MEENAKSHI

ACADEMY OF HIGHER EDUCATION & RESEARCH

DEEMED TO BE UNIVERSITY U/S 3 OF UGC ACT, 1956

CHOICE-BASED CREDIT SYSTEM (CBCS)

Regulations 2022

BACHELOR OF OