Extremity**<br>**2.Lower Extremity**<br>**3.Head, Neck and Face**<br>Back and Thoracic cage<br>i. Skull and Mandible<br>ii. Facial Muscles, blood supply,<br>nerve supply<br>iii. Triangles of neck, Glands,<br>Tongue & Palate<br>iv. Larynx & Pharynx<br>v. Muscles of mastication & T.M.<br>joint<br>vi. Extra ocular muscles with nerve<br>supply<br>vii. Nose & Para nasal sinuses.<br>**4. Back and Thoracic cage** | 25 |
| 3 | Neuroanatomy | a)General organization of Nervous System.<br>b)Central Nervous System.<br>c) Peripheral Nervous System.<br>d)Autonomic Nervous System | 25 |
| 4 | Cardiovascular & Respiratory System | Thoracic wall, Mediastinum, Heart and major blood vessels, Lungs, Diaphragm, & Intercostals, Ribs and Sternum | 10 |
| 5 | Abdomen | Muscles of abdomen ,pelvic and pelvis floor | 10 |
| 6 | Systemic Anatomy | Alimentary, Urinary and Genital System | 5 |

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| 7 | Sensory Organs | Ear, Eye and Skin | 5 |
| 8 | Endocrine and exocrine organs | Thyroid, Adrenals | 2 |
| 9 | Radiology | Introduction to Radiology, Surface radiology and Intervention radiology.(X-rays, CT Scan, MRI Scan, PET Scan,) Intervention Radiology (US etc) | 8 |

**OT103NQ2017: Introduction to Public Health for Occupational Therapist: 105 Hours**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Orientation and Introduction to Public Health | Definition of Health(WHO definition),<br>Causation of Disease: Outline the natural history of disease and the influence of social, economic and cultural aspects of health and diseases.<br>Definition of Public Health( Winslow and other public health experts definition)<br>What is Medical model of health and Social model of health?<br>Paradigm Shift from medical model to social model<br>Definition of Community Health and its relevance.(community health solutions to address public health problems)<br>Types of Prevention<br>Human Rights<br>Health as a Human Right | 10 |
| 2 | Social Determinants of Health | Public Health Situation in India<br>Health Inequalities in India (social and gender inequalities)<br>Definition of Equity, Equality and Social Justice)<br>Social Determinants of Health(**Closing the gap in a generation: Health equity through action on the social determinants of health – WHO)** | 12 |
| 3 | Health Systems in India | Health Systems Framework and Health Systems in India<br>Important Health Policies in India(Alma Ata Declaration, Bhore Committee, Mudaliyar Committee, ICSR-1980-SEPEC analysis, Universal Health Coverage, Mental Health Act)<br>National Health Mission : Overview<br>Human Resource of Rehabilitation Professionals.<br>Health financing and Health Economics<br>Plural Health System: Overview of AYUSH approaches and other local health traditions approaches | 12 |
| 4 | Globalization and Health | Introduction<br><br>International and Regional Health Organizations | 9 |

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| | | WTO and Public Health | |
| 5 | Introduction to health Research Methodologies | Introduction to Epidemiology, Qualitative Methodology and Health Economic Evaluation, Definition, study designs overview | 7 |
| 6 | Gender, Women's Health and Men's Health | Gender: A Social Construction perspective.<br>Social Construction and its influence on Women's Health<br>National Program for Women's Health: Overview<br>Social Construction and its influence on Men's Health | 7 |
| 6 | Communicable and Non-communicable disease: Overview of National Programs in India | Dynamics and modes of disease transmission<br>Epidemiology and control of communicable diseases (including National Programme)<br>Epidemiology and control of non-communicable diseases including (National Programme) | 6 |
| 7 | Mental Health | Overview of Mental Health in India: a Public Health perspective. | 7 |
| 8 | Child's Health, Adolescent Health, Oral Health and Health in Old age: Public health Perspective | Overview from a Public Health Perspective. | 10 |
| 8 | Ethics in Public Health and for Health Professionals | Syllabus Include: Introduction and principles of Bioethics and Medical / Health care Ethics; Bioethics, social justice and civil society; Bio ethics in electronic data; Overview on ethical issues in health care research and practice; and Occupational Therapy – Code of Ethics. | 10 |
| 9 | Social Movements in Health | Introduction to Social Movements in Health (Definition, Relevance, Impact and Example - Peoples Health Movement: History and relevance. | 5 |
| 10 | Environmental Health | Introduction to Environmental Health (Definition; Influence of Environmental factors on human health; and Introduction to environmental epidemiology, Environmental law and occupational safety) | 5 |
| 11 | Armed conflicts | Armed Conflicts (Definition; Understanding armed conflict as a public health problem; and Roles and responsibilities of Health care professionals) | 5 |

**OT103NQ2017: Physiology and Biochemistry: 105 Hours**

| S.NO | Areas | CONTENTS | THEORY |
|---|---|---|---|
| 1 | General Physiology | 1)Cell:<br>i. Structure of cell membrane<br>ii. Transport across cell membrane<br>iii. Homeostasis<br>2)Blood:<br>i. Rh- ABO system & mismatch transfusion<br>ii. WBC<br>iii. Plasma protein<br>iv. Erythrocytes<br>v. Platelets<br>vi. Hemoglobin<br>vii. Normal values of blood<br>(composition & function)<br>viii Bleeding time & clotting time<br>3)Nerve:<br>i. Structure, classification & Properties<br>ii. R.M.P& action potential<br>iii. Propagation of nerve impulse<br>iv. Nerve injuries –degeneration,<br>regeneration and reaction of<br>degeneration(retrograde)<br>4)Muscle:<br>i. Structure- properties- classification: smooth,<br>skeletal, cardiac, excitation/contraction, coupling<br>ii. Factors affecting development of<br>muscle tension, fatigue, load.<br>iii. Neuro-muscular transmission,<br>applied physiology:<br>Myasthenia gravis, Eaton Lambert<br>Syndrome.<br>iv. Motor unit EMG | 15 |

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| 2 | Nervous System, Cardio vascular and Respiratory System | **Nervous System:**<br>a)Central Nervous<br>System(CNS), Peripheral<br>Nervous System(PNS), Autonomic Nervous System(ANS):<br>Introduction of nervous system,<br>Classification: C.N.S., P.N.S., & A.N.S.<br>b) Synapse: structure, properties, & transmission.<br>c) Reflexes: classification & properties.<br>d) Receptor: Physiology, classification, properties.<br>e) Tracts: Sensory and motor tracts: effect of transaction (complete and incomplete) at various levels.<br>f) Sensations: Physiology of Touch, Pain, Temperature & Proprioception;<br>g) Muscle Tone: Physiology of Muscle Tone (muscle spindle); Stretch reflex.<br>h) Functions of Cortex: Connection & function of Basal ganglia, Thalamus, Hypothalamus, Sensory and Motor cortex, Cerebellum, Limbic system, Vestibular.<br>i) ANS: Autonomic nervous system: Structure and functions of the sympathetic and the parasympathetic nervous system.<br>j) Learning and Memory: Learning, memory & conditioned reflex<br>k) Voluntary Movement: Physiology of Voluntary movement.<br>**Cardiovascular System:**<br>a)Structure & properties of cardiac muscle:<br>Cardiac impulse- initiation and<br>conduction<br>Cardiac cycle<br>b)Heart rate Regulation:<br>Blood pressure- definition-regulation-<br>Cardiac output regulation<br>& function affecting; Peripheral<br>resistance,<br>venous return<br>Regional circulation-coronary, muscular, cerebral<br>Normal ECG.<br>**Respiratory System:**<br>a) Introduction, structure and function of Respiratory System:<br>Mechanics of respiration;<br>Pulmonary Volumes & capacities; Anatomical & Physiological Dead<br>space -ventilation/perfusion ratio,<br>alveolar ventilation<br>Transport of respiratory gases<br>Nervous & Chemical control of<br>respiration Pulmonary function tests- Direct & indirect method of measurement Physiological changes with altitude & acclimatization. | 20 |

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| 3 | Endocrine and Reproductive system | **Endocrine System:**<br>a) Secretion, regulation & function: Pituitary, Thyroid, Adrenal, Parathyroid and Pancreas glands.<br>b) Applied physiology (abnormalities) of the mentioned glands.<br>**Reproductive System:**<br>i. Physiology of menstrual cycle and spermatogenesis<br>ii. Functions of progesterone, estrogen and testosterone<br>iii. Puberty & menopause<br>iv. Physiological changes during pregnancy. | 15 |
| 4 | Special Senses | **Ear:** Structure and function of the ear Applied physiology- types of deafness.<br>**Eye**: Structure and function of the eye Applied physiology: errors of<br>refraction, accommodation,<br>Reflexes: dark and light adaptation, photosensitivity. | 6 |
| 5 | Exercise Physiology | i. Basal Metabolic Rate and<br>Respiratory Quotient.<br>ii. Energy metabolism.<br>iii. Fatigue<br>iv. Oxygen debt<br>v. Immediate cardio vascular changes during exercise, responses to mild, moderate and severe exercise, concept of endurance.<br>vi. Immediate respiratory changes<br>during exercise<br>vii. Concept of training /conditioning, effects of chronic exercise/effect of training on the cardiovascular & respiratory system.<br>viii. Body temperature regulation during exercise.<br>ix. Hormonal and metabolic effects during exercise.<br>x. Effects of exercise on muscle strength, power, endurance.<br>xi. Physical fitness and its components | 10 |
| 6 | Physiology of ageing | Physiology of ageing with respect to systems. | 10 |

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| 7 | Gastrointestinal, Excretory system; Integument and temperature regulation | **Gastrointestinal System:**<br>Absorption and digestion in brief and Liver Function.<br>**Excretory System:**<br>**General organization of the system:**<br>i. Kidney-structure & function;<br>ii. Urine formation (to exclude concentration and dilution)<br>iii. Juxtaglomerular apparatus<br>iv. Fluid and electrolyte balance – Na, K, H2O<br>v. Neural control of micturation<br>vi. Applied physiology: Types of bladder<br>**Integumentary System and temperature regulation:**<br>1) Integument Integrity:<br>Structure of Skin, functions of skin and sweat mechanism.<br>2) Temperature regulation:<br>Regulation of body temperature, factors affecting and applied physiology. | 7 |
| 8 | Nutrition and hormones | 1. Nutrition: Nutrients and their role in human health, nutritional requirements, energy requirements and nutritional disorders Composition of food, balanced diet, Kwashiorkor, Marasmus, Nitrogen balance, major dietary constituents & their importance. Include energy requirements, factors affecting B.M.R., S.D.A. (Specific Dynamic Action) and R.Q. (Respiratory Quotient)<br>2. Hormones:<br>a) Definition and -classification of hormones: Chemical structure – peptide or protein hormones, amine hormones or amino acid derivatives and steroid hormones.<br>b)Mechanism of Hormone action: Mechanism of hormone action- group I and group II. | 7 |
| 9 | Muscle Contraction | Mechanism &<br>Biochemical events:<br>Connective Tissue-<br>Biochemistry of connective tissue Collagen- Glyco-protein proteoglycans.<br>Protein composition of muscle fiber.<br>Sources of energy in muscle contraction. | 10 |
| 10 | Clinical Biochemistry | Organ function test:<br>Liver Function Test, Renal Function Test, Lipid profile in serum, Thyroid function test.<br>Metabolism in starvation:<br>Starvation metabolism, Hemoglobin chemistry and metabolism | 5 |

**Practicum:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT105NQ2017 | Occupational Therapy Techniques | 225 | NIL | 6 |
| 2 | OT106NQ2017 | Applied Anatomy and Physiology (including Biochemistry) | 225 | NIL | 6 |
| Total | | | 450 | | |

**OT105NQ2017**: **Occupational therapy process: 225 hrs**

| S.NO | AREAS | CONTENT | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Joint Range of Motion (R.O.M). (Upper Limb, Lower Limb, Spine & TM joints): Demonstration , Hands on practice on peers, models or clients under supervision, interactive sessions, following clinical and/or simulated audio-visual presentations. | Demonstration- Patient positioning. Identification of surface landmarks for goniometry. Goniometric placements. Recording measurements. With goniometry. AROM/PROM. Assessing functional ROM in tasks. Measuring Fixed Flexion Deformity (FFD) and extension deformity. | 30 |
| 2 | Muscle Strength: Demonstrations, simulated case presentations on models and clinical diagnosis using audio visuals, practice on peers, models & patients under supervision. | Learn & perform gross muscle testing on normal & patients in upper & lower extremities Identify strength in functional tasks. | 30 |
| 3 | Muscle Tone: Demonstrations, simulated case presentations on models and clinical diagnosis using audio visuals, practice on peers, models & patients under supervision | Evaluation, palpation testing for normal tone and variations in tone under supervision of staff. Identification of types of muscle tone in normal and patients ( pyramidal, extra-pyramidal & lower motor neuron) | 20 |

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| 4 | Coordination:<br>Demonstration, Hands-on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations | Tests for Cerebellar signs.<br>Tests for extra pyramidal signs.<br>Upper body and lower body tests for space, time, and rhythm. | 15 |
| 5 | Sensation:<br>Demonstration, Hands-on practice on peers, models or clients under supervision, interactive sessions follow clinical and/or simulated audio-visual presentations. | Tests for superficial sensations and deep sensations under supervision.<br>Practical Introduction and procedural learning to sensory kits. | 15 |
| 6 | Perception:<br>Demonstration, Hands-on practice on peers, models or clients under supervision, interactive sessions follows clinical and/or simulated audio-visual presentations. | Tests for superficial sensations and deep sensations under supervision. Practical introduction and procedural learning to sensory kits. | 15 |
| 7 | Cognition:<br>Demonstration, Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations. | Demonstration and<br>execution of tests on –<br>Memory -3 types.<br>Attention.<br>Orientation. | 10 |
| 8 | Endurance:<br>Definition<br>Importance of Endurance in performance.<br>Factors affecting endurance. Relation to activity tolerance. | Demonstration in common tasks, exercises.<br>Discussion with respect to endurance tasks. | 10 |
| 9 | Hand Functions & Evaluation Methods:<br>Demonstration, Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations. | Demonstration -- Procedural<br>Assessments of all above functions and edema. Assessment of in-hand manipulation in any two tasks.<br>Total active motion of hand.<br>Practice on peers, models and patients | 25 |
| 10 | Therapeutic exercises:<br>Demonstration, Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations. | Demonstration and Identification of muscle contractions in different types of exercises,<br>Co-relation of contractions in tasks. | 35 |

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| 11 | Therapeutic Modalities in Occupational Therapy: Demonstration, Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations. | Labs ,practical for the following activities:<br>Shoulder Wheel.<br>Inclined Sanding.<br>Bicycle Fret Saw, Etc. | 20 |

**OT106NQ2017: Human Anatomy and Physiology (including Biochemistry): 225 hours**

| S.NO | REGIONS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| | HUMAN ANATOMY | | |
| 1 | Musculoskeletal System | Applied Anatomy: Bones, muscles, joints<br>1.Upper Extremity<br>2.Lower Extremity<br>3.Head, Neck and Face<br>4. Back and Thoracic cage | 35 |
| 2 | Neuro-anatomy | CNS, PNS | 25 |
| 3 | Cardiovascular & Respiratory System | Applied anatomy of major blood vessels: Pulse | 10 |
| 4 | Abdomen | Muscles of abdomen, pelvis and pelvic floor. | 5 |
| 5 | Systemic Anatomy | GI system, Genito-Urinary System | 5 |
| 6 | Sensory Organs | Ear, Eye, Skin | 5 |
| 7 | Radiology | Introduction to Radiology, Surface radiology and Intervention radiology.(X-rays, CT Scan, MRI Scan, PET Scan,) Intervention Radiology (US etc) | 15 |
| | HUMAN PHYSIOLOGY | | |
| 1 | Hematology – (demonstration only) | Demonstrations- Interpret repots of blood tests / Microscopic view of cells. | 15 |

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| 2 | Blood Pressure | Measurement of Blood pressure in relaxed position<br>Understanding effects of change in posture & exercise on blood pressure | 10 |
| 3 | Examination of Pulse | In major arteries | 5 |
| 4 | Spirometry | Lung volumes and capacities<br>Timed vital capacity | 10 |
| 5 | Perimetry | Static and Kinetic perimetry. Tangent screen and Goldmann Perimetry tests. | 10 |
| 6 | Physical fitness | Breath holding<br>Mercury Column Test<br>Cardiac Efficiency Test – Harvard step test – Master step test | 15 |
| 7 | Bicycle Ergometry | Observation and exposure to Bicycle Ergometer and Work test with it. Students also look for the below.<br>a.Heart rate<br>b. Oxygen uptake.<br>c.Fatigue<br>d. Immediate cardio vascular changes during exercise, responses to mild, moderate and severe exercise, concept of endurance.<br>e. Immediate respiratory changes during exercise<br>f. Concept of training /conditioning, effects of chronic exercise/effect of training on the cardiovascular & respiratory system.<br>g. Body temperature regulation during exercise.<br>h. Effects of exercise on muscle strength, power, endurance. | 10 |
| 8 | Clinical examination:<br>History taking and general examination /Respiratory system / cardio vascular system / Higher functions/ Cranial nerves /Reflexes / Motor & Sensory system, Cerebellar function test. | | 25 |
| | BIOCHEMISTRY | | |
| 1 | Demonstration of estimation of various biomolecules and their interpretation | Interpret reports of various Conditions (including Diabetic profile, Cardiac profile, Uric acid and Gout) | 25 |

**Field work:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT107NQ2017 | Public Health: Visit to Health Centers (sub health post, PHC, CHC, DH) and NGO's to understand the Primary, Secondary and Tertiary health care activities. Seminar presentation | 50 | NIL | 2 |

**Examination pattern and division of marks**

**Theory:**

- **MAIN SUBJECTS:** 100 marks divided between 80 (written examination at end of semester) and 20 (internal assessment based on semester long work presentation),
- **SUBSIDIARY SUBJECTS:** 50 marks divided between 40 (written examination at end of semester) and 10 (internal assessment based on semester long work presentation)

**Practical:**

- **MAIN SUBJECTS:** 100 marks divided into 60 marks (practical exam at end of semester), 20 marks (viva voce), and 20 marks (internal assessment)
- **SUBSIDIARY SUBJECTS:** 50 marks divided into 30 marks (practical exam at end of semester), 10 marks (viva voce), and 10 marks (internal assessment)

## Semester 1

| Sl no | Code | Course title | Theory | Practical | Max Marks | Credits |
|---|---|---|---|---|---|---|
| 1 | OT101NQ2017 | Introduction to Occupational Therapy Process | 100 | | 100 | 4 |
| 2 | OT102NQ2017 | Human Anatomy | 100 | | 100 | 4 |
| 3 | OT103NQ2017 | Human Physiology and Biochemistry | 100 | | 100 | 4 |
| 4 | OT104NQ2017 | Introduction to Public Health for Occupational Therapist | 100 | | 100 | 4 |

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|---|---|---|---|---|---|---|
| 5 | OT105NQ2017 | Practicum 1: Occupational Therapy Techniques | | 100 | 100 | 6 |
| 6 | OT106NQ2017 | Practicum 2: Applied Anatomy, Physiology, Biochemistry, Biomechanics and vital signs | | 100 | 100 | 6 |
| 7 | OT107NQ2017 | Field Visit: Public Health: Visit to Health Centers and Seminar Presentation. Journal presentation included. | | | 50 | 2 |
| | | **Total** | | | **650** | **30** |

## Marks for First Semester BOT

**Theory:**

| S. No | Subject | Topics | Marks per topic |
|---|---|---|---|
| 1 | Occupational Therapy (Total marks out of 100) | History and Scope of OT | 10 |
| | | Occupational Science | 10 |
| | | Principles and methods of assessment; and diagnostic tools in OT | 20 |
| | | Therapeutic modalities in OT | 20 |
| | | ADL and return to work | 20 |
| | Internal assessment | | 20 |
| 2 | Human Anatomy (Total Marks out of 100) | General Anatomy & Histology | 05 |
| | | Musculoskeletal System | 15 |
| | | Neuroanatomy | 15 |
| | | Cardiovascular & Respiratory System | 10 |

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|---|---|---|---|
| | | Abdomen | 05 |
| | | Systemic Anatomy | 05 |
| | | Sensory Organs | 10 |
| | | Endocrine and exocrine organs | 05 |
| | | Radiology | 10 |
| | Internal assessment | | 20 |
| 3 | Physiology and Biochemistry (Total marks out of 100) | General Physiology | 05 |
| | | Nervous System, Cardio vascular and Respiratory System | 10 |
| | | Endocrine and Reproductive system | 05 |
| | | Special Senses | 10 |
| | | Exercise Physiology | 10 |
| | | Physiology of ageing | 10 |
| | | Gastrointestinal, Excretory system; Integument and temperature regulation | 05 |
| | | Nutrition and hormones | 05 |
| | | Muscle Contraction | 10 |
| | | Clinical Biochemistry | 10 |
| | Internal assessment | | 20 |
| | | | |
| 4 | Introduction to Public Health for Occupational Therapist (Total marks out of 100) | Orientation and Introduction to Public Health | 5 |
| | | Social Determinants of Health | 5 |
| | | Health Systems in India | 6 |

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| | | Globalization and Health | 6 |
| | | Introduction to health Research Methodologies | 6 |
| | | Gender: Women's Health and Men's Health | 5 |
| | | Communicable and Non-communicable disease: Overview of National Programs in India | 6 |
| | | Mental Health | 6 |
| | | Child's Health, Adolescent Health, Oral Health and Health in Old age: Public health Perspective | 6 |
| | | Ethics in Public Health and for Health Professionals: | 7 |
| | | Social Movements in Health | 6 |
| | | Environmental Health | 10 |
| | | Armed conflicts | 6 |
| | Internal assessment | | 20 |

**Practicum:**

| S.No. | Topic | | Total marks |
|---|---|---|---|
| 1 | Occupational Therapy Techniques | Assessment Tools | 20 |
| | | Therapeutic Modalities | 20 |
| | | Activities of Daily Living and Work Hardening | 20 |
| | Viva | | 20 |
| | Journal + Internal Assessment | Year work on practical performed | 20 |
| 2 | Anatomy | | |
| | Spots | i. Musculoskeletal | 30 |
| | | ii. Organ Systemic | |
| | | iii. Neuro-anatomy | |

| | | | |
|---|---|---|---|
| | | iv Soft parts of thorax, spine, neck, UL,LL | |
| | Viva | i. Hard parts | 10 |
| | | ii. Soft parts | |
| | Journal + Internal Assessment | Year work on practical performed | 10 |
| 3 | Physiology and Biochemistry | | |
| | Demonstration: On Clinical Physiology | C.V.S. | 30 |
| | | R.S. | |
| | | C.N.S. | |
| | Viva | | 10 |
| | Journal + Internal Assessment | Year work on practical performed | 10 |

## SEMESTER TWO

**Theory:**

| Sl no | Code | Course title | No. of Notional Learning Hours | *Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT201NQ2017 | Fundamentals of Psychology | 105 | NIL | 4 |
| 2 | OT202NQ2017 | Biomechanics, Ergonomics and Bioengineering. | 105 | NIL | 4 |
| 3 | OT203NQ2017 | Creating inclusive communities to promote occupational performance and participation | 75 | Nil | 3 |
| 4 | OT204NQ2017 | Basic Nursing and First aid | 30 | Nil | 1 |
| 5 | OT205NQ2017 | Introduction to Language, Communication and ICT, Sign language, AAC | 105 | Nil | 4 |
| Total | | | 420 | 16 | |

**Practicum:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT206NQ2017 | Occupational therapy process | 150 | NIL | 4 |
| 2 | OT207NQ2017 | Assistive technology | 150 | NIL | 4 |
| 3 | OT208NQ2017 | Basic Nursing and First Aid | 30 | NIL | 1 |
| 4 | OT209NQ2017 | Languages, Communication and ICT | 120 | NIL | 3 |
| Total | | | 450 | | 12 |

**Field work:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT210NQ2017 | CBR work (NGO Posting) / Seminar presentations | 50 | NIL | 2 |

**OT104NQ2017: Fundamentals of Psychology: 105 Hours**

| S.NO | AREAS | CONTENT | DIDACTIC HOURS |
|---|---|---|---|
| 1 | General Psychology | a)Introduction to Psychology:<br>b) Fields of psychology, schools of thoughts.<br>c) Attention: Definition and its types<br>d) Perception: Form perception, depth perception, constancy,<br>Movement, plasticity & individual<br>differences in perception<br>e) Stress: Types, Stress cycles & coping with stress<br>f) Feeling and emotion: Physiology & theories of emotion<br>g) Motivation: Theories of motivation, different types of motives and sources of conflicts and adjustment.<br>h) Personality: Theories of personality & types of assessments of personality<br>i) Communication and Language<br>j) Intelligence: Nature & theories of intelligence, individual differences and enumerate types of assessments of intelligence.<br>k) Memory and Attention: Theories of memory, short term & long term Memory, forgetting, amnesia, methods of improving memory.<br>l) Human learning: Definition of learning & basic principles of human learning.<br>k) Thinking: Thinking process, concepts, problem solving, decision Making and creative thinking. | 21 |

| | | | |
|---|---|---|---|
| 2 | Developmental Psychology | 1. Introduction to developmental<br>Theories: Learning Theories:<br>Behavioral Theory, Social learning theory, Maturation theory of Arnold, Gesell, Psychoanalytic theory of Sigmund Freud, Erik Erikson theory, Cognitive Theory of Jean Piaget, Humanistic self theory and Ethnology theory.<br>2. Individual differences in behavior.<br>3. Influence of heredity & environment.<br>4. Infancy.<br>5. The early childhood<br>6. The middle childhood.<br>7. Puberty – physiological & psychological changes.<br>8. The adolescent state.<br>9. Early & middle adulthood.<br>10. Old age. | 21 |
| 3 | Abnormal psychology | 1. Meaning of abnormal behavior.<br>2. Classification of abnormal behavior.<br>3. Causal factors in abnormal behavior | 21 |
| 4 | Industrial Psychology | Introduction to Industrial and Organizational Psychology: Definition, goals, key forces, and fundamental concepts History of industrial psychology Major Fields of I/O Psychology<br>Individual in Workplace:<br>Motivation- Definition, Types, Theory-Maslow's and Herzberg Job satisfaction- Definition, Factors affecting Job Satisfaction, Consequences Leadership - Definition, Leadership Styles, Approaches to Leadership, Organizational Culture-Definition, Levels, Characteristics, Types, Functions<br>Development of Human Resources:<br>Job Analysis- Definition, Purpose, Types, Process, Methods, Recent Developments Recruitment and Selection- Nature and objectives, Sources- Internal and External, Process, Definition and steps in selection process Performance Management- Definition, Scope, Process, Tools Training and Development- Meaning and nature, Objectives, Methods- on the job and off the job Introduction to consumer psychology and consumer decision making | 21 |
| 5 | Sports and Exercise Psychology: | Arousal and Anxiety<br>Psychosocial factors in sport and exercise<br>Motivation & Imagery uses in sport and exercise | 21 |

**OT202NQ2017: Biomechanics, Ergonomics and Bioengineering: 105 Hours**

Biomechanics

| S.NO | REGIONS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Introduction to Biomechanics: Kinetics and Kinematics | 1.General concepts of Statics and dynamics<br>2. Definition of Kinematics and kinetics; and Applications of biomechanics in occupational therapy.<br>3. Kinetics:<br>a) Force and Force Systems:<br>Definition, types of force systems.<br>Classification of force system – linear, parallel, concurrent, general,. Examples of each with application to occupational therapy. Internally generated forces, externally applied forces.<br>Composition and resolution of forces with examples.<br>Moment torque &couple.<br>Friction and its practical application in the human body.<br>b) Newton's laws of motion:<br>Three laws of motion. Description with examples of each related to occupational therapy.<br>c) Centre of Gravity:<br>Body mass.<br>Center of gravity with respect to body mass. Centre of gravity and its application in human body with respect to change in body mechanics and function.<br>d) Levers:<br>Classification. Physiological significance of trade-off of mechanical advantage. Examples in human body.<br>4)Kinematics:<br>Planes of human body.<br>Types of motion – linear / translatory / rotatory / angular, curvilinear /general plane motion.<br>Open & close kinematic chain motion.<br>Application of kinematics in occupational therapy. | 15 |

| | | | |
|---|---|---|---|
| 2 | Biomechanics Of Joints And Applied Kinesiology | 1)Upper extremity, (shoulder and scapula-humeral complex, Elbow & radio-ulnar complex, Wrist and hand complex):<br>Joint classification.<br>Applied anatomy of articulating surfaces.<br>Soft tissue structures related to joints: joint capsule, muscles and ligaments.<br>Mechanics of the bone and soft tissue components involved during static, dynamic conditions of the joints. Alteration in mechanics following injury & pathological states.<br>2) Lower extremity joints: Hip complex and pelvic complex. Knee joint and patellar complex. Ankle and foot complex: Joint classification,<br>Applied anatomy of articulating surfaces.<br>Soft tissue structures related to joints: joint capsule, muscles and ligaments.<br>Mechanics of the bone and soft tissue components involved during static, dynamic conditions of the joints. Alteration in mechanics following injury & pathological states.<br>3) Spine:<br>General structure and function of spine.<br>Muscles of vertebral column<br>4) Temporomandibular Joint:<br>General structure and function of Temporomandibular joint. Articular surfaces capsule, muscles and movement.<br>Biting, chewing, articulation, reduced ROM, strength. | 15 |
| 3 | Posture and balance | Posture:<br>Definition of normal posture.<br>Anatomical posture.<br>Define Abnormal posture.<br>Define Anterior, posterior, lateral deviations with respect to normal alignment of spine.<br>Define anterior, posterior lateral tilts, pelvic obliquity.<br>Deformities and abnormal posturing in lower and upper body that affect postural mechanics.<br>Factors Affecting Posture:<br>Spinal alignment.<br>Pelvic alignment.<br>Factors affecting seating.<br>Musculoskeletal<br>Tone.<br>Balance:<br>Definition.<br>Static and dynamic balance.<br>Balance in sitting and standing.<br>.Balance rating with respect to static and dynamic states. | 15 |

| | | | |
|---|---|---|---|
| | | Administration of a standard scale [berg balance scale | |
| 4 | Gait: Normal and pathological gaits | Normal human gait cycle parameters.<br>Myokinetics and Kinematics of gait.<br>Stair gait, running,<br>Common gait deviations and analysis.<br>Types of crutch and cane gaits.<br>Preparatory exercises for crutch and cane walking. | 10 |
| 5 | Bed Mobility and Transfers | Bed Mobility:<br>Precursor to transfers and mobility.<br>Bed mobility for preparation of transfers.<br>Transfers:<br>Definition.<br>Types.<br>Guidelines for using proper body mechanics.<br>Principles of body positioning.<br>· Stand pivot transfer<br>· Sliding board transfer<br>· Bent pivot transfer<br>· Dependent transfers | 7 |

## Ergonomics and Bioengineering:

| S.NO | REGIONS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Introduction to Ergonomics | Definition of Ergonomics.<br>Areas and branches of Ergonomics. | 3 |
| 2 | Anthropometric Considerations and Environmental design in Ergonomics | Anthropometric Considerations:<br>Enumerate facets- static and dynamic anthropometry.<br>Overview static anthropometry:<br>Differences in respect to gender, ethnicity, age, occupation, persons with disability.<br>Measurements, concepts of 5th, 50th and 95th percentile.<br>Limitations and uses of data principles in its application.<br>Environmental design in Ergonomics:<br>Understand the types of environment.<br>Architectural barriers and Universal Design. Outline the effects of environmental factors such as temperature, humidity noise, vibration, visual environmental pollution on human body. Explain the safety factors, accidents and their prevention. | 10 |
| 3 | Man- machine system as Ergonomic concept and Ergonomic considerations at Work (and time and motion ) | Man- machine system as Ergonomic concept:<br>Describe functioning of man-machine system.<br>Information processing theory and the process.<br>Ergonomic considerations at Work:<br>Explain layout of equipment design of seating.<br>Explain the design of work space.<br>Human compatibility and use of displays and controls.<br>Work site job analysis.<br>Time and Motion study in Ergonomics:<br>Define and underline the assumptions of Time and Motion study. Explain the cycle of managerial control and its application. | 10 |
| 4 | Cognitive Workload & Organization of Mental Space (Skill Psychology in Ergonomics) | Explain the concept of cognitive workload, its advantages and organization of mental space.<br>Understand the effects of cognitive overload. | 10 |

| | | | |
|---|---|---|---|
| 5 | Bioengineering(ACOTE) | Introduction to Bio-engineering. Its application in the fabrication of assistive and adaptive technology; and virtual reality<br>Explain and apply general principles of splinting while designing and fabrication of<br>Common Upper /Lower Extremity orthotics.<br>Indications and contraindications of splinting: Upper /Lower Extremity Orthosis viz.<br>· Resting pan Splint,<br>· Short Opponens Splint.<br>· Dynamic Extension Outrigger splint.<br>· Finger gutter Splint.<br>· Radial Bar Cock Up | 10 |

**OT203NQ2017: Creating inclusive communities to promote occupational performance and participation: 75 Hours**

Objectives:

This course provides students with skills to support the development of inclusive communities. It will introduce students to the impact of societal attitudes, service systems, policies & legislation and the natural & built environment on people's participation in society. It will also provide students with skills in identifying people at risk of exclusion, the barriers to inclusion & how occupational therapists can contribute to the development of inclusive practices.

With the profession of occupational therapy having been founded on the value of meaningful occupations, occupational therapists work to ensure people with disabilities and health conditions are able to actively participate in society. This requires occupational therapists to have a well-developed understanding of the environment and the ability to identify barriers and facilitators to engagement.

This course provides an overview of how environmental factors in our society, such as legislation, public and private policies and programs, and attitudes contribute to people's experiences of inclusion and discrimination. It includes theoretical and practical components for you to develop skills essential for promoting community inclusion. The course is organised around a series lectures, tutorials, discussion, reflection, and group work. It uses actual case material drawn from current and past social issues and experiences and features leading Australian disability advocates.

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Introduction to Disability and Conceptualizing Disability | Introduction to Disability: What is Disability and Impairment? Who is a person with Disability? Disability creation process (Canada Research). Models of addressing disability. | 12 |

| | | | |
|---|---|---|---|
| 2 | Overview of Social Exclusion | Vulnerability<br>Social Exclusion | 9 |
| 3 | Introduction to Inclusive Community | What is a community? What is Development? Overview of Human Development Index.<br>What is Inclusive Community? What is Disability Inclusive Development? What are the approaches to Disability Inclusion Development? What is the Twin Track approach to disability?<br>Overview on Barriers to Inclusive Society? | 12 |
| 4 | International Classification of Functioning, Disability & Health | International Classification of Functioning, Disability & Health: WHO's ICF 2001 & older editions of ICIDH. | 7 |
| 5 | Policies and legislations for inclusive development | (Overview of Mental Health Act (1987), Rehabilitation Council of India act (1992), Persons With Disability act (1995), National Trust act (1999), Right to Education act (2010) and The Rights of Persons with Disabilities Act (2016) | 9 |
| 6 | Rehabilitation | Define Rehabilitation<br>CBR Matrix (WHO)<br>IBR | 9 |
| 7 | Appropriate Technology: Overview | Revising Alma Ata Declaration<br>Orientation on principles of Disabled Village Children | 5 |
| 8 | Role of OT towards disability inclusive community development | Role of OT towards disability inclusive community development from above learning. Seminar presentation by students | 12 |

**OT204NQ2017: Basic Nursing and First Aid: 30 Hours**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| | FIRST AID | | |
| 1 | Introduction | Definition of first aid, importance of first aid, Golden rules of first aid, scope and concept of emergency | 1 |

| | | | |
|---|---|---|---|
| 2 | First Aid Emergencies | 1. Burns & scalds: Causes, Degrees of burns, first aid treatment, general treatment.<br>2. Poisoning: Classification (irritants, acid alkali, narcotics) Signs and symptoms, first aid treatment, general treatment.<br>3. Trauma due to foreign body insertion: Eye, ear, nose, throat, stomach and lung.<br>4. Bites: First aid, signs, symptoms and treatment.<br>a. Dog bites: Rabies<br>b. Snake bite: neurotoxin, bleeding diathesis. | 3 |
| 3 | Skeletal injuries | Definition, types of fractures of various parts of the body, causes, signs, and symptoms, rules of treatment, transport of patient with fracture, first aid measures in dislocation of joints, treatment of muscle injuries. | 1 |
| 4 | Respiratory emergencies | 1. Asphyxia: Etiology, signs and symptoms, rules of treatment.<br>2. Drowning: Definition and management.<br>3. Artificial respiration: types and techniques. | 4 |
| 5 | Wounds and Hemorrhage | 1. Review of Anatomy and Physiology of the circulatory system.<br>2. Wounds: Classification, management.<br>3. Hemorrhages: Classification, signs and symptoms, rules for treatment of hemorrhage.<br>4. Treatment of hemorrhage from special areas (scalp, mouth, nose, ear, palm and various veins.)<br>5. Internal hemorrhages: Visible and concealed. | 3 |
| 6 | Shock and Unconsciousness | Definition, types of shock, common causes of shock, signs and symptoms of shock (assessment of established shock), general and special treatment of established shock. | 3 |
| 7 | Transportation of the injured | Methods of transportation: Single helper, hand seat, stretcher, wheeled transport (ambulance)<br>2. Precautions taken: Blanket lift, air and sea travel. | 2 |
| 8 | Community emergencies | Role of first aider (immediate and later) in fires, explosions, floods, earthquakes, famine. | 2 |
| 9 | Community Resources | Police Assistance, voluntary agencies (local, national, international), Ambulance services (functions) | 2 |

| | | | |
|---|---|---|---|
| 10 | Bandages | Bandaging, basic turns, bandaging extremities; triangular bandages and their application | 3 |
| | **BASIC NURSING** | | |
| 11 | Introduction | What is nursing? Nursing principles. Interpersonal relationship | 1 |
| 12 | Nursing Position | Environment safety; bed making, prone, lateral, dorsal, dorsal recumbent, Fowler's positions, comfort measures, aids to rest and sleep. | 1 |
| 13 | Lifting and transporting patients | Lifting patients up in the bed; transferring from bed to wheel chair, transferring from bed to stretcher. | 1 |
| 14 | Providing for patient's elimination | Giving and taking bed pan, urinal, observation of stools, and urine, observation of sputum. Understand use and care of catheters, and giving enema. | 1 |
| 15 | Methods of giving nourishment | Feeding, tube feeding, drips, transfusions | 1 |
| 16 | Infection Control | Principles of prevention | 1 |

**OT205NQ2017: Introduction to Language, Communication and ICT: 105 Hours**

Objectives:

1. Introduction to ICT/computer literacy/Internet/use of smart phones for effective communication in Rehabilitation
2. Introduction to effective communication(Verbal/written/non verbal) in English and regional languages to facilitate students' awareness of communication in therapeutic contexts & development of verbal & non-verbal communication skills in varying sized group situations.
3. Develop knowledge, skills and application of existing technology to develop innovative technologies to enhance the quality of life and inclusion of persons with disabilities and senior citizens at national and global levels.
4. Enable students to develop indigenous technologies for persons with special needs and senior citizens.
5. Build knowledge based on assistive devices, assistive technology based on electronics, mechanical engineering, accessible designing in construction, universal accessibility standards and software applications for persons with special needs.

| S.NO. | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Introduction to ICT in rehabilitation | | 26 |

| | | | |
|---|---|---|---|
| 2 | Introduction to ICT to Improve Employability of Persons With Disabilities | | 30 |
| 3 | Introduction to Mobile based application for learning | | 22 |
| 4 | Introduction to Language and Communication | | 27 |

**Practicum:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT206NQ2017 | Occupational therapy process | 150 | NIL | 4 |
| 2 | OT207NQ2017 | Assistive technology | 150 | NIL | 4 |
| 3 | OT208NQ2017 | Basic Nursing and First Aid | 30 | NIL | 1 |
| 4 | OT209NQ2017 | Languages, Communication, and ICT | 100 | NIL | 3 |
| Total | | | 450 | | 12 |

**OT206NQ2017: Occupational therapy process: 150 hrs**

| S.NO | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Work Analysis | Analysis of rural occupations and other unorganized sector jobs.<br>Group wise presentations | 35 |
| 2 | Job analysis learned in theory: Activity Analysis | Group wise presentation of analysis of below jobs<br>Tailoring.<br>Data entry on computers.<br>Carpentry.<br>Driving | 40 |
| 3 | Application of ADL Scales (Processers-Barthel index, FIM FAM, AMPS) | Functional Independence Measure (FIM)<br>Functional Assessment Measure (FAM)<br>Assessment of Motor and Process Skills (AMPS)<br>Modified Barthel Index. | 35 |

| | | | |
|---|---|---|---|
| 4 | Compensatory Principles in ADL | Apply Barthel Index, FIM, FAM, AMPS on normal subjects and clients with limitations in performance component. Rate level of independence in ADL | 40 |

**OT207NQ2017: Assistive technology: 150 hours**

| S.NO | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Normal gait and Pathological gait | Visual analysis of normal gait,<br>identification and analysis of pathological gaits:<br>Antalgic gait<br>Hemiplegic gait<br>Trendelenburg gait<br>Stiff- joint gait.<br>High steppage gait<br>Festinating/shuffling gait<br>Scissoring gait<br>Ataxic gait<br>Waddling gait | 30 |
| 2 | Mobility aids | Assessment for the need of Mobility aids.<br>Selection of Assistive devices for ambulation<br>Fitting of Assistive devices for ambulation<br>Gait training with mobility aid and Demonstration of types of crutch gaits(two point, three point and four point gaits) | 30 |
| 3 | Wheel Chair Selection process and adaptation | Practice in Transfer techniques and training in Wheel Chair use<br>Adaptations according to the individual needs of beneficiaries<br>Practice in evaluation and prescription for wheel chairs,<br>Wheel chair devices for positioning and wheel chair maneuvering | 30 |
| 4 | Low cost aids and appliances | Assessment and fabrication of low cost devices in community.<br>Like crutches, rollators, corner chair, special chair, standing frame, parallel bars, prg boards, bath tubs, universal cuff etc. (Innovations to be encouraged using locally available resources) | 30 |

| | | | |
|---|---|---|---|
| 5 | Mobility Skills | Bed Mobility:<br>Precursor to transfers and mobility. Bed mobility for preparation of transfers.<br>Transfer: Guidelines for using proper body mechanics. Practing the below:<br>Stand pivot transfer<br>Sliding board transfer<br>Bent pivot transfer<br>Dependent transfers | 30 |

**OT208NQ2017: Basic Nursing and First Aid: 30 Hrs**

| S.NO | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| | FIRST AID | | |
| **1** | First Aid Emergencies | 1. Burns & scalds: first aid treatment<br>2. Poisoning: first aid treatment<br>3. First aid treatment in Trauma due to foreign body insertion: Eye, ear, nose, throat, stomach and lung.<br>4. Bites: First aid<br>a. Dog bites: Rabies<br>b. Snake bite: neurotoxin, bleeding diathesis. | 4 |
| **2** | Skeletal injuries | Transport of patient with fracture, first aid measures in dislocation of joints, treatment of muscle injuries. | 4 |
| **3** | Respiratory emergencies | 1. Asphyxia<br>2. Drowning<br>3. Artificial respiration: types and techniques. | 3 |
| **4** | Wounds and Hemorrhage | 1. Wound management.<br>2. Hemorrhage: First aid.<br>3. First aid of hemorrhage from special areas (scalp, mouth, nose, ear, palm and various veins.) | 3 |
| **5** | Transportation of the injured | Methods of transportation: Single helper, hand seat, stretcher, wheeled transport (ambulance)<br>2. Precautions taken: Blanket lift, air and sea travel. | 2 |
| **6** | Bandages | Bandaging, basic turns, bandaging extremities; triangular bandages and their application | 4 |
| | BASIC NURSING | | |

| | | | |
|---|---|---|---|
| **7** | Nursing Position | Environment safety; bed making, prone, lateral, dorsal, dorsal recumbent,<br>Fowler's positions, comfort measures, aid to rest and sleep. | 4 |
| **8** | Lifting and transporting patients | Lifting patients up in the bed; transferring from bed to wheel chair' transferring from bed to stretcher. | 4 |
| **9** | Providing for Patient's elimination | Giving and taking bed pan, urinal, observation of stools, and urine. Observation of sputum. Understand use and care of catheters, giving enema. | 2 |

**OT209NQ2017: Languages, Communication and ICT: 120Hrs**

| S.NO | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Introduction to ICT- practical aspect | To be decided by respective faculty based on theory. | 40 |
| 2 | Effective communication in rehabilitation-assignment | To be decided by respective faculty | 40 |
| 3 | Effective communication in regional languages-assignment | To be decided by respective faculty | 40 |

**OT207NQ2017: Field work:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT207NQ2017 | CBR work (NGO Posting) / Seminar presentations | 50 | NIL | 2 |

**Examination pattern and division of marks:**

**Theory:**

- **MAIN SUBJECTS:** 100 marks divided between 80 (written examination at end of semester) and 20 (internal assessment based on semester long work presentation),
- **SUBSIDIARY SUBJECTS:** 50 marks divided between 40 (written examination at end of semester) and 10 (internal assessment based on semester long work presentation)

**Practical:**

- **MAIN SUBJECTS:** 100 marks divided into 60 marks (practical exam at end of semester), 20 marks (viva voce), and 20 marks (internal assessment)

- **SUBSIDIARY SUBJECTS:** 50 marks divided into 30 marks (practical exam at end of semester), 10 marks (viva voce), and 10 marks (internal assessment)

**Semester 2**

| S. no | Code | Course title | Theory | Practicals | Max Marks | Credits |
|---|---|---|---|---|---|---|
| 1 | OT201NQ2017 | Fundamentals of Psychology | 100 | | 100 | 4 |
| 2 | OT202NQ2017 | Biomechanics, Ergonomics and Bioengineering. | 100 | | 100 | 4 |
| 3 | OT203NQ2017 | Creating inclusive communities to promote occupational performance and participation: | 75 | | 75 | 3 |
| 4 | OT204NQ2017 | Basic Nursing and First aid | 25 | | 25 | 1 |
| 5 | OT205NQ2017 | Introduction to Language, Communication and ICT, Sign language, AAC | 100 | | 100 | 4 |
| 5 | OT206NQ2017 | Practicum 1: Occupational therapy process | | 100 | 100 | 4 |
| 6 | OT207NQ2017 | Practicum 2: Assistive technology | | 100 | 100 | 4 |
| 7 | OT208NQ2017 | Practicum 3: Basic Nursing and First Aid | | 50 | 50 | 1 |
| 8 | OT209NQ2017 | Practicum 4: Languages, Communication and ICT | | 100 | 100 | 3 |
| 9 | OT210NQ2017 | Field Visit: CBR work (NGO Posting) / Seminar presentations. Journal presentation included | | | 50 | 2 |
| | | Total | | | 800 | 30 |

**Marks for Second Semester BOT:**

| S.No. | Topic | Content | Marks |
|---|---|---|---|
| 1 | Fundamentals of Psychology (Total marks out of 100 | General Psychology | 10 |
| | | Developmental Psychology | 20 |
| | | Abnormal psychology | 20 |
| | | Industrial Psychology | 10 |
| | | Sports and Exercise Psychology | 20 |
| | Internal Assessment | | 20 |

| | | | |
|---|---|---|---|
| | | | |
| 2 | Biomechanics, Ergonomics and Bioengineering (Total marks out of 100) | Introduction to Biomechanics: Kinetics and Kinematics | 10 |
| | | Biomechanics Of Joints And Applied Kinesiology | 20 |
| | | Posture and balance | 20 |
| | | Gait: Normal and pathological gaits | 20 |
| | | Bed Mobility and Transfers | 10 |
| | Internal Assessment | | 20 |
| | | | |
| 3 | Creating inclusive communities to promote occupational performance and participation (Total marks out of 75) | Introduction to Disability and Conceptualizing Disability | 10 |
| | | Overview of Social Exclusion | 5 |
| | | Introduction to Inclusive Community | 6 |
| | | International Classification of Functioning, Disability & Health | 6 |
| | | Policies and legislations for inclusive development | 6 |
| | | Rehabilitation | 6 |
| | | Appropriate Technology: Overview | 6 |
| | | Role of OT towards disability inclusive community development | 10 |
| | Internal assessment | | 20 |
| | | | |
| 4 | Basic nursing and first aid (Total marks out of 25) | Introduction about first aid | 1 |
| | | First Aid Emergencies | 1 |
| | | Skeletal Injuries | 1 |
| | | Respiratory Emergencies | 1 |
| | | Wounds and Hemorrhage | 2 |
| | | Shock and unconsciousness | 2 |
| | | Transportation of the injured | 1 |

| | | | |
|---|---|---|---|
| | | Community Emergencies | 1 |
| | | Community Resources | 1 |
| | | Bandages | 1 |
| | | Introduction on basic nursing | 1 |
| | | Nursing Position | 1 |
| | | Lifting and transporting patients | 1 |
| | | Providing for patient's elimination | 1 |
| | | Methods of giving nourishment | 2 |
| | | Infection Control | 2 |
| | Internal Assessment | | 5 |
| | | | |
| 5 | Introduction to Language, Communication and ICT (Total marks out of 100) | Introduction to ICT | 25 |
| | | Effective communication in rehabilitation | 35 |
| | | Effective communication in regional languages | 20 |
| | Internal Assessment | | 20 |

Practicum:

| S.No. | Subject | Contents | Marks |
|---|---|---|---|
| 1 | Occupational therapy process | Activity analysis | 30 |
| | | ADL assessment and best therapy strategy designing | 30 |
| | ViVa | | 20 |
| | Journal + Internal assessment | Semester work on practical performed | 20 |
| 2 | Assistive Technology | Identifying the gait deviation ( visual analysis) and cause of the gait deviation | 20 |
| | | Selecting the best mobility aid from the given patient and demonstrating its use on the case | 20 |

| | | | |
|---|---|---|---|
| | | Wheel chair prescription or Use of wheelchair and transfers | 20 |
| | ViVa | | 20 |
| | Journal + Internal assessment | Semester work on practical performed | 20 |
| 3 | Basic Nursing and First Aid | First Aid | 10 |
| | | Transfers and Transportation | 10 |
| | | Methods of Nourishment | 10 |
| | Viva | | 10 |
| | Journal + Internal assessment | Semester work on practical performed | 10 |
| 4 | Languages, Communication and ICT | Effective communication in rehabilitation | 30 |
| | | Effective use in regional languages | 30 |
| | Viva | | 20 |
| | Journal + Internal Assessment | Semester work on practical performed | 20 |

# SEMESTER THREE

**Theory:**

| Sl no | Code | Course title | No. of Notional Learning Hours | *Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT301NQ2017 | Pathology and Microbiology | 53 | NIL | 2 |
| 2 | OT302NQ2017 | Pathological conditions 1: General Medicine and Surgery. | 105 | NIL | 4 |
| 3 | OT303NQ2017 | Pathological Conditions 2 : Orthopedics and Neurology | 105 | Nil | 4 |
| 4 | OT304NQ2017 | Pharmacology for Occupational Therapist | 105 | Nil | 4 |
| 5 | OT305NQ2017 | Creative arts in Occupational therapy | 52 | NIL | 2 |
| Total | | | 420 | 16 | |

**Practicum:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT305NQ2017 | Splinting 1 | 150 | NIL | 4 |
| 2 | OT306NQ2017 | Occupational Therapy and diagnostics 1 | 150 | NIL | 4 |
| 3 | OT307NQ2017 | Creative arts | 150 | NIL | 4 |
| Total | | | 450 | | 12 |

**Field work:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT308NQ2017 | Occupational Therapy diagnostics – Industrial visit and seminar presentation | 50 | NIL | 2 |

**Theory:**

**OT301NQ2017: Pathology and Microbiology: 53 Hrs**

| S.NO | TOPICS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | General Pathology | i. Cell injury-Causes, Mechanism & Toxic injuries with special reference to Physical injuries including Ionizing radiation, Chemical & Biological.<br>ii. Reversible injury (degeneration)- types morphology- Cloudy swelling, hyaline, fatty changes.<br>iii. Intra-cellular Accumulation- Mucin, Protein.<br>iv. Irreversible cell injury-types of necrosis- Apoptosis – Calcification- Dystrophic & Metastasis.<br>v. Extra-cellular accumulation- Amyloidosis. | 4 |
| 2 | Inflammation and repair | i. Acute inflammation – features, causes, vascular & Cellular events.<br>ii. Morphologic variations-Ulcers.<br>iii. Inflammatory cells & Mediators.<br>iv. Chronic inflammation: Causes, Types, Nonspecific & Granulomatous – with examples.<br>v. Wound healing by primary & secondary union, factors promoting & delaying healing process.<br>vi. Healing at various sites- bone, nerve & muscle.<br>vii. Regeneration & Repair. | 5 |
| 3 | Immuno-pathology | i. Immune system: organization-cells antibodies regulation of immune responses.<br>ii. Hyper-sensitivity (types and examples including Graft rejection).<br>iii. Secondary Immuno–deficiency including H.I.V.<br>iv. Basic concepts of autoimmune disease (emphasis on S.L.E. & R.A.) | 5 |

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| 4 | Circulatory disturbances | i. Edema– pathogenesis – types – transudates/exudates.<br>ii. Chronic venous congestion- lung, liver.<br>iii. Thrombosis – formation – fate – effects.<br>iv. Embolism – types- clinical effects.<br>v. Infarction – types – common sites.<br>vi. Gangrene – types – etiopathogenesis.<br>vii. Shock – Pathogenesis, types. | 5 |
| 5 | Growth disturbances, | i. Atrophy, Hypertrophy, Hyperplasia, Metaphase, Agenesis, Dysplasia.<br>ii. Neoplasia classification, Histo–pathogenesis, Biologic Behaviors, difference between Benign & Malignant Tumours.<br>iii. Malignant neoplasms- grades-stages: local & distal spread.<br>iv. Carcinogenesis: Physical, Chemical, Occupational, Heredity, Viral, Nutritional.<br>v. Precancerous lesions & Carcinoma in situ.<br>vi. Tumour & host interactions–local and systemic. Effects: metastatic (special reference to bones and C.N.S.) | 6 |
| 6 | Medical Genetics | Classifications with examples of Genetic disorders. | 7 |
| 7 | Clinical Pathology | i. Anemia – (deficiency) – Total Count / Differential Count/ Eosinophilia, Anaemia.<br>ii. Muscle / Skin / Nerve biopsy.<br>iii. Microscopic appearance of muscle necrosis – fatty infiltration. | 6 |
| 8 | General Microbiology and Systemic Mirobiology | **General Microbiology:**<br>i. Introduction& scope.<br>ii. Classification of Micro-organisms and Bacterial Anatomy (cell wall, Capsule, spore, flagella and types as per their shape and arrangement).<br>iii. Sterilization.<br>iv. Disinfection.<br>v. Demonstration for General Microbiology.<br>**Systemic Microbiology:**<br>Basic in bacteriology, virology, mycology and parasitology. Introduction, actions and diseases examples. | 5 |
| 9 | Immunology | i. Innate immunity & acquired immunity.<br>ii. Structure and function of immune. System and Immune response – Normal / abnormal.<br>iii. Define Antigen, Antibody and Antigen-antibody reaction & application for diagnosis.<br>iv. Hyper – sensitivity.<br>v. Auto-immunity. | 5 |

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| 10 | Applied Microbiology and Laboratory diagnosis of infections | **Applied Microbiology:**<br>i. Hospital acquired infections, Universal safety precautions and Waste disposal.<br>ii. Diseases involving Bones, Joints- Nerves-Muscles-Skin-Brain- Cardiopulmonary system, Burn and Wound infections.<br>**Laboratory Diagnosis of Infections:**<br>i. Media and identification of Bacteria.<br>ii. Sample collection for smear, Examination and cultures.<br>iii. Demonstration of Gram staining, and culture media. | 5 |

**OT302NQ2017: Pathological conditions 1: General Medicine and Surgery: 105 Hours**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Common Infectious Diseases | Clinical features and management of –<br>Malaria, Rabies, Leptospirosis, Dengue, and Chikungunya. | 9 |
| 2 | Endocrine system | i. Disorders of Endocrine system<br>a. Thyroid---- Hyperthyroidism, Hypothyroidism<br>b. Pituitary – Acromegaly, Dwarfism, Diabetes Insipidus<br>c. Adrenal conditions - Cushing's syndrome, Hyperadrenalism<br>d. Pancreas: Diabetes Mellitus - Introduction, pathophysiology, types, relation to physical activity, neurological implications (autonomic neuropathy, myopathy, weakness) &<br>medications | 10 |
| 3 | Nutritional deficiencies | Obesity, Nutrition Deficiency Disease (Rickets, Vit. E, Vit. D, Vit. B , micro nutrients(zn su) | 9 |
| 4 | Autoimmune conditions | i. Rheumatoid Arthritis.<br>ii .Systemic Lupus Erythematosis.<br>iii. Crohn's Disease.<br>iv. Gout.<br>v. Polymyositis.<br>vi. Fibro myalgia.<br>vii. Ankylosing spondylitis.<br>viii. CREST syndrome. | 9 |
| 5 | Geriatrics and Gerontology | Aging Process (physiological changes due to aging)<br>ii. Cardiovascular & Respiratory complications.<br>iii. Osteoporosis | 7 |

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|---|---|---|---|
| 6 | Hemaotology | Clinical features, classification and management, as applicable in Anemia, Hemophilia, Thalassemia, Leukaemia, and Hodgkin's disease. | 9 |
| 7 | Nephrology | Clinical features and management of acute& chronic renal failure, glomerular nephritis,<br>Urinary Tract Infections. | 6 |
| 8 | Dermatology | Understanding basic skin lesions, STDs, Connective tissue disorders, Leprosy, Psoriasis, Hyperhydrosis, Cutaneous hyperplasia-Keloid, Hypertrophic scar, Corn, Callosity. | 6 |
| 9 | General Surgery | Anaesthesia, Hemorrahge and shock, Wounds, ulcers and cellulitis, minimally invasive surgeries, common surgical incisions (abdominal) and procedures, classification of oncosurgery(emphasize on mastectomy and reconstruction), amputations, burns, Peripheral vascular diseases, organ transplant and donation | 15 |
| 10 | Plastic and Reconstructive Surgery | **Skin grafts & flaps:**<br>Types, indications with special emphasis to burns, wounds.<br>Keloid & Hypertrophied scar management.<br>**Ulcers:**<br>Complications and postoperative care.<br>**Tendons**:<br>Tendon transfers, with special emphasis to hand, foot & facial paralysis.<br>**Nerves**:<br>Reconstructive surgery of peripheral nerves.<br>**Reconstructive Surgery**:<br>Micro vascular surgery- re implantation and revascularization.<br>**Cosmetic Surgery:**<br>Criteria, Indications and management,<br>Cosmetic use of Botox.<br>**Hand Injuries:**<br>Crush injuries, tendon injuries. | 9 |

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| 11 | ENT and Ophthalmology Surgery | **General ENT:**<br>Indications, surgical approach & management.<br>Management of Common conditions of the ear, nose and throat (e.g. URTI).<br>**Tracheostomy:**<br>Indications, surgical approach & Management.<br>**Cranial Nerve Palsies**:<br>Cranial nerve palsy, VII &VIII nerves surgical intervention and management, indications.<br>Laryngeal nerve injuries.<br>Vertigo:<br>Definition, classification, causes prognosis and treatment<br>**Dysphagia:**<br>Definition, aetio-pathology, complications & treatment.<br>**Hearing Impairment:**<br>Definition of Normal acuity. Hearing impairment, deafness.<br>Audiogram – implications. Sensorineural hearing loss.<br>Cochlear / Auricular implants in congenital conditions and deafness.<br>Types of hearing aids<br>**Ophthalmology Surgery:**<br>**Cranial Nerve Palsy**:<br>Impact of IIIrd, IVth, VIth Cranial Nerve palsy on vision.<br>Common Opthalmic conditions: Diseases of the conjunctiva, , cataract,<br>optic nerve tumours and their management<br>**Surgical procedures in ophthalmology**:<br>Keratoplasty and Tarsorraphy, procedures for macular degeneration,<br>cataract, detachment, myopia –related precautions in therapy.<br>**Eye Donation:**<br>Procedure, Indications, Prerequisites and legal procedures.<br>**Visual Field Defecits**:<br>Impact in different conditions like nerve palsies, cataract, glaucoma, myopia, hyper-metropia, evaluation of vision in cortical and peripheral nerve lesions. Visual components of depth perception. Scanning, tracking, accommodation processing vision. | 9 |

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|---|---|---|---|
| 12 | Obstetrics and Gynecology | **Physiology:**<br>i. Physiology of puberty & menstruation.<br>ii. Physiology of pregnancy.<br>iii. Physiology of labor and post natal care.<br>**Gynecological surgeries:**<br>Including neoplasms of female reproductive organs<br>**Menopause:**<br>Pre, peri & post Menopausal complications and management<br>**Other gynecological conditions**:<br>Infertility.<br>Urogenital dysfunctions.<br>Pelvic Inflammatory Disease | 7 |

**OT303NQ2017, Pathological Conditions Orthopaedics and Neurology: 105 Hours**

**ORTHOPAEDICS: 52 Hrs**

| S.NO | TOPICS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Fractures | a. Definition, Classification, Causes, Clinical features, healing of fractures & Complications.<br>b. Principles of general management of:<br>i. Fractures of the Upper Extremity.<br>ii. Fractures of the Lower Extremity.<br>iii. Fracture of the vertebral column, thorax and pelvis.<br>iv. Trauma care and first aid | 6 |
| 2 | Dislocations and Subluxations | A. Definition, General description,<br>Principles of management of traumatic dislocation and subluxation of following joints:<br>i. Shoulder joint.<br>ii. Acromioclavicular joint.<br>iii. Elbow joint.<br>iv. Hip joint.<br>v. Knee joint. | 6 |
| 3 | Soft tissue and Traumatic injuries | a. Introduction, Anatomy & physiology<br>general description, grade of injury and management of injuries of:<br>i. Ligaments, Bursae, Fascia.<br>ii. Muscle and tendon injuries of upper and lower limb.<br>b. Whiplash injury of the cervical spine. | 6 |

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| 4 | Deformities and Anomalies | a. Definition, Causes, Classification, Congenital and acquired deformities. Physical, clinical and radiological features, Complications.<br>b. Principles of medical and surgical management of the deformities.<br>c. General description of following deformities :<br>i. Deformities of the spine:<br>a) Scoliosis.<br>b) Kyphosis.<br>c) Lordosis.<br>d) Flat back.<br>e) Torticollis.<br>ii. Deformities of the lower limb:<br>a) Congenital Dislocation of Hip, coxavara ,coxavalga, anteversion, Retroversion.<br>b) Genu valgum, Genu varum, Genu recurvatum, Congenital Dislocation of Knee.<br>c)Talipescalcaneousequinusvarus& valgus.<br>d) Pescavus, Pesplanus.<br>e) Hallux valgus &varus, Hallux rigidus and hammer toe.<br>iii. Deformities of Upper limb<br>a) Sprengel's shoulder, Cubitusvarus, Cubitus valgus<br>b) Dupytren's contracture. | 6 |
| 5 | Degenerative and Inflammatory Conditions | a. OsteoArthritis.<br>b. Spondylosis.<br>C .Spondylolysis and listhesis.<br>d. Pyogenic arthritis.<br>e. Rheumatoid arthritis.<br>f. Juvenile arthritis.<br>g. Tuberculous arthritis.<br>h. Gouty arthritis.<br>i. Haemophilic arthritis.<br>j. Neuropathic arthritis.<br>k. Ankylosing spondylitis.<br>l. Psoriatic arthritis. | 5 |
| 6 | Management of Metabolic Disorders | a. Osteoporosis.<br>b. Osteomalacia & Rickets | 4 |
| 7 | General Orthopedics Disorders | a. Carpel tunnel syndrome /Entrapment nerve injuries.<br>b. Compartment syndrome, Ischemic contracture.<br>c. Avascular necrosis of bone in adult and children.<br>d. Backache /Prolapsed Intervertebral Disc.<br>e. Cumulative Trauma Disorders | 6 |
| 8 | Tumors Of The Musculoskeletal System. | i. Classification, Principles of general management.<br>ii. General description of benign and malignant tumors of musculoskeletal system. | 6 |

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| 9 | Sports Injuries | Management of:<br>Ligament and Meniscal injuries of upper limb and lower limb in sports.<br>Overuse injuries in sports. | 7 |

**Neurology: 53 Hours**

| S.NO | Topics | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Cerebro Vascular accidents | Aetiology, symptoms, investigations & management | 4 |
| 2 | Extra- Pyramidal Lesions | Parkinsonism.<br>Athetosis, Chorea, Dystonia.<br>Wilson's disease | 5 |
| 3 | Diseases of the muscle | Classification, investigation, management<br>Myopathy | 5 |
| 4 | Neuromuscular disorders | Myesthenia Gravis.<br>Poliomyelitis and post polio syndrome.<br>Motor Neuron Diseases. | 4 |
| 5 | Diseases of the Peripheral Nerves | Polyneuropathies – types, sequelae, prognosis and management | 3 |
| 6 | Cerebellar disorders | Ataxias- Hereditary and Acquired:<br>Diagnosis, Prognosis and management. | 3 |
| 7 | Disorders of Cranial Nerves | Affectations due to infective, neoplastic and inflammatory pathology. | 4 |
| 8 | Degenerative Diseases | Multiple Sclerosis, Spinal Muscular Atrophy, Alzheimer's Disease, Dementia | 4 |
| 9 | Infections of the Nervous System | Encephalitis, Neurosyphilis, Herpes, Meningitis, Tetanus<br>Involvement of Nervous system in H.I.V. | 3 |
| 10 | Disorders of Spinal Cord | Syringomyelia, Tabes Dorsalis, Caudaequina syndrome. | 4 |
| 11 | Headache | Types of headache, management, Migraine. | 2 |
| 12 | Epilepsy | Classification, complications and management. | 4 |
| 13 | Investigations | Understanding indications and reporting of Neuroimaging, EEG, Nerve Conduction Studies. EMG. | 3 |

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|---|---|---|---|
| 14 | Neuro Sugeries | Head Injury: Types, clinical features and management<br>Intra cranial and spinal tumors:<br>Classification, signs and symptoms, management and complications.<br>Intracranial Aneurysm and Arterio Venous<br>Malformation: Management, complications.<br>Neural Tube Defects: Hydrocephalus, Myelomeningocoeles, Spinal Dysraphism. | 5 |

**OT304NQ2017, Pharmocology: 105 Hrs:**

| S.NO | Topics | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | General Pharmocology | i. Pharmacokinetics.<br>ii. Routes of administration.<br>iii. Adverse drug reaction and reporting.<br>vi. Factors modifying drug effect. (in relation to all listed below) | 10 |
| 2 | Drugs Acting On C.N.S (Pain management and not analgesics) | Effects on CNS, PNS, co-ordination, involuntary movements in relation to<br>functional performance:<br>i. Introduction.<br>ii. Alcohols + Sedatives & Hypnotics.<br>iii. Anti-convulsants.<br>iv. Drug therapy in Extra Pyramidal condition.<br>v. Pain Management & antipyretics.<br>vii. Local anesthetics, counter irritants | 15 |
| 3 | Drugs Used In Psychiatry | For adults and children, Psychomotor<br>effects Relation to mental, cognitive and physical performance:<br>i. Anxiolytics.<br>ii. Antidepressants.<br>iii. Antipsychotics.<br>iv. Drugs used in substance abuse | 11 |
| 4 | Drugs Acting On Autonomic Nervous System | i. Adrenergic.<br>ii. Cholinergic.<br>iii. Skeletal muscle relaxant | 7 |
| 5 | Drugs Acting On C.V.S. | Effects on exercise /performance Control of CCF, remodeling of myocardial tissue and circulation:<br>i. Antihypertensive.<br>ii. Antianginal.<br>iii. Myocardial Infarction-<br>Drugs for CCF.<br>iv. Shock.<br>v. Coagulants and Anticoagulants. | 11 |

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|---|---|---|---|
| 6 | Drugs Acting On Respiratory System | Indications for exercise training, performance with respect to drugs administered:<br>i. Cough.<br>ii. Bronchial asthma.<br>iii. C.O.P.D. | 10 |
| 7 | Chemotherapy Of Neoplastic Diseases; Gastro Intestinal and Dermatological | Anticancer Drugs. | 10 |
| 8 | Miscellaneous: Anti-microbial | i. Anti –Tuberculosis.<br>ii. Drugs for UTI.<br>iii. Leprosy.<br>iv. Antibiotics.<br>v. Antifungal.<br>vi. Antiviral drugs. | 10 |
| 9 | Hormones And Related Drugs (Prolactin) | Mode of action of insulin, its<br>relation to exercise, performance<br>and diet:<br>i. Insulin and oral Anti diabetic drugs.<br>Effects of long term use of steroids on immune system, body tissues, exercise and<br>Performance:<br>ii. Steroids-Anabolic steroids.<br>iii. Drugs for osteoporosis, Vitamin D,<br>Calcium,<br>Phosphorus.<br>iv. Thyroid & Anti thyroid.<br>v. Estrogen + Progesterone. | 11 |
| 10 | Geriatric Drugs | Risk of over/under medication<br>Dementia<br>Cardiac conditions<br>Immunizations<br>Anticoagulants | 10 |

**OT305NQ2017: Creative arts in Occupational Therapy: 52 Hours**

Objective: Occupational Therapy is an art and science based intervention program. Some of the art based skills that Occupational Therapists need to understand are given below. At the end of the clinical hours, the Occupational Therapy student will be able to understand the subtle techniques of the art skills and would be able to employ them as a part of the entire scientific process of Occupational Therapy.

| S.NO. | TOPICS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Dramatics | Role play, Story telling, Street play, Theatre | 9 |
| 2 | Music and Dance | Understanding music therapy<br>Understanding dance and movement therapy | 9 |
| 3 | Painting | Use of different materials, Block printing, Stamping, making stencils | 9 |
| 4 | Crafts | Paper crafts, Leather crafts (including embossing), Table loom weaving | 9 |
| 5 | Pottery | Clay modeling, Potter's wheel, Sculpting | 6 |
| 6 | Horticulture | Traditional gardening<br>Composting, making manure<br>Square-foot gardening | 10 |

**Practicum:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT306NQ2017 | Splinting | 150 | NIL | 4 |
| 2 | OT307NQ2017 | Occupational Therapy and diagnostics 1 | 150 | NIL | 4 |
| 3 | OT308NQ2017 | Creative arts in Occupational Therapy | 150 | NIL | 4 |
| Total | | | 450 | | 12 |

**OT306NQ2017: Splinting: 150 Hrs:**

| S.NO | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Design and Fabrication Demonstrations, simulated presentations using audio-visuals, interactive sessions | Care and handling of tools and equipment:<br>Tools-Files, Pliers, Saws,<br>Chisels, Hammers – Types and components<br>Equipments- Fret Saw Bicycle<br>Sewing Machine<br>Pronation-Supination Wheel<br>Splinting materials- Thermoplastics and fabricating materials, padding materials, harnessing materials, securing/fixing materials,<br>adhesives etc<br>Identification of material.<br>therapeutic values related to tools | 50 |
| 2 | Hand Splints:<br>Demonstrations on models, under supervision, simulated presentations using audio-visuals, interactive session | Designing and paper pattern of splints-<br>Finger Gutter<br>Resting pan<br>Short opponens<br>Dynamic extension outrigger splint<br>Radial bar cock up | 50 |
| 3 | Orthosis | Definition, Classification, Indications, Principles and Materials used.<br>Orthotic components, terminology used in the Upper, Lower extremity and Spinal Orthosis.<br>Classification, Principles, indications, goals, brief description related to each of the following:<br>i. Upper Extremity Orthosis - shoulder, elbow, forearm and wrist hand orthosis [fabrication].<br>ii. Lower Extremity Orthosis – Hip, Knee, Ankle orthosis and footwear modification.<br>iii. Spinal Orthosis: Cervical, Thoraco - lumbar Lumbar Classification, Biomechanical<br>Principles of prescription, indications, contraindications. | 50 |

**OT307NQ2017: Occupational Therapy Diagnostics: 150 Hrs**

| S.NO | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Anthropometric considerations and universal design | Definition of Anthropometry, Universal Design, Accessibility - Principles | 40 |
| 2 | Physical environment accessibility | Identifying types of environment.<br>Identifying Architectural barriers and applying principles of Universal Design. Access Audit practice.<br>Seminar presentations | 35 |
| 3 | Man-machine system | **Man- machine system as**<br>**Ergonomic concept:**<br>Describe functioning of man-machine system.<br>Information processing theory and the process.<br>**Ergonomic considerations at Work:**<br>Explain layout of equipment design of seating.<br>Explain the design of work space.<br>Human compatibility and use of displays and controls.<br>Work site job analysis.<br>**Time and Motion study in Ergonomics:**<br>Define and underline the assumptions of Time and Motion study.<br>Explain the cycle of managerial control and its application. | 30 |
| 4 | Pre Vocational Training | Definition, concept of Pre-Vocational Assessment and Training as opposed to Job training, role of Occupational Therapist in Prevocational program | 45 |

**OT308NQ2017: Creative Arts in Occupational Therapy: 150 Hours**

| S.NO. | TOPICS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Dramatics | To produce plays incorporating the following on topical ideas applicable in Occupational Therapy in groups:<br>Role play<br>Story telling<br>Street play<br>Theatre | 25 |
| 2 | Music and Dance | To present music and dance as a production in groups on topics commonly treated using Occupational Therapy | 25 |
| 3 | Painting | Submit 5 materials using painting techniques learnt in theory | 25 |
| 4 | Crafts | Submit articles made using 1 leather craft, 1 table loom craft, and 3 using different paper crafts techniques | 25 |

| | | | |
|---|---|---|---|
| 5 | Pottery | Submit 1 article using pottery | 25 |
| 6 | Horticulture | Create one 1 foot X 1 foot horticulture space per student<br>Note to colleges: Take up this project as the first to ensure students are able to present projects before end of semester | 25 |

**OT309NQ2017: Field work: 50 Hours:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT308NQ2017 | Occupational Therapy diagnostics –Industrial visit and seminar presentation | 50 | NIL | 2 |

**Examination pattern and division of marks:**

**Theory:**

- **MAIN SUBJECTS:** 100 marks divided between 80 (written examination at end of semester) and 20 (internal assessment based on semester long work presentation),
- **SUBSIDIARY SUBJECTS:** 50 marks divided between 40 (written examination at end of semester) and 10 (internal assessment based on semester long work presentation)

**Practical:**

- **MAIN SUBJECTS:** 100 marks divided into 60 marks (practical exam at end of semester), 20 marks (viva voce), and 20 marks (internal assessment)
- **SUBSIDIARY SUBJECTS:** 50 marks divided into 30 marks (practical exam at end of semester), 10 marks (viva voce), and 10 marks (internal assessment)

## Semester 3

| S. no | Code | Course title | Theory | Practicals | Max Marks | Credits |
|---|---|---|---|---|---|---|
| 1 | OT301NQ2017 | Pathology and Microbiology | 50 | | 50 | 2 |
| 2 | OT302NQ2017 | Pathological conditions 1: General Medicine and Surgery. | 100 | | 100 | 4 |
| 3 | OT303NQ2017 | Pathological Conditions 2 : Orthopedics and Neurology | 100 | | 100 | 4 |
| 4 | OT304NQ2017 | Pharmacology for Occupational Therapist | 100 | | 100 | 4 |
| 5 | OT305NQ2017 | Creative arts in Occupational therapy | 50 | | 50 | 2 |
| 6 | OT306NQ2017 | Practicum 1: Splinting 1 | | 100 | 100 | 4 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 7 | OT307NQ2017 | Practicum 2: Occupational Therapy and diagnostics 1 | | 100 | 100 | 4 |
| 8 | OT308NQ2017 | Practicum 3: Creative arts | | 100 | 100 | 4 |
| 9 | OT309NQ2017 | Field Visit: Occupational Therapy diagnostics – Industrial visit and seminar presentation. Journal presentation included. | | | 50 | 2 |
| | | Total | | | 750 | 30 |

**Marks for Third Semester BOT:**

| S. No | Subject | Topics | Marks per topic |
|---|---|---|---|
| 1 | Pathology and Microbiology (Total marks out of 50) | General Pathology | 2 |
| | | Inflammation and repair | 3 |
| | | Immuno pathology | 2 |
| | | Circulatory disturbances | 5 |
| | | Growth disturbances, | 5 |
| | | Medical Genetics | 5 |
| | | Clinical Pathology | 3 |
| | | General Microbiology and Systemic Mirobiology | 5 |
| | | Immunology | 5 |
| | | Applied Microbiology and Laboratory diagnosis of infections | 5 |
| | Internal assessment | | 10 |
| 2 | Medicine (Total marks out of 100) | Infectious diseases | 10 |
| | | Endocrine diseases | 10 |
| | | Autoimmune conditions | 10 |
| | | Hematology | 10 |
| | | Nutritional deficiencies | 10 |
| | | Nephrology | 10 |
| | | Neurology | 10 |
| | | Dermatology | 10 |

| | | | |
|---|---|---|---|
| | Internal Assessment | | 20 |
| | | | |
| 3 | Surgery (Total marks out of 100) | Orthopedics | 20 |
| | | General Surgery | 20 |
| | | Plastic and reconstructive surgery | 10 |
| | | ENT | 10 |
| | | Opthalmology | 10 |
| | | Obstetrics and Gynaecology | 10 |
| | Internal Assessment | | 20 |
| | | | |
| 4 | Pharmacology (Total marks out of 100) | General Pharmocology | 5 |
| | | Drugs Acting On C.N.S (Pain management and not analgesics) | 10 |
| | | Drugs Used In Psychiatry | 10 |
| | | Drugs Acting On Autonomic Nervous System | 5 |
| | | Drugs Acting On C.V.S. | 10 |
| | | Drugs Acting On Respiratory System | 10 |
| | | Chemotherapy Of Neoplastic Diseases; Gastro Intestinal and Dermatological | 10 |
| | | Miscellaneous: Anti-microbial | 5 |
| | | Hormones And Related Drugs (Prolactin) | 10 |
| | | Geriatric Drugs | 5 |
| | Internal Assessment | | 20 |
| 5 | Creative Arts in Occupational Therapy (Total marks out of 50) | Dramatics | 6 |
| | | Music and Dance | 6 |
| | | Painting | 7 |
| | | Crafts | 7 |
| | | Pottery | 6 |
| | | Horticulture | 8 |

| | | | |
|---|---|---|---|
| | Internal Assessment | | 10 |

**Practicum:**

| S.No | Subject | Contents | Marks |
|---|---|---|---|
| 1 | Splinting | Identifying and illustrating use of tools | 10 |
| | | Identifying best material –case based | 10 |
| | | Splint fabrication | 10 |
| | | Defining and describing principle of orthosis | 20 |
| | | Use of orthosis | 10 |
| | Viva | | 20 |
| | Journal + Internal Assessment | Semester work on practical performed | 20 |
| 2 | Occupational therapy diagnostics | Taking anthropometric measurement on patient/ simulated case | 15 |
| | | Universal design principles/ Audit | 15 |
| | | Providing ergonomic advise based on simulated problem | 15 |
| | | Pre-vocational evaluation | 15 |
| | Viva | | 20 |
| | Journal + Internal Assessment | Semester work on practical performed | 20 |
| 3 | Creative Arts | Applicability of creative art on simulated cases: 2 short cases: | 15 per short case (Total 30) |
| | | Applicability of creative art on simulated cases: 1 long case: | 30 |
| | Viva | | 20 |
| | Journal + Internal Assessment | Semester work on practical performed | 20 |

# SEMESTER FOUR

**Theory:**

| Sl no | Code | Course title | No. of Notional Learning Hours | *Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT401NQ2017 | Pathological Conditions 3: Psychiatry | 105 | NIL | 4 |
| 2 | OT402NQ2017 | Pathological Conditions 3: Pediatrics | 55 | NIL | 2 |
| 3 | OT403NQ2017 | Pathological conditions 4: Cardiology and Pulmonology. | 52 | NIL | 2 |
| 4 | OT404NQ2017 | Gerentology and Sports Medicine and Occupational therapy | 53 | Nil | 2 |
| 5 | OT405NQ2017 | Occupational Therapy Process 2 | 105 | Nil | 4 |
| 6 | OT406NQ2017 | Yoga and Occupational therapy | 50 | Nil | 2 |
| Total | | | 420 | 16 | |

**Practicum**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT407NQ2017 | Occupational Therapy Process 2 | 250 | NIL | 6 |
| 2 | OT408NQ2017 | Complex activity analysis: Livelihood in rural areas, Sports, Driving and sexual function. | 100 | NIL | 3 |
| 3 | OT409NQ2017 | Yoga and Occupational Therapy | 100 | NIL | 3 |
| Total | | | 450 | | 12 |

**Field work:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT407NQ2017 | Problem evaluation assessment for sports injuries: OT role in Paralympic sports and seminar presentation. | 50 | NIL | 2 |

**Theory:**

**OT401NQ2017: Pathological conditions 3: Psychiatry: 105 Hrs**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Psychiatric illness | Signs and symptoms related to Consciousness, attention, emotion, motor behavior, thinking, speech, perception, memory. | 9 |
| 2 | Diagnosis of psychiatric disorders | History & Mental Status Examination. Current diagnostic information | 9 |
| 3 | Schizophrenia and other psychotic disorders | a. Schizophrenia & its types,<br>b. Other psychotic disorders (Psychotic disorder),<br>c. Delusional disorder, Schizo-affective disorders, Post partum psychosis<br>Impact of each on function. | 9 |
| 4 | Mood Disorder | Overview, diagnostic criterion of specific mood disorders, onset, prevalence and Prognosis of:<br>Manic episode.<br>Major depressive episode.<br>Mixed episode.<br>Hypomaniac episode. | 9 |
| 5 | Organic Brain Disorders | Delirium, dementia, Amnestic syndromes, Organic personality disorder | 8 |

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|---|---|---|---|
| 6 | Anxiety Disorders | Overview, onset, prevalence and prognosis, medical management, impact on function, effect & side effect of medication on performance.<br>Types –, Phobia, Obsessive Compulsive Disorder, Panic disorder, Post traumatic stress disorder, Acute stress disorder, Generalized anxiety disorder. | 8 |
| 7 | Personality Disorder | Overview, Classification, Types, Diagnostic criterion, prognosis. | 9 |
| 8 | Disorders of Infancy, Childhood and adolescence | Attention Deficit Hyperactivity Disorder<br>Mental Retardation.<br>Conduct disorder,<br>Pervasive developmental disorder.<br>Enuresis.<br>Communication disorder.<br>Learning disorder.<br>Motor skill disorder. | 9 |
| 9 | Substance related disorder | Overview, substance dependence, abuse, prevalence and prognosis, impact on function with respect to medical management in Alcohol and other substances. | 9 |
| 10 | Eating Disorder | Diagnostic criterion, impact on function with respect to medical management of<br>Anorexia Nervosa<br>Bulimia Nervosa. | 5 |
| 11 | Cognitive Disorder | Dementia, Alzheimer's, Pick's disease, Amnestic disorder. | 5 |
| 12 | Somatoform disorder | Overview, onset, prevalence and prognosis, medical management:<br>Somatisation disorder,<br>Conversion disorder,<br>Pain disorder,<br>Hypochondriasis,<br>Body dysmorphic disorder. | 7 |
| 13 | Therapy, procedure and approaches | ECT, Group therapy, Psycho therapy, Cognitive Behavioral Therapy | 9 |

**OT402NQ2017: Pathological conditions 3: Pediatrics: 56 Hrs:**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Growth and development | a. Normal intra-uterine development of fetus with special reference to Central Nervous System, Neuromuscular System, Cardiovascular Respiratory System<br>b. Normal development & growth<br>c. Immunization and breast-feeding<br>d. Sepsis, Prematurity, Asphyxia. Hyperbilirubinemia and birth injuries.<br>e. Cerebral Palsy- Medical Management including early intervention.<br>f. Epilepsy .<br>g. Mental Retardation. | 14 |
| 2 | Developmental disorders associated with spinal cord | Spinal Dysraphism, Spina Bifida, Meningocele, Myelomeningocele, hydrocephalus. | 9 |
| 3 | Common diseases of The Respiratory System | Respiratory distress in neonate. Bronchopulmonary dysplasia | 4 |
| 4 | Rheumatology | Juvenile R. A. & Rheumatologic conditions of Musculoskeletal system, Rheumatic Heart disease. | 7 |
| 5 | Nutritional disorders | Malnutrition and Vitamin deficiency conditions | 4 |
| 6 | Genetic & congenital Disorders | Down's Syndrome, Genetically transmitted neuromuscular conditions, Congenital Heart Disease | 18 |

**OT403NQ2017, Pathological conditions 4: Cardiology and Pulmonology: 28 Hrs:**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | CARDIOLOGY: Cardiovascular Diseases: | i. Hypertension – types.<br>ii. Cardiac Conditions<br>a) Coronary Artery Disease (Atherosclerosis, Angina, Myocardial infarction, Congestive Cardiac Failure)<br>b) Rheumatic Heart Disease.<br>c) Infective Endocarditis.<br>d) Cardio myopathy.<br>iii. Valvular Heart Disease.<br>a) Congenital.<br>b) Acquired:<br>iv. Congenital Heart Disease .<br>v. Investigations.<br>a) Basics of E.C.G. [ Normal & Abnormal ECG - emphasizing on Ischemia, Infarction & Arrhythmias]<br>b) Observation of conduction of stress test on<br>patient – understand objectives, process and procedure, test interpretation.<br>c) 2D Echo – indications, applications to performance -Ejection Fraction & Wall motion Abnormality. | 10 |
| 2 | PULMONOLOGY: Diseases of the Respiratory System | i. Acute Diseases: Bacterial Pneumonia, Viral Pneumonia, Aspiration Pneumonia, Tuberculosis, Lung Abscess, and Bronchiectasis.<br>ii. Chronic Obstructive Diseases:<br>1. COPD: Peripheral airway disease, chronic bronchitis, Emphysema.<br>2. Asthma.<br>3. Cystic Fibrosis.<br>4. Hyaline Membrane diseases.<br>iii. Chronic Restrictive Lung Disease.<br>1. ILD.<br>iv. Carcinoma of the lungs.<br>v. Pulmonary oedema.<br>vi. Pulmonary Hypertension, CorPulmonale Investigations:<br>1. Chest X-ray.<br>2. Blood Gas Analysis.<br>3. Pulmonary Function Test (Observation of procedure on patient/ understand interpretation in relation to functional capacity.) | 9 |

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|---|---|---|---|
| 3 | CARDIO VASCULAR AND THORACIC SURGERIES: | 1)Introduction: Cardiorespiratory resuscitation,<br>cardiopulmonary bypass,<br>Special investigation procedures in cardiac surgery, Complications of cardiac surgery<br>Brief description of indications, surgery, complications following surgeries.<br>2)Surgeries of Thorax:<br>Thoracotomy, Thoracoplasty<br>3)Surgeries of the Lung:<br>Lobectomy, Pneumenectomy, Decortication.<br>4)Surgeries of the cardiovascular system:<br>Surgery for coronary artery disease.<br>Valvular surgeries.<br>Surgery for Congenital Heart Disease.<br>Aneurysms and Peripheral vascular diseases. | 9 |

**OT404NQ2017: Pathological Conditions 5: Gerentology and Sports Medicine: 28 Hrs:**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Gerontology | • Health and medical care in ageing<br>• Health context of ageing<br>• The ageing process:<br>- Initial physiological response<br>- Response of the old person<br>Peak level of response<br>- Biorhythms<br>- Response of connective tissue, elastic tissue, glycoprotein, contractile protein, cartilage and bone density, brain.<br>• Acute and chronic illness.<br>• CNS changes in ageing<br>Neuropsychological measurement of cerebral function.<br>• Controversies in geriatric medicine<br>• Nutrition<br>• Hypertension in the elderly<br>• Oestrogen replacement therapy<br>• Surgery and the elderly patient<br>• Ordinary versus extraordinary measures in the care of the elderly | 18 |

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|---|---|---|---|
| 2 | Sports Medicine and role of Occupational Therapist | • Common sports injuries including dance injuries<br>• Pre requisite for participation in competitive sports (Physical, mental and cardiopulmonary fitness)<br>• Injury prevention<br>• Therapeutic role of participation in sports / Sports as recreation<br>• OT as team member<br>• Sports for special needs | 10 |

**OT405NQ2017: Occupational Therapy Process 2: 56 Hrs:**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Spatiotemporal Adaptation | Theory of spatiotemporal Adaptations:<br>Sensory –motor<br>Sensory Integration.<br>Reflex and reaction maturation.<br>Stability & mobility development | 9 |
| 2 | Treatment Approaches | Theory, concepts and principles of practice based on clinical reasoning.<br>Applications in task performance | 9 |
| 3 | Hand Functions | Identification of Evaluation Tools.<br>Procedures of evaluation.<br>Indications & Applications in variety of conditions.<br>· Jebson Taylor Hand Function Test<br>· Crawford small part dexterity test.<br>· Purdue Peg board.<br>· Complete Minnesota dexterity test | 9 |
| 4 | Functional cast Bracing and orthosis | Definition, concept, principles of functional cast bracing.<br>Scientific basis and Objectives of functional bracing.<br>Importance in healing of fractures.<br>Advantages over conventional bracing.<br>Materials used.<br>Indications & contraindications of functional bracing. | 9 |
| 5 | Play In Child Development | Functions of Play – Social, Physical, Sensory, Emotional, Perceptual, Cognitive.<br>Emotional development in children<br>Content & structure of play.<br>Theories of play – E. Erikson, A. Freud, J. Piaget, Reilly.<br>Role of play in Occupational Therapy treatment process. | 8 |

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|---|---|---|---|
| 6 | Adaptation | Adaptation process- Process by which person maintains useful relationship to<br>Environment: Definition.<br>Content of adaptive process.<br>Needs assessment for adaptive devices | 12 |

**OT406NQ2017: Yoga and Occupational Therapy: 50 Hrs**

| S.NO. | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | History of Yoga | Beginnings of Yoga, definition of Yoga and its use | 2 |
| 2 | Principles of Practice | Principles in practice of different schools of Yoga, including Meditation : The Ashtanga Yoga practice, A Psycho-Spiritual Integration Frame of Reference | 18 |
| 3 | Clinical use of Yoga | Use of yogic practices in treatment of various ailments, as an adjunct to Occupational Therapy: Yoga for neurorehabilitation, Yoga for Musculoskeletal rehabilitation, Yoga for Stress Management | 30 |

**Practicum: 450 Hours**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT407NQ2017 | Occupational Therapy Process 2 | 250 | NIL | 6 |
| 2 | OT408NQ2017 | Complex activity analysis: Livelihood in rural areas, Sports, & Driving | 100 | NIL | 3 |
| 3 | OT409NQ2017 | Yoga and Occupational Therapy | 100 | NIL | 3 |
| Total | | | 450 | | 12 |

**OT407NQ2017: Occupational Therapy Process 2: 250 Hrs**

| S.NO | Areas | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Spatiotemporal Adaptation | Demonstration of reflex & Reactions<br>Theory of spatiotemporal adaptation<br>Applications in occupational therapy intervention. | 50 |
| 2 | Treatment Approaches:<br>Hands on practice on peers, or clients under supervision, interactive sessions following<br>clinical and/or simulated audio-visual presentations. | Demonstration of each treatment approach incorporated in a task performance.<br>Sensory Motor treatment Approaches(Rood's & PNF Therapy),<br>Neuro Developmental Treatment Approach (Bobath's)<br>Movement Therapy (Brunnstom's)<br>Overview of Sensory integrative approach.<br>Motor Control Theories & Techniques (Carr & Shepherd's approach) | 50 |
| 3 | Hand Functions Demonstration on one model, one industrial<br>injury. Interactive session based on clinical reasoning | • Jebson Taylor Hand Function Test<br>• Crawford small part dexterity test.<br>• Purdue Peg board.<br>• Complete Minnesota dexterity test | 50 |
| 4 | Functional cast Bracing and orthosis:<br>Demonstration of Paper patterns for commonly used braces. Clinical and simulated presentations using audio-visuals, interactive sessions on clinical reasoning. | Functional Cast Braces for-<br>• Forearm.<br>• Arm.<br>• Femur.<br>• Tibia. | 50 |
| 5 | Demonstration<br>Fabrication<br>Clinical reasoning for need based assessment | Adaptive devices:<br>• Universal cuff.<br>• Writing device.<br>• Long handled scrubber.<br>• Built up handle spoon.<br>• Dressing Stick. | 50 |

**OT408NQ2017: Complex activity analysis: 100 Hrs**

| S.NO | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Activity analysis: jobs in rural areas | Assignment and seminar presentation on one job for each group | 35 |

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|---|---|---|---|
| 2 | Activity analysis: Sports | Assignment and seminar presentation on one sport for each group | 30 |
| 3 | Activity analysis: Driving different types of vehicles | Assignment and seminar presentation on type of vehicle for each group | 35 |

**OT409NQ2017: Yoga and Occupational Therapy: 100 Hrs**

| S.NO. | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Ashtanga Yoga system | Demonstration of different practices: Yama, Niyama, Asan, Pranayam, Pratihara, Dharana, Dhyana, Samadhi | 50 |
| 2 | Meditation | Demonstration of art of Medication and Practice | 20 |
| 3 | Clinical use | Use of Yoga as an adjunct to Occupational Therapy in clinical practice | 30 |

**Field work: 50 hrs**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT407NQ2017 | Problem evaluation assessment for sports injuries: OT role in Paralympic sports and seminar presentation. | 50 | NIL | 2 |

## Examination pattern and division of marks:

**Theory:**

- **MAIN SUBJECTS:** 100 marks divided between 80 (written examination at end of semester) and 20 (internal assessment based on semester long work presentation),
- **SUBSIDIARY SUBJECTS:** 50 marks divided between 40 (written examination at end of semester) and 10 (internal assessment based on semester long work presentation)

**Practical:**

- **MAIN SUBJECTS:** 100 marks divided into 60 marks (practical exam at end of semester), 20 marks (viva voce), and 20 marks (internal assessment)
- **SUBSIDIARY SUBJECTS:** 50 marks divided into 30 marks (practical exam at end of semester), 10 marks (viva voce), and 10 marks (internal assessment)

## Semester 4

| S. no | Code | Course title | Theory | Practicals | Max Marks | Credits |
|---|---|---|---|---|---|---|
| 1 | OT401NQ2017 | Pathological Conditions 3: Psychiatry | 100 | | 100 | 4 |
| 2 | OT402NQ2017 | Pathological Conditions 4: Pediatrics | 50 | | 50 | 2 |
| 3 | OT403NQ2017 | Pathological conditions 5: Cardiology and Pulmonology. | 50 | | 50 | 2 |
| 4 | OT404NQ2017 | Gerentology and Sports Medicine and Occupational therapy | 50 | | 50 | 2 |
| 5 | OT405NQ2017 | Occupational Therapy Process 2 | 100 | | 100 | 4 |
| 6 | OT406NQ2017 | Yoga and Occupational therapy | 50 | | 50 | 2 |
| 7 | OT407NQ2017 | Practicum 1: Occupational Therapy Process 2 | | 100 | 100 | 6 |
| 8 | OT408NQ2017 | Practicum 2: Complex activity analysis: Livelihood in rural areas, Sports, Driving and sexual function. | | 50 | 50 | 3 |
| 9 | OT409NQ2017 | Practicum 3: Practicum 1: Yoga and Occupational Therapy | | 50 | 50 | 3 |
| 10 | OT410NQ2017 | Field Visit: Problem evaluation assessment for sports injuries: OT role in Paralympic sports and seminar presentation. Journal presentation included | | | 50 | 2 |
| | | Total | | | 650 | 30 |

### Marks for Fourth Semester BOT

**Theory:**

| S. No | Subject | Topics | Marks per topic |
|---|---|---|---|
| 1 | Pathological conditions: Psychiatry (Total marks out of 100) | Schizophrenia and other psychotic disorders | 10 |
| | | Mood Disorder | 10 |

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|---|---|---|---|
| | | Organic Brain Disorders | 5 |
| | | Anxiety Disorders | 5 |
| | | Personality Disorder | 10 |
| | | Disorders of Infancy, Childhood and adolescence | 10 |
| | | Substance related disorder | 10 |
| | | Eating Disorder | 5 |
| | | Cognitive Disorder | 10 |
| | | Somatoform disorder | 5 |
| | Internal Assessment | | 20 |
| 2 | Pathological conditions: Pediatrics (Total marks out of 50) | Normal Growth and nutritional disorders | 15 |
| | | Developmental and Genetic disorders | 15 |
| | | Pulmonary and Rheumatological disorders | 10 |
| | Internal Assessment | | 10 |
| 3 | Pathological conditions: Cardiology and Pulmonology (Total marks out of 50) | Cardiovascular diseases | 10 |
| | | Pulmonary diseases | 10 |
| | | Cardiovascular and thoracic surgeries | 20 |
| | Internal Assessment | | 10 |
| 4 | Pathological conditions: Gerontology and Sports Medicine (Total marks out of 50) | Gerontology | 20 |
| | | Sports Medicine | 20 |
| | Internal Assessment | | 10 |
| 5 | Occupational Therapy Process II (Total marks out of 100) | Spatiotemporal Adaptation | 15 |
| | | Treatment Approaches | 20 |
| | | Hand Functions | 10 |
| | | Functional cast bracing and Orthosis | 10 |
| | | Play in child development | 15 |

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|---|---|---|---|
| | | Adaptation | 10 |
| | Internal Assessment | | 20 |
| 6 | Yoga and Occupational Therapy (Total marks out of 50) | History of Yoga | 10 |
| | | Principles in practice | 15 |
| | | Clinical conditions | 15 |
| | Internal Assessment | | 10 |

**Practicum marks:**

| S.no. | Topic | | Total marl |
|---|---|---|---|
| 1 | Occupational Therapy Process II | Spatiotemporal Adaptation and Treatment Approaches | 20 |
| | | Hand Functions | 20 |
| | | Play in child development | 20 |
| | Viva | | 20 |
| | Journal + Internal Assessment | Semester work on practical performed | 20 |
| | | | |
| 2 | Complex Activity Analysis | Rural job presentation | 10 |
| | | Sports Injuries | 10 |
| | | Vehicle simulation | 10 |
| | Viva | | 10 |
| | Journal + Internal Assessment | Semester work on practical performed | 10 |
| 3 | Yoga and Occupational Therapy | Asanas | 15 |
| | | Clinical conditions and Yoga treatment | 15 |
| | Viva | | 10 |
| | Journal + Internal Assessment | Semester work on practical performed | 10 |

# SEMESTER FIVE

**Theory:**

| Sl no | Code | Course title | No. of Notional Learning Hours | *Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT501NQ2017 | Promoting OT performance for individuals with complex issues and life situations: General Medicine and Surgery | 105 | NIL | 4 |
| 2 | OT502NQ2017 | Promoting OT performance for individuals with complex issues and life situations: Orthopedics | 105 | NIL | 4 |
| 3 | OT503NQ2017 | Promoting OT performance for individuals with complex issues and life situations: Neurology | 105 | Nil | 4 |
| 4 | OT504NQ2017 | Promoting OT performance for individuals with complex issues and life situations: Hand and work Injuries and Disability Management | 105 | Nil | 4 |
| Total | | | 420 | 16 | |

**Practicum:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT505NQ2017 | Occupational therapy management 1 | 210 | NIL | 6 |
| 2 | OT506NQ2017 | Occupational Therapy management 2 | 240 | NIL | 6 |
| Total | | | 450 | | 12 |

**Field work:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT507NQ2017 | Occupational therapy Management: Visit to an Orthotic/Prosthetic unit | 50 | NIL | 2 |

**OT501NQ2017: OT Performance in Gen Medicine and Surgery: 105 Hrs**

| S.NO | Areas | Contents | Didactic Hours |
|---|---|---|---|
| 1 | Autoimmune disorders | Definition of conditions, stage of disease, signs and symptoms, deformities, patho-mechanics of deformities. Occupational therapy management in acute, sub acute and chronic stage of diseases, mobilization techniques, understanding of orthotic applications, joint protection and energy conservation. | 9 |
| 2 | Dermatology | Definition, mode of transmission, clinical features & OT management in Leprosy. Psychosocial implications in Leprosy. CREST syndrome, SLE, affectations of the integumentary system | 8 |
| 3 | Immune disorders | Spectrum of HIV disease & its impact on occupational behavior. Describe appropriate OT goals, treatment plan & strategies for people with HIV infection & AIDS.<br>Describe the physical, psychological & environmental needs of people with HIV infection & AIDS. Palliative Care for HIV | 9 |
| 4 | Hematology: Hemophilia and Thalassemia. | Definition, classification. Occupational therapy management, psychological and psychosocial implications, Prevention of bleeds, joint protection, indications and contraindications for exercises and orthosis in hemophilia- musculoskeletal management.<br>Energy Conservation & life style modification, dietary measures, patient education. | 9 |
| 5 | Obesity | Definition and classification of obesity,<br>BMI<br>Health related correlates of obesity (Endocrine disorders like Diabetes, Thyroid disorders) Body composition- relation of Percentage of body fat, body fat distribution, fat cell size & number with obesity, Bone and water content, muscle mass. OT management using Preventive and corrective programs, through work, activities and exercises.<br>Life style modification, diet & activity modification, stress management. Community education and preventive programs. | 9 |

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| 6 | Burns | Define & classify burns, Characteristics of different degrees of burns. Describe phases of recovery & focus on OT intervention for each phase (pre graft, post graft, rehabilitation). Factors that increase potential for scar hypertrophy &contracture. Psychosocial aspects. | 9 |
| 7 | Amputations & Prosthetics | Define amputation, causes of amputation, surgical management, levels of amputation (for both Upper and lower extremity) OT rehabilitation post amputation. Stump evaluation, ideal stump, stump re-fashioning, complications of stump end, phantom limb, phantom limb pain, desensitization, body image disturbances.<br>**Training and rehabilitation**<br>Types of prosthesis - Body powered, hybrid, Modular prosthesis, CAD CAM prosthesis & Myoelectric prosthesis, Components of prosthesis & the function<br>of each component<br>Pylon training.<br>Check out of prosthesis.<br>Pre & post prosthetic OT management techniques.<br>Psychological implication of amputation. Factors that interfere with prosthetic training. | 10 |
| 8 | Cancer Rehabilitation | Head, neck, face & breast cancer, its diagnosis & medical & surgical management. Psychological problems associated with cancer. Physical dysfunction issues from cancer. OT techniques used for rehabilitation of cancer patients (Preventive, restorative, supportive). Hospice (palliative aspects), family systems and the need for treatment of the family as the unit of care. | 9 |
| 9 | Vascular conditions | Causes, classification, clinical features of lymphatic, arterial and venous disorders. Management guidelines. Indications and contraindications for exercises. Wound healing, wound classification, intervention. Role of occupational therapists. | 8 |
| 10 | Visual Impairment | Definition and Classification, mobility techniques, communication skills, sensory re-education, emotional and psychological aspects of visual impairment. Facilities for visual impairment, Prevention of blindness. | 9 |
| 11 | Auditory Impairment | Definition and classification, communication skills, types and uses of hearing aids, emotional and psychological aspects, facilities for hearing impairment, prevention of deafness, approaches in hearing impairment rehabilitation, vestibular affectations and re-training. | 8 |
| 12 | Obstetric and Gynecology | Complications related to Pregnancy Effects of aerobic exercises during pregnancy. Antenatal and prenatal exercises. Occupational therapy management during pregnancy and post partum, caesarean child birth and high risk pregnancy. | 8 |

**OT502NQ2017: Promoting OT performance for individuals with complex issues and life situations: Orthopedics: 105 Hrs**

| S.NO | AREAS | CONTENTS | Didacti hours |
|---|---|---|---|
| 1 | Orthopaedic Clinical Evaluation. | Clinical evaluation of upper extremities, lower extremities and spine including special and specific tests and clinical signs.<br>Diagnosis of function and performance using Occupational Therapy tools.<br>Frames of References & Models of Approaches as applied to Musculoskeletal Rehabilitation. | 10 |
| 2 | Congenital Musculoskeletal Conditions. | Occupational Therapy Management orthotic prescriptions, soft tissue techniques and adaptive techniques in the following common congenital musculoskeletal conditions:<br>Definition of Congenital anomalies.<br>Classification of Congenital musculoskeletal anomalies.<br>i. Congenital Torticollis,<br>ii. Radial club hand,<br>iii. Congenital dislocation of hip and knee,<br>iv. Congenital club -foot | 15 |
| 3 | Fractures of Upper Extremity & Lower Extremity. | Definition, Mechanism of Injury, Orthopaedic and Occupational Therapy management of fractures of upper extremities & lower extremities.<br>Management of complications:<br>Reflex sympathetic dystrophy (complex regional pain syndromes), Volkmann's ischemic contracture, Myositis Ossificans.<br>Fixators –Internal and External: Classification, types.<br>Therapeutic intervention in Occupational Therapy with respect to the type of fixation (internal &external) and related Precautions. | 15 |
| 4 | Injuries at and around Joints of Upper and Lower Extremities. | Definition and Mechanism of injuries at and around joints of upper and lower extremities.<br>Arthroscopic and open surgical intervention. Preventive therapy and Post injury as well as post surgical occupational therapy management. | 14 |
| 5 | Pathological and Arthritic conditions of Upper & Lower Extremity joints. | Types of arthritis and their Aetiopathogenesis.<br>Conservative, arthroplasty and other surgical interventions with occupational therapy rehabilitation program. | 14 |

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|---|---|---|---|
| 6 | Pathological conditions of Vertebral Column and Spinal Cord. | Various conditions of vertebral column and spinal cord and their aetio-pathogenesis. Conservative and post-surgical interventions using occupational therapy rehabilitation techniques | 15 |
| 7 | Neuromuscular Conditions: Poliomyelitis and Cerebral Palsy | Reconstructive surgeries in poliomyelitis and cerebral palsy including limb lengthening procedures.<br>Post-surgical Occupational Therapy management with emphasis on orthotic and splinting prescriptions | 10 |
| 8 | Work Related Musculoskeletal Disorders (Cumulative Trauma Disorders). | Definition. Classification and Mechanism of injury of work related musculoskeletal disorders of upper extremities, lower extremities and spine.<br>Preventive and Restorative approach based on Ergonomic and Biomechanical principles.<br>Occupational Therapy Assessment and Management in various phases of injury; with<br>emphasis on safe return to ADL, Work & Productive Activities and Leisure Activities. | 12 |

**OT503NQ2017: Promoting OT performance for individuals with complex issues and life situations:**
**Neurology: 105 Hrs**

| S.NO | AREAS | CONTENTS | Didacti hours |
|---|---|---|---|
| 1 | Neurological Clinical Evaluation | Neurological evaluations for cortical, sub cortical, cerebellar, spinal and peripheral nervous system dysfunctions.<br>Frames of References as applied to Neuro-rehabilitation. | 4 |
| 2 | Disorders of the Cerebral Circulation.<br>Cerebral Vascular Accident (CVA)/Stroke<br>Cerebral Embolism & Thrombosis<br>Hypertensive Encephalopathy<br>Cerebral Hemorrhage | Anatomy & physiology of cerebral circulation<br>Correlation of signs and symptoms to diagnosis.<br>Assessment based on appropriate FOR.<br>Prognostic determinants.<br>Strategies to optimize motor, sensory, balance, visual, cognito – perceptual components of function.<br>Clinical reasoning for selection of therapeutic intervention models- Preventive, Curative Rehabilitative and Adaptive /compensatory. | 8 |

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|---|---|---|---|
| 3 | Traumatic Injuries to the Brain. | Classification of Head Injury & its Mechanism of Injury including Intracranial Hemorrhage. Immediate Effects of Head Injury. Post Head Injury sequel, signs and symptoms. Occupational Therapy assessment tools for level of consciousness, cognition.<br>Standardized Assessments –<br>Glasgow Coma Scale<br>Rancho Los Amigo,<br>Allen's Cognitive Assessment scale for functional prognosis.<br>Assessments based on appropriate FOR.<br>Prognostic determinants. Strategies to optimize motor, sensory, balance, visual, cognito perceptual components of function.<br>Strategies to optimize motor, sensory, visual, cognito –perceptual components of function | 7 |
| 4 | Infective Conditions of the Brain.<br>Intracranial abscess<br>Meningitis<br>Encephalitis<br>Cerebral malaria | Aetio-pathogenesis, symptomatology<br>Assessment based on appropriate FOR.<br>Prognostic determinants.<br>Strategies to optimize motor, sensory, balance, visual, cognito – perceptual components of function.<br>Clinical reasoning for selection of therapeutic intervention models-<br>Preventive,<br>Curative<br>Rehabilitative and<br>Adaptive /compensatory.<br>Specific and special therapeutic considerations in context to clinical diagnosis | 8 |
| 5 | Neoplastic Conditions of the Brain and Spine<br>Intracranial & Spinal Tumors. | Aetio-pathogenesis, Assessment based on appropriate FOR.<br>Prognostic determinants<br>Strategies to optimize motor, sensory, balance, visual, cognito – perceptual components of function. | 8 |
| 6 | Disorders of the Basal Ganglia (Movement Disorders)<br>Hypoactive basal ganglia disorders such as:<br>1. Parkinsonism<br>2. Parkinson plus syndromes<br>Hyperactive basal ganglia disorders such as:<br>1. Chorea and Athetosis<br>2. Dystonia<br>3. Tardive or Drug Induced Dyskinesias | Aetio-pathogenesis.<br>Grading stage of disease.<br>Assessment based on appropriate FOR. Prognostic determinants.<br>Strategies to optimize motor, sensory, balance, visual, cognito – perceptual components of function.<br>Clinical reasoning for selection of therapeutic intervention models-<br>Preventive,<br>Curative<br>Rehabilitative and<br>Adaptive /compensatory | 8 |

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|---|---|---|---|
| 7 | Inflammatory and Autoimmune Disorders of the Brain and Spine.<br>Multiple Sclerosis<br>Transverse Myelitis<br>Peripheral Neuropathies | Aetio-pathogenesis.<br>Grading stage of disease.<br>Assessment based on appropriate FOR.<br>Prognostic determinants.<br>Strategies to optimize motor, sensory, balance, visual, cognito – perceptual components of function.<br>Clinical reasoning for selection of therapeutic intervention models-<br>Preventive,<br>Curative<br>Rehabilitative and<br>Adaptive /compensatory. | 8 |
| 8 | Diseases of Motor Neurone, Neuromuscular Junction and Muscles.<br>Motor Neuron Disease.<br>Myasthenia Gravis.<br>Myopathy and muscular dystrophies. | Aetio-pathogenesis<br>Clinical presentation.<br>Grading stage of disease.<br>Assessment based on appropriate FOR.<br>Prognostic determinants.<br>Strategies to optimize motor, sensory, balance, visual, cognito – perceptual components of function.<br>Clinical reasoning for selection of therapeutic intervention models-<br>Preventive,<br>Curative<br>Rehabilitative and<br>Adaptive /compensatory | 8 |
| 9 | Seizure Disorders. | Aetio-pathogenesis, classification and manifestation. Clinical presentation. Assessment based on appropriate FOR. Prognostic determinants based on conservative, operative management.<br>Strategies to optimize motor, sensory, visual, cognitive, endurance, components of function.<br>Clinical reasoning for selection of therapeutic intervention models-<br>Rehabilitative and<br>Adaptive /compensatory. | 8 |
| 10 | Cerebellar Dysfunctions | Aetio-pathogenesis, Clinical presentation.<br>Grading stage of disease.<br>Assessment based on appropriate FOR.<br>Prognostic determinants.<br>Strategies to optimize motor, balance, visual, components of function.<br>Clinical reasoning for selection of therapeutic intervention models-<br>Preventive,<br>Curative<br>Rehabilitative and<br>Adaptive /compensatory | 8 |

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|---|---|---|---|
| 11 | Vestibular Dysfunctions | Aetio-pathogenesis and<br>Classification Clinical presentation.<br>Assessment based on appropriate FOR.<br>Prognostic determinants.<br>Strategies to optimize motor, sensory, balance, visual, components of function.<br>Clinical reasoning for selection of therapeutic intervention models-<br>Preventive,<br>Curative<br>Rehabilitative and<br>Adaptive /compensatory | 8 |
| 12 | Cranial Nerve Dysfunctions | Assessment of cranial nerve functions and dysfunctions.<br>Aetiopathogenesis<br>Clinical presentation.<br>Assessment based on appropriate FOR.<br>Prognostic determinants.<br>Strategies to optimize motor, sensory, balance, visual, perceptual components of function.<br>Clinical reasoning for selection of therapeutic intervention models-<br>Preventive,<br>Curative<br>Rehabilitative and<br>Adaptive /compensatory | 7 |
| 13 | Cognito-motor, Perceptual Skills and Dysfunctions | Evaluation of Cognito-motor & Perceptual skills and dysfunctions.<br>Occupational Therapy Training and models of cognitive rehabilitation.<br>Peripheral and central visual defects leading to perceptual deficits.<br>Identify and describe specific treatment approaches for- Low vision and occulomotor dysfunction, unilateral neglect, apraxia [Limb, Constructional and Dressing apraxia], compensatory and accommodative techniques.<br>Aetio-pathogenesis<br>Assessment based on appropriate FOR.<br>Prognostic determinants.<br>Strategies to optimize, Visuo-motor, visual, balance cognitive – perceptual components of function.<br>Clinical reasoning for selection of therapeutic intervention models-<br>Preventive,<br>Curative<br>Rehabilitative and<br>Adaptive /compensatory. | 8 |

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|---|---|---|---|
| 14 | Dysphagia | Normal physiology of swallowing.<br>Causative factors in Dysphagia.<br>Assessing cognitive abilities to initiate therapy.<br>Guidelines for assessment & treatment of patients with Dysphagia.<br>Feeding –positioning, diet modification.<br>Specific and special therapeutic considerations in context to clinical diagnosis. | 7 |

**OT504NQ2017: Hand and work Injuries and Disability Management: 105 Hrs:**

| S.NO | AREAS | CONTENTS | Didacti hours |
|---|---|---|---|
| 1 | Industrial Rehabilitation | Introduction:<br>Historical Aspects for the development of Industrial Rehabilitation.<br>Industrial Rehab team. Different Product lines of Industrial Rehabilitation.<br>Work assessment: Work Conditioning and Hardening.<br>Classification of Work Levels.<br>Work, Physical and Functional Capacity Evaluation.<br>Job Analysis.<br>Ergonomic Consultation.<br>Physical Injury Prevention Program.<br>Symptom Magnification.<br>Expert Witness Testimony.<br>Consultation for Vocational Training. | 35 |
| 2 | Disability & Health | Basic concepts of disability evaluation and certification in India and its Social Legislation. | 35 |
| 3 | Hand Injuries | Nature of injuries, Statistics, Clinical presentations in rehabilitation, stages of rehabilitation, use of activity and orthosis | 35 |

**Practicum:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credit |
|---|---|---|---|---|---|
| 1 | OT505NQ2017 | Occupational therapy management 1 | 210 | NIL | 6 |
| 2 | OT506NQ2017 | Occupational Therapy management 2 | 240 | NIL | 6 |
| Total | | | 450 | | 12 |

**Practicum 1:**

**OT505NQ2017: Occupational therapy Management 1: General Surgeries: 105 hrs**

| S.NO | AREAS | CONTENTS | PRACTICA HOURS |
|---|---|---|---|
| 1 | Burns:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations | Demonstration of anti deformity position.<br>Measurement of pressure garments.<br>Demonstration of different devices for positioning.<br>Orthotics for burns. | 25 |
| 2 | Amputation:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations | Demonstration of different types of prosthesis<br>Identification of different parts of prosthesis<br>Donning and doffing of prosthesis<br>Stump bandaging<br>Push up transfer, Gait analysis with prosthesis<br>Check out of prosthesis<br>Wheelchair – amputee frame | 30 |
| 3 | Tendon Injuries of hand:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations | Demonstration of Protocol for tendon repair & splinting at acute, sub-acute and chronic stages.<br>(Tendon Gliding exercises, Blocking exercises) | 25 |
| 4 | Crush injuries of hand:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations and/or simulated audio-visual presentations | Edema measurement using standardized methods.<br>Grip and pinch strength evaluation using standardized equipment.<br>Clinical reasoning in splint prescription for flexion and extension deformities of hand and wrist- live / simulated case presentations.<br>Audio visual interactive sessions | 25 |

**OT505NQ2017: Occupational Therapy Management 1: General Medicine: 3 credits: 105 Hours**

| S.NO | Areas | Contents | PRACTI AL HOUR |
|---|---|---|---|
| 1 | Autoimmune disorders:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations | Evaluation of deformities<br>Splint Prescription based on clinical reasoning- live case presentations.<br>Education for joint protection, energy conservation, home making.<br>Discussion, deliberations and interactive sessions. | 18 |
| 2 | Immune disorders | Spectrum of HIV disease & its impact on occupational behavior.<br>Describe appropriate OT goals, treatment plan & strategies for people with HIV infection & AIDS.<br>Describe the physical, psychological & environmental needs of people with HIV infection & AIDS.<br>Palliative Care for HIV | 10 |
| 3 | Hematology:<br>Hemophilia and<br>Thalassemia:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations | Demonstration of positioning, holding techniques during execution of exercises.<br>Audio visuals for splint prescription<br>Practice on peers and models for above.<br>Joint protection and work simplification techniques | 12 |
| 4 | Obesity:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations | Assessment of parameters- fat pad measurement, BMI, grading obesity.<br>Simulated and live case presentations-<br>Equating intake and output ratios in terms of diet and activity/ exercise.<br>Life style modifications, exercise<br>prescription with respect to precautions in each case | 14 |
| 5 | Cancer Rehabilitation:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations | Demonstration of management for<br>Mastectomy, Lymphedema.<br>Range and strength exercises.<br>Cosmetic prosthesis.<br>Postural exercises and body image retraining. | 14 |
| 6 | Vascular conditions:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations | Demonstration of exercises for arterial,<br>venous disorders.<br>Indications, contraindications, complications of compression techniques.<br>Wound evaluation | 10 |

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| 7 | OT for complete loss of vision:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations | Mobility training.<br>Training for sensory compensation.<br>Environmental modification. | 10 |
| 8 | Occupational Therapy in speech and hearing impairment:<br>Hands on practice, interactive Sessions | Rehabilitation in Cochlear implants beneficiaries.<br>Cognitive assessment and retraining in congenitally deaf and post cochlear implants. | 10 |
| 9 | Obstetric and Gynecology:<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audiovisual presentations | Demonstration of antenatal and post natal, pelvic floor strengthening, Kegel's exercises.<br>Mother & child care.<br>Indications and contraindications to exercises.<br>Back care: Ergonomic education. | 7 |

**Practicum 2:**

**OT506NQ2017: Occupational Therapy Management 2: Orthopedics: 120 Hrs:**

| S.NO | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Orthopaedic Clinical Evaluation:<br>Demonstration, practice on models and patients, clinical and simulated case presentations followed by interactive discussions to elicit clinical reasoning. | Evaluate and identify two problems each of UE/LE/Spine – relate the functional limitation due to the problem, identify soft tissue and bony problems | 20 |
| 2 | Fractures of Upper Extremity & Lower Extremity:<br>Demonstration, practice on models and patients, clinical and simulated case presentations followed by interactive discussions to elicit clinical reasoning. | Present simulated or live presentation of clinical cases.<br>Practical in the form of fabrication of one cervical collar, simulated cases and recommendations for lumbar, thoracic spine. | 20 |
| 3 | Injuries at and around Joints of Upper and Lower Extremities:<br>Demonstration, interactive sessions follows clinical and/or simulated audio-visual presentations. | Practical with respect to patient education, preoperative group education, post op precautions for knee shoulder, hip surgeries. Adaptations in ADLs. | 20 |

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| 4 | Pathological and Arthritic conditions of Upper & Lower Extremity joints: Demonstration, interactive sessions, following clinical and/or simulated audio-visual presentations. | Practical with respect to patient education, preoperative group education, post op precautions for UE & LE surgeries. Adaptations in ADLs and Energy Conservation techniques. | 20 |
| 5 | Pathological conditions of Vertebral Column and Spinal Cord: Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations. | Precautions, patient education with demonstration, work and task modification, psycho-social and educational groups | 20 |
| 6 | Brachial Plexus Injuries and other Peripheral Nerve Injuries: Demonstration, practice on models and patients, clinical and simulated case presentations followed by interactive discussions to elicit clinical reasoning | Demonstration of the different splints used in Peripheral Nerve Injuries and Brachial Plexus Injuries.<br>Nerve gliding exercises.<br>Sensory testing – Moberg pick up test.<br>Siemmes Winston's Monofilament.<br>Discussions, deliberations, interactive sessions based on clinical reasoning for above. | 20 |

**OT506NQ2017: Occupational Therapy Management 2: Neurological conditions: 120 Hrs:**

| S.NO | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Neurological Clinical Evaluation: Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations | Evaluation or identification of abnormal function, functional limitation related to the same and application of Frames of References for intervention. | 12 |
| 2 | Disorders of the Cerebral Circulation. Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations | Understand and demonstrate symptoms related to affectation, assess motor status, recovery stages, prescribe appropriate intervention | 12 |
| 3 | Traumatic Injuries to the Brain: Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations | Assessment on standard scales and protocols for cognition, alertness, ADL's, practice of remedial therapeutic approaches for management of tone, methods of transfers. Documentation. | 9 |

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| 4 | Infective Conditions of the Brain:<br>Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations | Identifying focal signs of UMN, cognitive perceptual-motor assessment, design learning strategies in clinical settings, assessment for mobility and functioning with safety in environment. | 9 |
| 5 | Neoplastic Conditions of the Brain and Spine. Intracranial & Spinal Tumors: Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations | Clinical reasoning for therapeutic intervention Decision making with respect to continuation, termination, modification of goals of therapy, Discharge plans. Specific and special therapeutic considerations in context to clinical diagnosis. | 6 |
| 6 | Disorders of the Basal Ganglia: Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations | Clinical reasoning for therapeutic intervention Decision making with respect to continuation, termination, modification of goals of therapy, discharge plans. Specific and special therapeutic considerations in context to clinical diagnosis. | 8 |
| 7 | Inflammatory and Autoimmune Disorders of the Brain and Spine:<br>Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations. | Clinical reasoning for therapeutic intervention Decision making with respect to continuation, termination, modification of goals of therapy, discharge plans. Specific and special therapeutic considerations in context to clinical diagnosis | 8 |
| 8 | Diseases of Motor Neurone, Neuromuscular Junction and Muscles:<br>Interactive sessions following clinical and/or simulated audio-visual presentations | Clinical reasoning for therapeutic intervention Decision making with respect to continuation, termination, modification of goals of therapy, discharge plans. Specific and special therapeutic considerations in context to clinical diagnosis | 8 |
| 9 | Seizure Disorders: Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations | Clinical reasoning for therapeutic intervention Decision making with respect to continuation, termination, modification of goals of therapy, discharge plans. Specific and special therapeutic considerations in context to clinical diagnosis | 4 |
| 10 | Cerebellar Dysfunctions: Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations | Clinical reasoning for therapeutic intervention Decision making with respect to continuation, termination, modification of goals of therapy, discharge plans. Specific and special therapeutic considerations in context to clinical diagnosis. | 10 |

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| 11 | Vestibular Dysfunctions:<br>Demonstration, interactive sessions following clinical and/or simulated audio-visual presentations | Clinical reasoning for therapeutic intervention<br>Decision making with respect to continuation, termination, modification of goals of therapy, discharge plans. Specific and special therapeutic considerations in context to clinical diagnosis | 9 |
| 12 | Cranial Nerve<br>Dysfunctions:<br>Demonstration, Interactive sessions following clinical and/or simulated audio-visual presentations | Clinical reasoning for therapeutic intervention<br>Decision making with respect to continuation, termination, modification of goals of therapy, discharge plans. Specific and special therapeutic considerations in context to clinical diagnosis | 9 |
| 13 | Cognito-motor, Perceptual<br>Skills and Dysfunctions:<br>Demonstration, Interactive sessions following clinical and/or simulated audio-visual presentations | Clinical reasoning for therapeutic intervention<br>Decision making with respect to continuation, termination, modification of goals of therapy, discharge plans. Specific and special therapeutic considerations in context to clinical diagnosis | 8 |
| 14 | Dysphagia:<br>Demonstration, Interactive sessions following clinical and/or simulated audio-visual presentations | Clinical reasoning for therapeutic intervention<br>Decision making with respect to continuation, termination, modification of goals of therapy, discharge plans. Specific and special therapeutic considerations in context to clinical diagnosis | 8 |

**OT507NQ2017: Field work:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT507NQ2017 | Occupational therapy Management: Visit to a orthotic/prosthetic unit | 50 | NIL | 2 |

**Examination pattern and division of marks:**

**Theory:**

- **MAIN SUBJECTS:** 100 marks divided between 80 (written examination at end of semester) and 20 (internal assessment based on semester long work presentation),
- **SUBSIDIARY SUBJECTS:** 50 marks divided between 40 (written examination at end of semester) and 10 (internal assessment based on semester long work presentation)

**Practical:**

- **MAIN SUBJECTS:** 100 marks divided into 60 marks (practical exam at end of semester), 20 marks (viva voce), and 20 marks (internal assessment)
- **SUBSIDIARY SUBJECTS:** 50 marks divided into 30 marks (practical exam at end of semester), 10 marks (viva voce), and 10 marks (internal assessment)

# Semester 5

| S. no | Code | Course title | Theory | Practicals | Max Marks | Credits |
|---|---|---|---|---|---|---|
| 1 | OT501NQ2017 | Promoting OT performance for individuals with complex issues and life situations: General Medicine and Surgery | 100 | | 100 | 4 |
| 2 | OT502NQ2017 | Promoting OT performance for individuals with complex issues and life situations: Orthopedics | 100 | | 100 | 4 |
| 3 | OT503NQ2017 | Promoting OT performance for individuals with complex issues and life situations: Neurology | 100 | | 100 | 4 |
| 4 | OT504NQ2017 | Promoting OT performance for individuals with complex issues and life situations: Hand and work Injuries and Disability Management | 100 | | 100 | 4 |
| 5 | OT505NQ2017 | Occupational therapy management 1 | | 100 | 100 | 6 |
| 6 | OT506NQ2017 | Occupational therapy management 2 | | 100 | 100 | 6 |
| 10 | OT507NQ2017 | Field Visit: Occupational therapy Management includes splinting, Journal presentation included | | | 50 | 2 |
| | | Total | | | 650 | 30 |

**Marks for Fifth Semester BOT**

| S. No | Subject | Topics | Marks per topic |
|---|---|---|---|
| 1 | OT performance in General Surgery and Medicine (Total Marks out of 100) | Autoimmune disorders | 5 |
| | | Dermatology | 5 |
| | | Hematology: Hemophilia/Thalassemia. | 5 |
| | | Obesity | 10 |
| | | Burns | 10 |
| | | Amputations | 10 |
| | | Cancer Rehabilitation | 10 |
| | | Vascular conditions | 10 |
| | | Visual Impairment | 5 |
| | | Auditory Impairment | 5 |
| | | Obstetric and Gynecology | 5 |
| | Internal Assessment | | 20 |
| 2 | OT performance in Orthopedics (Total marks out of 100) | Orthopaedic Clinical Evaluation. | 10 |
| | | Congenital Musculoskeletal Conditions. | 10 |
| | | Fractures of Upper Extremity & Lower Extremity. | 10 |
| | | Injuries at and around Joints of Upper and Lower Extremities. | 10 |
| | | Pathological and Arthritic conditions of Upper & Lower Extremity joints. | 10 |
| | | Pathological conditions of Vertebral Column and Spinal Cord. | 10 |
| | | Neuromuscular Conditions: | 10 |

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| | | Poliomyelitis and Cerebral Palsy | |
| | | Work Related Musculoskeletal Disorders (Cumulative Trauma Disorders). | 10 |
| | Internal Assessment | | 20 |
| 3 | OT performance in Neurology | Neurological Clinical Evaluation | 5 |
| | | Disorders of the Cerebral Circulation: Cerebral Vascular Accident (CVA)/Stroke, Cerebral Embolism & Thrombosis, Hypertensive Encephalopathy, Cerebral Hemorrhage | 10 |
| | | Traumatic Injuries to the Brain. | 5 |
| | | Infective Conditions of the Brain: Intracranial abscess, Meningitis, Encephalitis, Cerebral malaria | 10 |
| | | Neoplastic Conditions of the Brain and Spine Intracranial & Spinal Tumors. | 5 |
| | | Disorders of the Basal Ganglia (Movement Disorders) Hypoactive basal ganglia disorders such as: 1. Parkinsonism 2. Parkinson plus syndromes. Hyperactive basal ganglia disorders such as: 1. Chorea and Athetosis 2. Dystonia 3. Tardive or Drug Induced Dyskinesias | 5 |
| | | Inflammatory and Autoimmune Disorders of the Brain and Spine: Multiple Sclerosis, Transverse Myelitis, Peripheral Neuropathies | 5 |
| | | Diseases of Motor Neurone, Neuromuscular Junction and Muscles. Motor Neuron Disease, Myasthenia Gravis, Myopathy and muscular dystrophies. | 5 |
| | | Seizure Disorders | 5 |
| | | Cerebellar Dysfunctions | 5 |
| | | Vestibular Dysfunctions | 5 |

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| | | Cranial Nerve Dysfunctions | 5 |
| | | Cognito-motor, Perceptual Skills and Dysfunctions | 5 |
| | | Dysphagia | 5 |
| | Internal Assessment | | 20 |
| | | | |
| 4 | OT performance in Hand and Work Injuries (Total marks out of 100) | Industrial Rehabilitation | 25 |
| | | Disability & Health | 30 |
| | | Hand Injuries | 25 |
| | Internal Assessment | | 20 |

**Practicum:**

| S. No | Subject | Topics | Marks per topic |
|---|---|---|---|
| 1 | Occupational therapy management 1 | Case presentations: 2 | 20+20 |
| | | Occupational therapy plan ( Short term and Long term goals) | 20 |
| | Viva | | 20 |
| | Journal + Internal Assessment | | 20 |
| 2 | Occupational Therapy management 2 | Case presentation: 2 | 20+20 |
| | | Occupational therapy plan ( Short term and Long term goals) | 20 |
| | Viva | | 20 |
| | Journal + Internal Assessment | | 20 |

# SEMESTER SIX

**Theory:**

| Sl no | Code | Course title | No. of Notional Learning Hours | *Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT601NQ2017 | Promoting OT performance for individuals with complex issues and life situations: Pediatrics | 105 | NIL | 4 |
| 2 | OT602NQ2017 | Promoting OT performance for individuals with complex issues and life situations: Cardiology and Pulmonology | 105 | NIL | 4 |
| 3 | OT603NQ2017 | Mental health conditions and Geriatric health: occupational therapy performance | 105 | Nil | 4 |
| 4 | OT604NQ2017 | Biostatistics and Research Methodology | 105 | Nil | 4 |
| Total | | | 420 | 16 | |

**Practicum:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT505NQ2017 | Occupational Therapy Management 3 | 345 | NIL | 9 |
| 2 | OT606NQ2017 | Research: Quantitative, Qualitative and literatures review in group | 105 | NIL | 3 |
| Total | | | 450 | | 12 |

**Field work:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT607NQ2017 | Visit to existing Occupational Therapy set-up in one Government and one private setting | 50 | NIL | 2 |

**OT601NQ2017: Promoting OT performance for individuals with complex issues and life situations:**

**Pediatrics: 105 Hrs:**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Conditions of neonates and infants | Screening, Assessment & Early interventions in neonates and infants. Interventions in NICU, Synactive Theory of Development, Oral Motor Stimulation, Environmental Modifications, Kangaroo Mother Care, Therapeutic Positioning & Splinting. | 21 |
| 2 | Cerebral Palsy | Classification, etiology and Occupational Therapy approaches including Neuro-Developmental Therapy, Preschool training,<br>Occupational Therapy in the school system and Home Care Program | 21 |
| 3 | Common Genetic Disorders: Down's syndrome | Etio-pathogenesis. Clinical presentation.<br>Assessment based on appropriate<br>FOR.<br>Prognostic determinants.<br>Strategies to optimize motor, sensory, balance, visual, cognito – perceptual components of function.<br>Clinical reasoning for selection of therapeutic intervention models- Preventive, Curative Rehabilitative and Adaptive /compensatory.<br>School based approach. | 21 |

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|---|---|---|---|
| 4 | Neural Tube Defects –<br>Meningomyelocele<br>Spinal Dysraphism<br>Diastomatomyelia<br>Hydrocephalus<br>Arnold Chiari<br>Malformation | Etio-pathogenesis. Clinical presentation.<br>Assessment based on appropriate<br>FOR.<br>Prognostic determinants.<br>Strategies to optimize motor, sensory, balance, visual, cognito – perceptual components of function.<br>Clinical reasoning for selection of therapeutic intervention models- Preventive, Curative Rehabilitative and Adaptive /compensatory.<br>School based approach. | 21 |
| 5 | Sensory Based therapies | Sensory Integration Therapy<br>Vision Therapy | 21 |

**OT602NQ2017: Promoting OT performance for individuals with complex issues and life situations: Cardiology and Pulmonology: 105 Hrs:**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Pulmonary conditions | COPD, Asthma, Tuberculosis,<br>Occupational lung diseases, ILD.<br>Symptom identification with respect to functional performance.<br>Classification of patients on symptomatic basis. Disability rating (ICF).<br>Occupational therapy management with special reference to improving strength, endurance, vital capacity, Energy Conservation Technique and Work<br>Simplification Technique. | 50 |
| 2 | Cardio vascular conditions | Cardiac conditions and management:<br>Medical and Surgical :<br>Hypertension, Ischemic heart disease,<br>Coronary artery disease, Cardiomyopathy, Arteriosclerosis, Atherosclerosis, Congenital and acquired heart diseases, Rheumatic heart disease, Valve replacements, CABG, PTCA.<br>Knowledge base for intervention:<br>Understanding and correlating-clinical presentations, physical findings, pathophysiology and investigations.<br>Reading and interpreting basic cardiopulmonary findings- ECG, Echo, Treadmill reports, ABG, Pulse, Oximetry, Pulmonary Function Test, Xrays, Blood profiles-enzymes levels, lipid<br>and cholesterol levels; catheterization finding as reported by the physician. Effects of drugs on exercise performance<br>Indications and Contraindications for work and activity.<br>Defining and understanding MET & its application to exercise prescription, work and sports medicine. | 55 |

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|---|---|---|---|
| | | Assessments and Intervention:<br>Administering conditioning and exercise programs using treadmills, ergo meters, step tests, walking and brisk walking protocols, spot jogging.<br>Low resistance training.<br>Work hardening and work assessment in cardio-pulmonary conditions. Modification of work and activity programs with respect to residual cardiac functions.<br>Assessment on work simulation.<br>Interpreting Cardio Pulmonary responses.<br>Maintenance and patient education:<br>Work simulation and simplification, energy conservation techniques. Risk factor modification. | |

**OT603NQ2017: Mental health conditions and Geriatric health: occupational therapy performance:**
**105 Hrs:**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | General and Specific Objectives of Psychiatric Occupational Therapy. | General and Specific Objectives and Prescription of Psychiatric Occupational Therapy. | 10 |
| 2 | Theoretic Basis of Occupational Therapy in Psychiatry. | Frames of References & Models of approaches used in Psychiatric Occupational Therapy: Model of Human Occupation, Mosey's Frames of Reference, Behavioral, Developmental, Sensory Integrative, Cognitive Disability & Psychoanalytical. | 12 |
| 3 | Methods of Evaluation in Psychiatric Occupational Therapy. | Mini Mental Status Examination (MMSE).<br>Observations.<br>Interviews and Checklists.<br>Standardized and Non-Standardized<br>Evaluation Techniques – Reisburg Allen's Cognitive Assessment Scale. | 15 |
| 4 | Activity Analysis & Work Fitness Evaluation | Activity analysis, Meaning of; and therapeutic utilization of activities in Psychiatric Occupational Therapy.<br>Work Fitness Evaluation including IDEA as per Guidelines of Assessment by Ministry of Social Justice & Empowerment. | 13 |

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|---|---|---|---|
| 5 | Types of Therapeutic Media used in Psychiatric Occupational Therapy: | Behavioral therapy.<br>Projective techniques.<br>Industrial activities: Fitness for work in industries using simulated arts and creative tasks.<br>Arts and creative activities<br>Social Skills Training: Social Skills training and fitness for work in industries using simulated Arts and creative tasks.<br>Group Therapy: Theories of small group functioning, elements of group process, effective group formation, development, and closure. Understanding personal dynamics with organizational culture in relation to group development in small and large group system Group types Sensory Integrative Therapy and recent advances. | 15 |
| 6 | Occupational Therapy Intervention Based on Current Practices in Psychiatric Conditions | Long term and Short term Occupational Therapy Assessments and Interventions based on current practices in:<br>a) Schizophrenic disorders.<br>b) Mood disorders<br>c) Dementia<br>d) Generalized anxiety disorders and phobias<br>e) Conversion and dissociation reaction.<br>f) Obsessive Compulsive disorder<br>g) Substance related disorder<br>h) Sensory Processing<br>Disorders like Autism Spectrum Disorder, Attention Deficit Disorder, Attention Deficit Hyperactivity Disorder, Developmental co-ordination disorder.<br>i) Psychological factors affecting medical Conditions (Psychosomatic conditions) and personality disorders.<br>j) Eating disorders<br>k) Mental Retardation<br>l) Learning disorders<br>m) Introduction & Concept of Forensic Psychiatry. | 15 |
| 7 | Role of an Occupational Therapist as a Team Member in Various Set ups. | i. Role of an occupational therapist as a team member in:<br>Community based rehabilitation.<br>Half way homes.<br>Day care centers.<br>Sheltered workshops.<br>Long- term care.<br>Psychiatric unit of acute care hospitals.<br>Child guidance clinic.<br>ii. Care Givers Education.<br>iii. Various Support Groups. | 10 |

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| 8 | Geriatric health | Definition of the term gerontology & geriatrics, health & health context in aging, biological, psycho physiological & psychological theories of aging,<br>specialized tools of OT assessment & treatment in geriatrics. Role of OT in fall prevention. | 15 |

**OT604NQ2017: Biostatistics and Research Methodology: 105 Hrs:**

| S.NO | AREAS | CONTENTS | DIDACTIC HOURS |
|---|---|---|---|
| 1 | Types of Research | Types of Research e.g. Basic Science Vs Clinical,<br>Descriptive, Analytical Vs Experimental. | 3 |
| 2 | Algorithm of Study Designs and Level of Evidence | Study designs such as Observational Vs Experimental.<br>Five levels of evidence. | 5 |
| 3 | Review of Literature | Various sources of references<br>Acknowledgement of sources | 6 |
| 4 | Ethical Guidelines | Ethical Guidelines for Biomedical Research in Human Participants.<br>Historical background in evolution of ethical guidelines. | 6 |
| 5 | Protocol Writing | Protocol Writing for Submission to Institutional Review Board/Institutional. Ethics Committee (IRB/IEC). | 6 |
| 6 | Methods of writing references | Methods of Writing References e.g.<br>Vancouver method, Harvard method. | 6 |
| 7 | Introduction to Statistics & Common Statistical Terminologies | Definitions, Scope & Limitations Terminologies e.g. Population, Sample, Constant, Variable etc. | 6 |
| 8 | Sources & Types of Data, Data Collection & Presentation. | Primary, Secondary; Quantitative & Qualitative<br>Measurement scale of data Surveys, Records, etc.<br>Tabulation & Graphs. | 6 |
| 9 | Measures of Central tendency & Location. | Mathematical Averages<br>Positional Averages. | 3 |
| 10 | Variability & its Measures | Range, Quartile deviation, Mean deviation, Standard deviation, Coefficient of variation<br>SEM, SEP. | 5 |
| 11 | Probability | Definitions<br>Addition theorem of probability<br>Multiplication theorem of probability | 5 |
| 12 | Normal Distribution & Normal Curve. | Construction<br>Properties<br>Use & significance | 5 |

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|---|---|---|---|
| | | Skewness in distribution. | |
| 13 | Sampling, Sampling Variability & its Significance. | Methods of sampling<br>Errors in sampling | 6 |
| 14 | Sample Size Calculation. | Quantitative: finite & infinite population<br>Qualitative: finite & infinite population. | 5 |
| 15 | Tests of Significance – I. | Significance of Difference in Means: Z test (for large samples)<br>t test: paired & unpaired (for small samples). | 5 |
| 16 | Tests of Significance – II. | The Chi - Square Test. Goodness of fit & Test of association. | 5 |
| 17 | Correlation & Regression. | Definition & types of correlation<br>Calculation of Pearson's correlation coefficient (r)<br>Simple linear regression | 5 |
| 18 | Demography & Vital Statistics. | Definition<br>Indicators of health & their uses. | 5 |
| 19 | Use of Computers in Biostatistics. | Windows Excel Data Analysis in bio-statistical analysis.<br>Names of various statistical tools and software | 5 |
| 20 | Introduction to Evidence Based practice & Professional reasoning in OT | Introduction & Definition of Evidence Based Practice<br>Introduction to Professional Reasoning<br>Aspects of professional reasoning (Scientific, Narrative, Pragmatic, Ethical & Interactive reasoning) | 7 |

**Practicum:**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT605NQ2017 | Occupational Therapy Management 3 | 345 | NIL | 9 |
| 2 | OT606NQ2017 | Research: Quantitative, Qualitative and literatures review in group | 105 | NIL | 3 |
| Total | | | 450 | | 12 |

**Practicum 1 : OT605NQ2017: Occupational Therapy Management: Pediatrics: 120 Hrs**

| S.NO | AREAS | CONTENTS | PRACTICAl HOURS |
|---|---|---|---|
| 1 | Conditions of neonates and infants | Demonstration<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations | 15 |
| 2 | Cerebral Palsy | Demonstration<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations | 18 |
| 3 | Common Genetic Disorders:<br>Down's syndrome | Demonstration<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations | 18 |
| 4 | Neural Tube Defects –<br>Meningomyelocele<br>Spinal Dysraphism<br>Diastomatomyelia<br>Hydrocephalus<br>Arnold Chiari Malformation | Demonstration<br>Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations | 18 |
| 5 | Early Intervention: An ecological approach | Seminar format with class discussions: Methods and practices in the screening, assessment, and treatment of children (birth to three years) with (or at risk for) developmental deviations. Prematurity, failure to thrive. Concepts and issues related to the planning and delivery of early intervention services, the impact of early intervention services on young children (birth to three years), families, and their environment. | 17 |
| 6 | Sensory Based Therapies | Application of Sensory Integration Therapy and Vision Therapy | 18 |
| 7 | School-Based Practice:<br>Assessment to Intervention | Seminar format with class discussions: The Individualized Educational Plan (IEP) process, models of service provision, the environmental context, inclusion, collaborative team building, the family as team member. The practical application of educationally relevant occupational therapy service provision in the context of the school: screening, assessment, planning, and implementation of interventions, documentation. Assessment for handwriting, hyperactivity | 16 |

**OT605NQ2017: Occupational Therapy Management 3: Cardiology and Pulmonology: 100 Hrs:**

| S.NO | AREAS | CONTENTS | PRACTICAl HOURS |
|---|---|---|---|
| 1 | Pulmonary Conditions:<br>Demonstration, Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations | Demonstration of clinical evaluation.<br>Hands on practice-Assessment of pulmonary parameters –clients, peers, models.<br>Practice of techniques for breathing exercises on peers/ patients, administration of exercise on standard equipment.<br>Graded Exercise Test for Pulmonary rehabilitation.<br>Simulated or live case presentations-<br>Goals of therapeutic intervention in various diagnoses.<br>Deliberations and interactive sessions on<br>Occupational and community reintegration. | 40 |
| 2 | Cardiovascular conditions:<br>Demonstration, Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations | Demonstration of clinical evaluation.<br>Hands on practice-Assessment of cardiac parameters – clients, peers, models.<br>Administration of exercise on standard equipment for: conditioning programs,<br>strength training : isometric and isotonic exercises.<br>Goals of therapeutic intervention in ischemia, infarction, Congestive Heart<br>Failure, PTCA.<br>Interpretation of ECG, 2D Echo, CST reports for correlation to exercise.<br>Work Assessment for work fitness.<br>Simulated or live case presentations-<br>Deliberations and interactive sessions. | 60 |

**OT605NQ2017: Occupational Therapy Management 3: Mental health conditions and Geriatric health: occupational therapy performance: 125 Hrs:**

| S.NO | AREAS | CONTENTS | PRACTI CAL HOURS |
|---|---|---|---|
| 1 | General and Specific Objectives of Psychiatric<br>Occupational Therapy. | General and Specific Objectives and Prescription of Psychiatric Occupational Therapy. | 10 |
| 2 | Theoretic Basis of Occupational Therapy in Psychiatry. | Frames of References & Models of approaches used in Psychiatric Occupational Therapy: Model of Human Occupation, Mosey's Frames of Reference, Behavioral, Developmental, Sensory Integrative, Cognitive Disability & Psychoanalytical. | 10 |

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| 3 | Methods of Evaluation in Psychiatric Occupational Therapy. | Mini Mental Status Examination (MMSE).<br>Observations.<br>Interviews and Checklists.<br>Standardized and Non-Standardized Evaluation Techniques – Reisburg<br>Allen's Cognitive Assessment Scale. | 20 |
| 4 | Activity Analysis & Work Fitness Evaluation | Activity analysis, Meaning of; and therapeutic utilization of activities in Psychiatric Occupational Therapy.<br>Work Fitness Evaluation including IDEA as per Guidelines of Assessment by Ministry of Social Justice & Empowerment. | 20 |
| 5 | Types of Therapeutic Media used in Psychiatric Occupational Therapy: | Behavioral therapy.<br>Projective techniques.<br>Industrial activities: Fitness for work in industries using simulated arts and creative tasks.<br>Arts and creative activities<br>Social Skills Training: Social Skills training and fitness for work in industries using simulated Arts and creative tasks.<br>Group Therapy: Theories of small group functioning, elements of group process, effective group formation, development, and closure. Understanding personal dynamics with organizational culture in relation to group development in small and large group system Group types<br>Sensory Integrative Therapy and recent advances. | 15 |
| 6 | Occupational Therapy Intervention Based on Current Practices in Psychiatric Conditions | Long term and Short term Occupational Therapy Assessments and Interventions based on current practices in:<br>• Schizophrenic disorders.<br>• Mood disorders<br>• Dementia<br>• Generalized anxiety disorders and phobias<br>• Conversion and dissociation reaction.<br>• Obsessive Compulsive disorder<br>• Substance related disorder<br>• Sensory Processing Disorders like Autism Spectrum Disorder, Attention Deficit Disorder, Attention Deficit Hyperactivity Disorder, Developmental co-ordination disorder.<br>Psychological factorsaffecting medical Conditions (Psychosomatic conditions) and personality disorders.<br>• Eating disorders<br>• Mental Retardation<br>• Learning disorders<br>Introduction & Concept of Forensic Psychiatry. | 20 |

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| 7 | Role of an Occupational Therapist as a Team Member in various Set ups. | i. Role of an occupational therapist as a team member in:<br>Community based rehabilitation.<br>Half way homes.<br>Day care centers.<br>Sheltered workshops.<br>Long- term care.<br>Psychiatric unit of acute care hospitals.<br>Child guidance clinic.<br>ii. Care Givers Education.<br>iii. Various Support Groups. | 15 |
| 8 | Geriatric health:<br>Demonstration, Hands on practice on peers, models or clients under supervision, interactive sessions following clinical and/or simulated audio-visual presentations | Seminar on fall prevention<br>Assessment of a client on a standard tool.<br>Demonstration on a healthy geriatric patient-posture, balance, reaction time, proprioceptive and kinesthetic changes.<br>Audio-visual presentations- using problem cases, interactive sessions on environmental modification and other recommendations | 15 |

**OT606NQ2017: Biostatistics and Research Methodology: 105 Hrs:**

| S.NO | AREAS | CONTENTS | PRACTICAL HOURS |
|---|---|---|---|
| 1 | Types of Research | Types of Research e.g. Basic Science Vs Clinical, Descriptive, Analytical Vs Experimental. | 5 |
| 2 | Algorithm of Study Designs and Level of Evidence | Study designs such as Observational Vs Experimental.<br>Five levels of evidence. | 5 |
| 3 | Review of Literature | Various sources of references<br>Acknowledgement of sources | 7 |
| 4 | Ethical Guidelines | Ethical Guidelines for Biomedical Research in Human Participants. Historical background in evolution of ethical guidelines. | 5 |
| 5 | Protocol Writing | Protocol Writing for Submission to Institutional Review Board/Institutional Ethics Committee (IRB/IEC). | 6 |
| 6 | Methods of writing references | Methods of Writing References e.g. Vancouver method, Harvard method. | 6 |
| 7 | Introduction to Statistics & Common Statistical Terminologies | Definitions, Scope & Limitations<br>Terminologies e.g. Population, Sample, Constant, Variable etc. | 2 |

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| 8 | Sources & Types of Data, Data Collection & Presentation. | Primary, Secondary<br>Quantitative & Qualitative<br>Measurement scale of data Surveys, Records, etc.<br>Tabulation & Graphs. | 6 |
| 9 | Measures of Central tendency & Location. | Mathematical Averages<br>Positional Averages. | 2 |
| 10 | Variability & its Measures | Range, Quartile deviation, Mean deviation,<br>Standard deviation, Coefficient of variation<br>SEM, SEP. | 2 |
| 11 | Probability | Definitions<br>Addition theorem of probability<br>Multiplication theorem of probability | 2 |
| 12 | Normal Distribution &<br>Normal Curve. | Construction<br>Properties<br>Use & significance<br>Skewness in distribution. | 2 |
| 13 | Sampling, Sampling<br>Variability & its Significance. | Methods of sampling<br>Errors in sampling | 4 |
| 14 | Sample Size Calculation. | Quantitative: finite & infinite population<br>Qualitative: finite & infinite population. | 5 |
| 15 | Tests of Significance – I. | Significance of Difference in Means: Z test<br>(for large samples)<br>t test: paired & unpaired (for small samples). | 4 |
| 16 | Tests of Significance – II. | The Chi - Square Test. Goodness of fit & Test of association. | 4 |
| 17 | Correlation & Regression. | Definition & types of correlation<br>Calculation of Pearson's correlation coefficient (r)<br>Simple linear regression | 4 |
| 18 | Demography & Vital Statistics. | Definition<br>Indicators of health & their uses. | 5 |
| 19 | Use of Computers in Biostatistics. | Windows Excel Data Analysis in bio-statistical analysis.<br>Names of various statistical tools and software | 4 |
| 20 | Demonstration and Practice.<br>Reflective writing. | Computer based practice for basic statistical analysis-word processing, spread sheets, tabulation, and Microsoft office access.<br>Identification of Tests for Parametric and Non- Parametric data and statistical formulae as applied to different categories of data. | 25 |

**Field work: 50 Hrs**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT607NQ2017 | Visit to existing Occupational Therapy set-up in one Government and one private setting | 50 | NIL | 2 |

**Examination pattern and division of marks:**

**Theory:**

- **MAIN SUBJECTS:** 100 marks divided between 80 (written examination at end of semester) and 20 (internal assessment based on semester long work presentation),
- **SUBSIDIARY SUBJECTS:** 50 marks divided between 40 (written examination at end of semester) and 10 (internal assessment based on semester long work presentation)

**Practical:**

- **MAIN SUBJECTS:** 100 marks divided into 60 marks (practical exam at end of semester), 20 marks (viva voce), and 20 marks (internal assessment)
- **SUBSIDIARY SUBJECTS:** 50 marks divided into 30 marks (practical exam at end of semester), 10 marks (viva voce), and 10 marks (internal assessment)

# Semester 6

| Sl no | Code | Course title | Theory | Practicals | Max Marks | Credi |
|---|---|---|---|---|---|---|
| 1 | OT601NQ2017 | Promoting OT performance for individuals with complex issues and life situations: Pediatrics | 100 | | 100 | 4 |
| 2 | OT602NQ2017 | Promoting OT performance for individuals with complex issues and life situations: Cardiology and Pulmonology | 100 | | 100 | 4 |
| 3 | OT603NQ2017 | Mental health conditions and Geriatric health: occupational therapy performance | 100 | | 100 | 4 |
| 4 | OT604NQ2017 | Biostatistics and Research Methodology | 100 | | 100 | 4 |
| 5 | OT605NQ2017 | Practicum 1: Occupational Therapy Management 3 | | 150 | 150 | 9 |
| 6 | OT606NQ2017 | Practicum 2: Research: Quantitative, Qualitative and literatures review in group | | 50 | 50 | 3 |
| 7 | OT607NQ2017 | Field Visit: Visit to existing Occupational Therapy set-up in one Government and one private setting. Journal presentation included | | | 50 | 2 |
| | | Total | | | 650 | 30 |

**Marks for Sixth Semester BOT**

| S. No | Subject | Topics | Marks pe topic |
|---|---|---|---|
| 1 | OT performance in Pediatrics (Total marks out of 100) | Conditions of neonates and infants | 20 |
| | | Cerebral Palsy | 20 |
| | | Common Genetic Disorders: Down's syndrome | 30 |
| | | Neural Tube Defects: Meningomyelocele, Spinal Dysraphism, Diastomatomyelia, Hydrocephalus, Arnold Chiari Malformation | 30 |
| 2 | OT performance in Cardiology & Pulmonology (Total marks out of 100) | Pulmonary conditions | 50 |

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| | | Cardio vascular conditions | 50 |
| 3 | OT performance in Mental Health & Geriatrics (Total marks out of 100) | General and Specific Objectives of Psychiatric Occupational Therapy. | 10 |
| | | Theoretic Basis of Occupational Therapy in Psychiatry. | 10 |
| | | Methods of Evaluation in Psychiatric Occupational Therapy. | 10 |
| | | Activity Analysis & Work Fitness Evaluation | 10 |
| | | Types of Therapeutic Media used in Psychiatric Occupational Therapy: | 10 |
| | | Occupational Therapy Intervention Based on Current Practices in Psychiatric Conditions | 10 |
| | | Role of an Occupational Therapist as a Team Member in Various Set ups. | 10 |
| | | Geriatric health | 20 |
| 4 | Biostatistics and Research Methodology (Total marks out of 100) | Types of Research | 5 |
| | | Algorithm of Study Designs and Level of Evidence | 5 |
| | | Review of Literature | 5 |
| | | Ethical Guidelines | 5 |
| | | Protocol Writing | 5 |
| | | Methods of writing references | 5 |
| | | Introduction to Statistics & Common Statistical Terminologies | 5 |
| | | Sources & Types of Data, Data Collection & Presentation. | 5 |
| | | Measures of Central tendency & Location. | 5 |
| | | Variability & its Measures | 5 |
| | | Probability | 5 |

| | | | |
|---|---|---|---|
| | | Normal Distribution & Normal Curve. | 5 |
| | | Sampling, Sampling Variability & its Significance. | 5 |
| | | Sample Size Calculation. | 5 |
| | | Tests of Significance – I. | 5 |
| | | Tests of Significance – II. | 5 |
| | | Correlation & Regression. | 5 |
| | | Demography & Vital Statistics. | 5 |
| | | Use of Computers in Biostatistics. | 5 |
| | | Introduction to Evidence Based practice & Professional reasoning in OT | 5 |

**Practicum Mark:** Occupational Therapy Management 3: Total 150 marks

| S.No. | Topic | | Total m |
|---|---|---|---|
| 1 | Occupational Therapy Management 3 | | |
| | | Treatment protocol for Pediatric conditions | 30 |
| | | Treatment protocol for Cardio-Pulmonary conditions | 30 |
| | | Treatment protocol for Mental Health/Geriatric condition | 30 |
| | Viva | 10 marks per subject | 30 |
| | Journal + Internal Assessment | 10 marks per subject | 30 |
| 2 | Research: Quantitative, Qualitative and literatures review in group | | |
| | | Presentation of one study on topic of student's choice | 30 |
| | Viva | | 10 |

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|---|---|---|---|
| | Journal + Internal Assessment | Statistical data collection and quantification of data presented on the study | 10 |

# SEMESTER SEVEN

**Theory**

| Sl no | Code | Course title | No. of Notional Learning Hours | *Pre-requisite Unit, if any | Credit |
|---|---|---|---|---|---|
| 1 | OT701NQ2017 | Advanced therapeutic techniques | 105 | NIL | 4 |
| 2 | OT702NQ2017 | Management and supervision of OT services | 105 | NIL | 4 |
| 3 | OT703NQ2017 | People in Pain | 105 | Nil | 4 |
| 4 | OT704NQ2017 | International approaches in Rehab | 105 | Nil | 4 |
| Total | | | 420 | 16 | |

**Practicum**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT705NQ2017 | 10 Case studies | 200 | NIL | 6 |
| 2 | OT706NQ2017 | Physical agent modalities | 125 | NIL | 3 |
| 3 | OT707NQ2017 | International approaches and sexual function interventions (PECS,Movt.therapy, Biofeedback, ABA,Brain gym, Montessori ) | 125 | NIL | 3 |
| Total | | | 450 | | 12 |

**Field work**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credit |
|---|---|---|---|---|---|
| 1 | OT708NQ2017 | Group demonstrations of Life Skills via Role Play | 50 | NIL | 2 |

**OT701NQ2017: Advanced therapeutic approaches: 105 Hrs**

| S.NO | Areas | Contents | Hours |
|---|---|---|---|
| 1 | Wellness Programs & Preventive Therapy. | Definition of health, health promotion and wellness.<br>Role of an occupational therapist in wellness programs and preventive therapy.<br>Community groups -<br>Prevention in Cardiac patients,<br>Joint Protection techniques in women, Rheumatoid Arthritis,<br>Psychosocial training in chronic illness,<br>Weight management,<br>Mother and child care groups.<br>Fall prevention to enhance mobility and safety.<br>Driving: Prerequisites for driving- visual perceptual assessment and training. | 18 |
| 2 | Stress Management | Definitions, types and physiology of stress.<br>Stress factors, stress response and techniques in stress management. | 18 |
| 3 | Introduction to Human Sexuality in relation to Disability Management in Occupational Therapy. | Definition of sexuality. Sexuality developmental milestones & response cycle.<br>Role of nervous system in Sexual functions, effect of nervous, cardiac & pulmonary dysfunctions on sexual functioning.<br>Levels & formats provided to patients regarding sexual counseling appropriate to Occupational Therapy.<br>Models of intervention in sexual problems.<br>PLISSIT MODEL. | 18 |
| 4 | Physical Agent Modalities,<br>Botox Management in Occupational Therapy | Principles and regulatory guidelines for the use of physical agent modalities.<br>Introduction, clinical application, precautions and contraindications of various physical agents such as thermal modalities, electrotherapy and therapeutic ultrasound and laser therapy. | 21 |

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|---|---|---|---|
| 5 | Vision Therapy | Definition - Protocols, uses – needs, Types of Vision Therapy programs, Occupational Therapy and Vision Therapy as a combination for functional restoration of vision | 10 |
| 6 | Life skill training | Life skills- core life skills strategies and techniques-<br>Components of life skills- criteria for using life skills-<br>Impact of life skills -Exploring life skills- Decision making- steps involved in decision making, Problem solving, Managing emotions, Creative Thinking,<br>Critical thinking, Communication and Interpersonal skills<br>Self awareness (Self Concepts), Empathy, Coping with stress, Money Management, Employability/ Readiness skills, Skills for Self Employed | 20 |

**OT702NQ2017 Management and Supervision of OT services: 105 Hrs:**

This course prepares students for work as occupational therapy practitioners in changing workplace contexts. It prepares students for full time professional practice placements working as an occupational therapy practitioner by addressing self-management, practitioner health wellness, performance assessment, setting personal objectives, developing documentation skills. Advanced communication issues related to complex cultural clinical situations are addressed such as managing clients who are angry, emotionally distressed, managing team dynamics, cultural dynamics and providing/receiving feedback. Included in this course is an application of major management principles to the provision of occupational therapy services with an emphasis on the administrative and supervisory requirements in managing an occupational therapy department. Information provided concerning program planning, recruitment, marketing, budgeting, supervision, documentation, evaluation, reimbursement, and quality assurance.

| S.NO | TOPICS | CONTENTS | DIDAC HOURS |
|---|---|---|---|
| 1 | Service Management: Functions and Strategies | i. Definition of administration.<br>ii. Management styles.<br>iii. Management by Objectives.<br>iv. Hierarchy in Organization.<br>v. Organizational Pattern.<br>vi. Job description.<br>vii. Job Specification.<br>viii. Policies and procedures.<br>ix. Productivity. | 9 |
| 2 | Quality Assurance | i. What is Quality Assurance?<br>ii. Quality Assurance History.<br>iii. Utilization Review.<br>iv. Program Evaluation.<br>v. Quality Assurance Monitoring. | 9 |

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|---|---|---|---|
| 3 | Fiscal Management | i. Budgeting.<br>ii. Type of Budgeting, Process and methods.<br>iii. Balance sheet.<br>iv. Direct versus indirect costs.<br>v. Chart of accounts. | 8 |
| 4 | Logistics Management | Purchase Ordering and maintenance of equipments, materials, furniture and buildings | 8 |
| 5 | Marketing | i. Marketing plan.<br>ii. Consumer research | 8 |
| 6 | Documentation | i. Guidelines for documentation.<br>ii. Relevant, Understandable, Measurable, Behavioral Assessment (RUMBA).<br>iii. Problem Oriented Medical Record(POMR).<br>iv. Subjective Objective Assessment and Planning.(SOAP).<br>v. SMART<br>vi Goal Attainment Scale (GAS).<br>vii Computerized documentation. | 8 |
| 7 | Annual Reports and Statistics. | Method of calculating monthly and annual statistics. Outline method of writing OT department annual reports. Making plans for future requirements based on statistics: eg. Staff patient ratio, equipment and staff requirements. | 8 |
| 8 | Considerations for construction of a new department, and modification of an old department | a) Space required<br>b) Allotment of space, e.g.<br>C) Accessibility, plumbing requirements, & circulation of air. | 9 |
| 9 | Safety precautions in OT | Discuss considerations relating to the following:<br>General Safety Recommendations in the OT department: eg. Moving patients, training attenders and “helpers”, while doing activities outside, when using sharp hand tools, while using machinery and electrical equipments.<br>Fire Safety<br>Safety precautions in relation to patients with physical conditions like Leprosy, Hemiplegia, Paraplegia, back injuries, Cerebellar dysfunction; Psychiatric Disorders, Epilepsy, Mental Retardation, suicidal patients and pediatric conditions like ADHD, Haemophilia. | 8 |
| 10 | Staff Management, Supervision and Development | Supervision: Methods and Types of Supervision:<br>Formal/Informal, Direct /Indirect, Administrative, Clinical etc.<br>Mentoring,<br>Performance evaluation and appraisal<br>Leadership<br>Professional development<br>Staff Meeting: Purpose of staff meetings | 7 |

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|---|---|---|---|
| 11 | Planning Teaching methods | Adult training methodologies for assistants and OT students in the clinical situation. | 7 |
| 12 | Home Care and Private practice | Home care delivery model, its implementation, parameters of Homecare, delivery service, skills required for effective practice, constraints, influence of various issues that shape home care practice.<br>Role of Occupational Therapy practitioner in private practice. | 8 |
| 13 | Managing Complex Clinical, Cultural & Communication Issues | Advanced communication issues related to complex cultural clinical situations are addressed such as managing clients who are angry, emotionally distressed, at risk of harm to self and others. Managing team dynamics, cultural dynamics and providing/receiving feedback and practitioner health wellness. | 8 |

**OT703NQ2017: People in Pain – An Occupational Therapy Perspective: 105 Hrs:**

Objective:

Upon completion of this course, the entry-level occupational therapist will:

1. Understand current theories of the anatomical, neurological, physiological, developmental, social, psychological, cultural, and spiritual components of pain, pain related functional interference and management of daily life, and the ramifications for activity restrictions.
2. Recognize the differences between acute and persistent pain and their implications for assessment and management of daily life.
3. Understand how age, sex/gender, family, culture, spirituality, the environment and social determinants of health contribute to the pain experience and the consideration of these aspects in assessment and management of pain and pain related loss of function.
4. Be able to assess the pain experience, pain related loss of function, and resulting therapeutic needs for an individual according to an occupational therapy framework
5. Be familiar with the reliability, validity, benefits, and limitations of self-report, behavioural, and physiological measures to assess and measure pain, pain experience, and interference of pain in everyday life.
6. Be able to combine assessment and an awareness of the social determinants of health with client identified activity goals, and understand the importance of re-evaluation of these goals on a short and long term basis.
7. Critically appraise pain assessment tools, intervention strategies, and outcome measures.
8. Understand the prevention of pain problems in the home and workplace within a framework of health promotion and illness prevention.
9. Be familiar with the roles and responsibilities of other health care professionals in the area of pain management and the merits of interdisciplinary collaboration.

| S.NO | AREAS | CONTENTS | DIDACT HOURS |
|---|---|---|---|
| 1 | I. Multidimensional Nature of Pain (34 Hours) | | |
| | A. Introduction | 1. Definition of pain as a complex phenomenon and a multidimensional experience<br>2. Epidemiology of pain as a public health problem with social, ethical, and economic considerations<br>3. Barriers affecting occupational performance and activities in daily life, and impacting participation due to living with pain<br>4. Ethical and legal standards in pain rehabilitation, prevention and advocacy | 4 |
| | B. Historical theories | 1. Descartes' theory of pain<br>2. Gate Control Theory of pain<br>3. Neuromatrix<br>4. Bio-psychosocial Model of Pain | 2 |
| | C. Physiological basis of pain | 1. Peripheral and central mechanisms of pain (including nociceptive events, ascending and descending pathways, effects of inflammation and tissue damage on nociceptors, nerve trauma and entrapment, central and peripheral sensitization, referred pain)<br>2. Physiological and pathological effects of unrelieved pain<br>3. Postural and ergonomic components (in home, work and leisure contexts)<br>4. Impact of co-morbidities<br>5. Fatigue | 6 |
| | D. Distinction among acute, breakthrough, and persistent pain | 1. Definitions and classifications<br>2. Impact on physiology of pain and psychological response to pain<br>3. Pain threshold, pain tolerance, and pain endurance | 3 |

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| | E. Psychological, behavioral, social and spiritual components of the pain experience, their relation to daily life activities and relationship to acute or chronic nature of pain | 1. Anxiety, avoidance, crisis reactions, stress, catastrophizing, life adjustment process<br>2. Impact on spirituality and meaningfulness, hope and hopelessness and its consequences for daily life<br>3. Psychological effect of unrelieved pain on perceptions of control and self-efficacy<br>4. Depression, wish to die, suicidal risks<br>5. Impact of persistent pain on occupational performance (function and activity) and quality of life<br>6. Barriers to effective pain communication<br>7. Suffering and pain | 5 |
| | F. Social Determinants of Health and Pain: Overview | 1. Economic factors<br>2. Educational factors<br>3. Work environments<br>4. Ethnicity and cultural factors<br>5. Sex and gender influences on pain experience<br>6. Pain management as an economic commodity | 5 |
| | G. Pain across the lifespan | 1. Pain in infancy, childhood, and adolescence<br>2. Pain in the older people<br>3. Pain in people with profound and multiple impairments<br>4. Family influences | 3 |
| | H. Health care environments and pain experience | 1. Person-centered care<br>2. Encounters in health care and consequences for the client | 2 |
| | I. Interaction of physiological basis of pain with psychological and environmental components | 1. Impact on pain perception, communication, meaning construction and pain response | 4 |
| 2 | II. Pain Assessment and Measurement (35 Hours) | | |

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| | | A. Occupational therapy assessment of pain impact on daily life and quality of life<br>• activity patterns<br>• time use<br>• goal fulfillment<br>• changes in routines<br>• habits<br>• roles<br>• skills related to goal-fulfillment | 5 |
| | | B. Assessment and measurement appropriate to client with communication problems due to age, language, or physical/cognitive difficulties | 5 |
| | | C. Use of International Classification of Functioning, Disability and Health | 5 |
| | | D. Evaluation of utility, reliability, and validity of measures of pain and related function. | 5 |
| | | E. Recognition of self-report measures as the gold standard:<br>• pain intensity<br>• location<br>• quality<br>• temporal variation<br>• chronology of pain<br>• relieving or aggravating factors | 5 |
| | | F. Use of behavioral and physiological measures of pain | 5 |
| | | G. Use of standardized baseline and repeat measures of pain related interference with function and quality of life | 5 |
| | III. Management of Pain (26 Hours) | | |
| | | A. Conduct person-centered intervention through collaborative activity goal setting using concepts and strategies from clinical reasoning | 2 |
| | | B. Utilize principles of critical research appraisal and application to clinical decision making | 1 |

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|---|---|---|---|
| | | C. Consider principles of a therapeutic milieu to promote optimal quality of life based on:<br>• relationship of trust, respect for client's meaning and construction of pain<br>• patient's goals and shared decision making<br>• focus on self-efficacy and personal autonomy<br>• facilitation of active coping<br>• Use of Deep Relaxation Technique | 2 |
| | | D.<br>• Develop a daily routine to support readjustment of habits and roles considering individual capacity, goals and life situation<br>• modify physical and psychosocial factors that contribute to pain related loss of function or negative consequences of pain on daily life<br>• structure psychosocial and physical environments to facilitate goal attainment<br>• involve family members and significant others<br>• encourage active versus passive participation<br>• facilitate pain health literacy (including communication and expression strategies)<br>• provide the patient with skills for health system navigation | 6 |
| | | E. Conceptualize service delivery as an interdisciplinary team process within the bio-psychosocial and persistent disease management models. | 1 |
| | | F. Promote the patient's awareness of the social determinants of health and a macro analysis of chronic pain as a social, public health issue that requires intervention at the patient, policy and advocacy levels | 2 |
| | | G. Consider management strategies according to nature of pain (acute, recurrent, or persistent) and the client's statement of needs/goal expectation | 1 |
| | | H. Utilize individual and group approaches for education, support, self-efficacy and advocacy | 1 |

| | | | |
|---|---|---|---|
| | | I. Incorporate cognitive-behavioral interventions in client's occupations and activities<br>• short and long-term goals<br>• coping strategies and appraisal<br>• cognitive restructuring<br>• distraction<br>• relaxation<br>• visual imagery<br>• mindfulness based strategies | 2 |
| | | J.<br>• Utilize persistent disease self-management programs<br>• Use occupations and activities with meaning to the client<br>• Incorporate activity tolerance, energy conservation, pacing, use of pain management strategies and therapeutic modalities to promote activity, relapse prevention and management)<br>• Discuss sleep and sleep hygiene<br>• Address intimacy and sexuality<br>• Include back care | 3 |
| | | K. Evaluate the utility of various assistive devices, adaptive equipment and splinting considering joint protection, promotion of function, prevention of harm and disability | 1 |
| | | L. Develop plans for reintegration into work (paid and unpaid employment) using client's goals | 2 |
| | | M. Encourage pain health literacy education including finding, accessing, and evaluating health resources required to assume an active role in health self-management | 1 |
| | | N. Provide advocacy at the policy and service delivery level | 1 |

| | | | |
|---|---|---|---|
| | IV. Clinical Conditions | 1. Migraine, tension or mixed headache<br>2. Musculoskeletal pains (e.g low back pain, arthritis)<br>3. Pain associated with burns<br>4. Pain in progressive disease, terminal illness (cancer), palliative care<br>5. Pain associated with neurological conditions<br>6. Complex regional pain syndrome, myofascial pain syndrome, fibryomyalgia<br>7. Phantom limb pain | 10 |

**OT704NQ2017: Complementary therapies (International approaches) in Rehabilitation: 105Hrs**

| S.NO | Areas | Contents | Hours |
|---|---|---|---|
| 1 | Bio-feedback | Definition of biofeedback.<br>Principles, foundations and elements of biofeedback system.<br>Neurophysiological clinical reasoning in biofeedback system.<br>Types of biofeedback system and clinical applications with advantages of biofeedback system as an adjunct to Occupational Therapy | 12 |
| 2 | Applied Behavioral Analysis and PECS, Anat Baniel method. Moshé Feldenkrais Alexander technique, | Information on Dr. Feldenkrais method, Anat Baniel method. Use of ABA. PECS as part of the communication system. Plasticity of the brain and use of different movement techniques | 14 |
| 3 | Brain Gym, Montessori method, Steiner method (Anthroposophical society of India) | At the end of this course you will know: What is Brain Gym? Who started Brain Gym? What are the different exercises? What is the premise behind Brain Gym?<br>Dr. Maria Montessori, work in OT. Current trends in Montessori method. Steiner method and ASI | 12 |
| 4 | Aquatic Therapy | Overview, techniques, applications and effectiveness, professional training and certifications | 12 |
| 5 | Reiki, Pranic healing, Acupressure and Acupuncture. | Different energy healing techniques, advantages, disadvantages, science behind the techniques | 12 |
| 6 | Animal assisted therapies | What is AAT? Science behind its use. How should it complement Occupational Therapy | 5 |

| | | | |
|---|---|---|---|
| 7 | The Listening Program and Auditory Integration | What is Sound? What is psycho acoustics? What is the Tomatis Method? What is the TLP? Uses and implications? | 14 |
| 8 | Sensory Enrichment Therapy | The following topics will be covered<br>1. Brain structure and neurons<br>2. Brain function in controlling development and behavior<br>3. Brain chemistry (how neurons communicate)<br>4. Brain plasticity<br>5. Environmental Enrichment (EBP support for impact of change in environment on brain),<br>6. Development of Sensory Enrichment Therapy<br>7. Sensory Enrichment Therapy Principles).<br>8. SET in practice- Multisensory Core protocol and Sensory Enrichment Foundation<br>9. What progress looks like with SET | 12 |
| 9 | Technology augmented rehabilitation | 1. Requirement of technology in rehabilitation<br>2. Current technology support for rehabilitation- Neurorehabilitation, Orthopaedic rehabilitation, paediatric rehabilitation, Cardio- Pulmonary rehabilitation<br>3. Conceptualizing new technology- need of new Mechatronic technology against the existing options.<br>4. Low cost affordable device design- patient friendly and cost effective technology<br>5. Modifying existing technology<br>6. Patenting a technology- Necessary documentation process | 12 |

**Practicum**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credit |
|---|---|---|---|---|---|
| 1 | OT705NQ2017 | 10 Case studies | 200 | NIL | 6 |
| 2 | OT706NQ2017 | Physical agent modalities | 125 | NIL | 3 |
| 3 | OT707NQ2017 | International approaches and sexual function interventions (PECS,Movt.therapy, Biofeedback, ABA,Brain gym, Montessori ) | 125 | NIL | 3 |
| Total | | | 450 | | 12 |

**OT705NQ2017: 10 CASE STUDIES: 200 Hrs:**

| S.NO | TOPIC | CONTENTS | PRACTICA HOURS |
|---|---|---|---|
| 1 | Case presentation during department rotations | Student has to conduct complete Occupational Therapy assessment including in-depth history taking and submit detailed Occupational Therapy plan. They will present the cases during their respective postings at each department. | 15 HOURS p case for assessment and follow- 5 HOURS pe case for written submission and presentatio |

**OT706NQ2017: Physical agent modalities: 125 Hrs**

| S.NO | AREAS | CONTENTS | PRACTICA HOURS |
|---|---|---|---|
| 1 | Physical agents: Demonstration, practice on peers, models and patients, clinical and simulated case presentations followed by interactive discussions to elicit clinical reasoning. | Practice of TENS, Ultrasound,thermal modalities, laser, Neuromuscular electrical stimulation (NMES), IFC as adjunct to Occupational therapy intervention to improve task performance | 125 |

**OT707NQ2017: Complementary Therapies (International approaches) and Advanced approaches in Occupational Therapy: 125 Hrs**

| S.NO | AREAS | CONTENTS | PRACTICA HOURS |
|---|---|---|---|
| 1 | Bio-feedback | Seminar presentation with practical demonstration in batches of 2 students each | 16 |
| 2 | PECS | Prepare simple PECS books for adult and pediatric patients | 10 |
| 3 | Movement Therapy and Vision Therapy | Seminar presentation with practical demonstration in minimum batches of 2 students each | 10 |
| 4 | Applied Behavior Analysis and Montessori education | Seminar presentation with practical demonstration in minimum batches of 2 students each | 10 |

| | | | |
|---|---|---|---|
| 5 | Brain Gym | Demonstration of Brain Gym exercises | 10 |
| 6 | Sensory Enrichment Therapy | Seminar presentation with practical demonstration in minimum batches of 2 students each | 20 |
| 7 | Human Sexuality in relation to Disability Management in Occupational Therapy | Presentation of 2 case studies with detailed Sexual History, Identification of problem/cause of sexual dysfunction, Recommendations, Intervention methodology | 14 |
| 8 | Technology | Eg. Field visit to a Mechatronics Laboratory with report submission | 15 |
| 9 | Sensory Integrative Therapy | Seminar presentation with practical demonstration in minimum batches of 2 students each | 20 |

**OT708NQ2017: Field work: 50 hrs**

| Sl no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Cred |
|---|---|---|---|---|---|
| 1 | OT708NQ2017 | Group demonstrations of Life Skills via Role Play | 50 | NIL | 2 |

**Examination pattern and division of marks**

**Theory:**

- **MAIN SUBJECTS:** 100 marks divided between 80 (written examination at end of semester) and 20 (internal assessment based on semester long work presentation),
- **SUBSIDIARY SUBJECTS:** 50 marks divided between 40 (written examination at end of semester) and 10 (internal assessment based on semester long work presentation)

**Practical:**

- **MAIN SUBJECTS:** 100 marks divided into 60 marks (practical exam at end of semester), 20 marks (viva voce), and 20 marks (internal assessment)
- **SUBSIDIARY SUBJECTS:** 50 marks divided into 30 marks (practical exam at end of semester), 10 marks (viva voce), and 10 marks (internal assessment)

## Semester 7

| Sl no | Code | Course title | Theory | Practicals | Max Marks | Credi |
|---|---|---|---|---|---|---|
| 1 | OT701NQ2017 | Advanced therapeutic techniques | 100 | | 100 | 4 |
| 2 | OT702NQ2017 | Management and supervision of OT services | 100 | | 100 | 4 |
| 3 | OT703NQ2017 | People in Pain | 100 | | 100 | 4 |
| 4 | OT704NQ2017 | International approaches in Rehab | 100 | | 100 | 4 |
| 5 | OT705NQ2017 | Practicum 1: 10 Case studies | | 100 | 100 | 6 |
| 6 | OT706NQ2017 | Practicum 2: Physical agent modalities | | 50 | 50 | 3 |
| 7 | OT707NQ2017 | Practicum 3: Complementary Therapies (International approaches) and Advanced approaches in Occupational Therapy | | 50 | 50 | 3 |
| 8 | OT708NQ2017 | Group demonstrations of Life Skills via Role Play: Journal presentation included | | | 50 | 2 |
| | | Total | | | 650 | 30 |

**Marks for Seventh Semester BOT**

Theory:

| S. No | Subject | Topics | Mark per top |
|---|---|---|---|
| 1 | Advances in Therapeutic Approaches (Total marks out of 100) | Wellness Programs & Preventive Therapy. | 20 |
| | | Stress Management | 20 |
| | | Introduction to Human Sexuality in relation to Disability Management in Occupational Therapy. | 20 |
| | | Physical Agent Modalities. | 20 |

| | | | |
|---|---|---|---|
| | Internal Assessment | | 20 |
| 2 | Management and supervision of OT services (Total Marks out of 100) | Service Management: Functions and Strategies | 6 |
| | | Quality Assurance | 7 |
| | | Fiscal Management | 6 |
| | | Logistics Management | 6 |
| | | Marketing | 6 |
| | | Documentation | 6 |
| | | Annual Reports and Statistics. | 6 |
| | | Considerations for construction of a new department, and modification of an old department | 6 |
| | | Safety precautions in OT | 7 |
| | | Staff Management, Supervision and Development | 6 |
| | | Planning Teaching methods | 6 |
| | | Home Care and Private practice | 6 |
| | | Managing Complex Clinical, Cultural & Communication Issues | 6 |
| | Internal Assessment | | 20 |
| 3 | People in Pain (Total marks out of 100) | Nature of Pain | 20 |
| | | Assessment of Pain | 20 |
| | | Management of Pain | 20 |
| | | Clinical conditions | 20 |
| | Internal Assessment | | 20 |
| 4 | International approaches in Rehabilitation (Total marks out of 100) | Different approaches in Rehabilitation | 40 |

| | | | |
|---|---|---|---|
| | | Sensory Enrichment Therapy | 20 |
| | | Technology Augmented Rehabilitation | 20 |
| | Internal Assessment | | 20 |

**Practicum:**

| S. No. | Topic | Contents | Mark |
|---|---|---|---|
| 1 | 10 Case Studies (Total marks 100) | For each case study marks are given as follows: (10 marks per case study) | |
| | | Presentation | 5 |
| | | Written submission | 2.5 |
| | | Viva | 2.5 |
| 2 | Physical agent modalities (Total marks out of 50) | Demonstration | 30 |
| | Viva | | 10 |
| | Journal + Internal Assessment | | 10 |
| 3 | Complementary Therapies (International approaches) and Advanced approaches in Occupational Therapy (Total marks out of 50) | Demonstration + Viva | 30 |
| | Viva | | 10 |
| | Journal + Internal Assessment | | 10 |

# SEMESTER EIGHT

**Theory:**

| S.no | Code | Course title | No. of Notional Learning Hours | *Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT801NQ2017 | Elective 1 | 100 | NIL | 4 |
| 2 | OT802NQ2017 | Elective 2 | 100 | NIL | 4 |
| 3 | OT803NQ2017 | Dissertation: Self-study with guide | 220 | NIL | 8 |
| Total | | | 420 | 16 | |

**Practicum:**

| S.no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Cred |
|---|---|---|---|---|---|
| 1 | OT804NQ2017 | Elective 1 | 110 | NIL | 3 |
| 2 | OT805NQ2017 | Elective 2 | 110 | NIL | 3 |
| 3 | OT806NQ2017 | Dissertation: Practicum | 230 | NIL | 6 |
| Total | | | 450 | | 12 |

**OT807NQ2017: Field work:**

| S.no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Cred |
|---|---|---|---|---|---|
| 1 | OT807NQ2017 | Seminar | 50 | NIL | 2 |

## Elective courses / Choice based courses: Each 4 credits

**Elective 1 option : Choose any one of the following:**

1. Telehealth: For service delivery of Occupational Therapy

   Telehealth is defined as "the application of evaluative, consultative, preventative, and therapeutic services delivered through telecommunication and information technologies". Telehealth include both synchronous (live) and asynchronous (store and forward) technologies services provided by rehabilitation professionals.

   Objectives:

   - Enable student to develop a telemedicine Program - Designed to give a broad overview of a variety of telemedicine topics, including: clinical services, telecommunications and infrastructure development/operations, distance education, evaluation, business aspects and equipment demonstration.
   - Develop expertise in telemedicine Applications - Offers a more detailed approach for any telemedicine program, providing a more in-depth look at the clinical applications of a tele-health program.

2. Public Speaking:

   Objective and Learning outcomes

   This is a performance course which intends to familiarise students with the preparation and delivery of various speeches including informative and persuasive speeches. Students will research, outline and deliver speeches, as well as act as critics of their own, fellow students', and famous speakers' work. The course aims to reduce students' anxiety in public presentations, emphasise speech preparation, enhance public speaking skills, and make students better able to evaluate their own performance and that of others. By the end of the semester, all students should:

1. Become aware of personal speech habits and characteristics. To increase your confidence.
2. Improve posture, voice, diction and other mechanics of speech.
3. Develop speech preparation and presentation techniques, audience awareness and self-awareness.
4. Cultivate poise and self-confidence.
5. Present a variety of speeches (informative, persuasive, demonstrative, special occasion, etc.)

**3.** Social entrepreneurship :

Objective of the course:

Students in this course will gain knowledge about social entrepreneurs and how they are creating solutions to address societal problems, learn how to develop creative solutions to

address social problems in Occupational therapy and empower students to see social entrepreneurship as a force for social change. The course is designed for student if she/he want to gain valuable tools to prepare her/him to make an impact on the lives of others.

**Elective 2 options: Choose any one of the following:**

1. **Neuro Lingustic Programming:**

   Objective and Learning Outcomes:

   Neuro Linguistic Programming or NLP is often referred to as The Art and Science of Excellence and is a powerful understanding of how the mind works, how language impacts our thinking and behaviours and how we can change our thinking, communication and behaviours to improve the quality of our lives.

   - Conscious vs Unconscious Mind : Understand the difference between the working of the conscious and unconscious mind and learn to tap into the power of the Unconscious mind.
   - Strategies of Excellence : Unveil the specific mental strategies that are used to make better decisions, create more powerful feelings, get motivated and replicate the processes when desired.
   - Sensory Acuity : Tune up senses to enable to see, hear and feel much more of the world
   - Understanding Language : The way we use words and language has a tremendous impact on our thinking. Learn the key distinctions in using language to make an enormous difference in the performance of all around us.

**2. Advanced Spasticity management**

1. Defining Spasticity(Revision)- Peadiatric onset vs adult onset rehabilitation spasticity, Brain injury vs SCI
2. Neuroscience of spasticity- Why higher centres loose motor control?
3. Impact of spasticity- Occupational perspectives( ICF model) – Story based teaching
4. Neuromodulation- What is neuromodulation? When should neuromodulation be used?
5. Advanced methods of managing spasticity-
   - Botulinium toxin
   - Baclofen- Oral versus Intrathecal
   - Neuro ablative surgeries
   - Selective peripheral Neurotomy
   - Hyperbaric Oxygen Therapy

- Trans-cranial magnetic Brain Stimulation

Each technique should be discussed under the following headings:

- What is the rationale for the technique?
- How should the patient be selected for the technique?
- What is the possible rehabilitation outcome for the patient depending on EBP and clinical experience?

**3. Advanced Behavioural Interventions**

Objective of the course is empower occupational therapy students to the domains of concern which expands in the last two decades and the Interventions are evolving to address the concern.

- Discuss the environmental barriers in relation to functioning of Adults with Developmental Disabilities and the potential facilitators.

- Discuss the following Behavioural Addictions in relation to the salient features of each compulsive behaviour, neurobiology behind it, and the interventions enabling adequate functioning of the individual.
    a. Gambling
    b. Use of Internet
    c. Gaming Addiction
    d. Excessive Shopping
    e. Sex Addiction
    f. Exercise Addiction
    g. Food Addiction

- Discuss Trans-theoretical model of Change and its importance in adaptive behaviour and optimal functioning
- Motivational Interviewing and Motivational Enhancement Therapy
- Discuss the process and student specific strategies for behavioural concerns/issues in classroom

**OT807NQ2017: Field work: 50 Hrs**

| S.no | Code | Course title | No. of Notional Learning Hours | Pre-requisite Unit, if any | Credits |
|---|---|---|---|---|---|
| 1 | OT807NQ2017 | Seminar: Presentation and written work | 50 | NIL | 2 |

Students are expected to conduct a half a day seminar on topics of their choice, in groups of 2/3/4/5 depending on the number of students (no more than 8 groups).

**Examination pattern and division of marks:**

**Theory:**

- **MAIN SUBJECTS:** 100 marks divided between 80 (written examination at end of semester) and 20 (internal assessment based on semester long work presentation),
- **SUBSIDIARY SUBJECTS:** 50 marks divided between 40 (written examination at end of semester) and 10 (internal assessment based on semester long work presentation)

**Practical:**

- **MAIN SUBJECTS:** 100 marks divided into 60 marks (practical exam at end of semester), 20 marks (viva voce), and 20 marks (internal assessment)
- **SUBSIDIARY SUBJECTS:** 50 marks divided into 30 marks (practical exam at end of semester), 10 marks (viva voce), and 10 marks (internal assessment)

## Semester 8

| S.no | Code | Course title | Theory | Practical | Max Marks | Credits |
|---|---|---|---|---|---|---|
| 1 | OT801NQ2017 | Elective 1 | 100 | | 100 | 4 |
| 2 | OT802NQ2017 | Elective 2 | 100 | | 100 | 4 |
| 3 | OT804NQ2017 | Elective 1 | | 50 | 50 | 3 |
| 4 | OT805NQ2017 | Elective 2 | | 50 | 50 | 3 |
| 5 | OT806NQ2017 | Dissertation Presentation | | 300 | 300 | 14 |
| 6 | OT807NQ2017 | Seminar: Presentation and written work | | | 50 | 2 |
| | | **Total** | | | **650** | **30** |

**Marks for Eight Semester BOT:**

**Theory:**

| S. No | Subject | Topics | Marks per topic |
|---|---|---|---|
| 1 | Elective 1 | Content as per subject – written examination | 40 |
| | | Internal Asssessment | 10 |
| 2 | Elective 2 | Content as per subject – written examination | 40 |
| | | Internal Assessment | 10 |

**Practicum:**

| | | | |
|---|---|---|---|
| 1 | Elective 1 (Total marks out of 50) | Demonstration | 30 |
| | | Viva | 10 |
| | | Journal + Internal assessment | 10 |
| 2 | Elective 2 (Total marks out of 50) | Demonstration | 30 |
| | | Viva | 10 |
| | | Journal + Internal assessment | 10 |
| 3 | Research leading to Dissertation (Total marks out of 300) | Presentation of Dissertation: Oral | 100 |
| | | Presentation of Dissertation: Journal | 125 |
| | | Viva on Dissertation | 75 |

# Basic Sciences Practical Examination Format

# for

# Occupational Therapy

## I/ Human Anatomy:

**THEORY**

- Distribution of maximum marks for the subject having 100 marks shall be : University exam- 80 marks, internal assessment- 20 marks.
- Internal Assessment: As per University pattern, one exam at the end of each term. Average of total marks obtained to be considered for internal assessment.
- Duration of paper: 3 Hours.
- Scheme of theory exam to be conducted out of 80 marks

**PRACTICAL EXAMINATION**

- Total marks 100 : University Exam 80 + Internal Assessment.-20
- Internal Assessment: One exam at the end of each term. Average of total marks obtained to be considered for Internal Assessment.
- PRACTICAL 80 MARKS + I.A. – 20 MARKS

**A. Spots**: Total Marks: 60

Based on:

i. Musculoskeletal (5x3) = 15 marks
ii. Organ Systemic (5x3) = 15 marks
iii. Neuroanatomy (5x3) =15 marks
iv. Soft parts of thorax, spine, neck UL,LL(5x3=15)

**B. Viva**: Total Marks: 15

i. Hard parts

ii. Soft parts

**C. Journal** Year work on practical performed: 05, Total 80 marks

## II/ Human Physiology

### THEORY

- Distribution of maximum marks for the subject having 100 marks shall be : University exam- 80 marks, internal assessment- 20 marks.
- Internal Assessment: As per University pattern, one exam at the end of each term. Average of total marks obtained to be considered for internal assessment.
- Duration of paper: 3 Hours.
- Scheme of theory exam to be conducted out of 80 marks

### PRACTICAL EXAMINATION

- Total marks 100 : University Exam for 80 + Internal Assessment for 20
- Internal Assessment: One exam at the end of each term. Average of total marks obtained to be considered for Internal Assessment.
- PRACTICAL 80 MARKS + I.A. – 20 MARKS

**A. Spots Based on:** PRACTICAL TOPICS: (10 X 2 Marks): Total Marks: 20

1. Haematology – (demonstration only)
2. GRAPHS
    a. Skeletal muscle and its properties
    b. Cardiac muscle-properties-effect of Ach & Adrenaline
3. Blood pressure- effects of change in posture & exercise
4. Examination of pulse
5. Spirometry
    a. Lung volumes and capacities
    b. Timed vital capacity
6. Perimetry
7. Physical fitness
    a. Breath holding
    b. Mercury column test
    c. Cardiac efficiency test- Harvard step test- Master step test
8. Bicycle Ergometry
9. Clinical examination: History taking and general examination /Respiratory system / cardio vascular system / Higher functions /Cranial nerves /Reflexes / Motor & Sensory system, cerebellar function test.

**B. Viva**: Total Marks: 20

**C**. **Demonstration** (Clinical Physiology: C.V.S. -10 Marks, R.S. -10 Marks C.N.S. and Cranial Nerves and Special Senses- 15 Marks: Total Marks: 35

**D**. **Journal** Year work on practical's performed: Total Marks: 05 Total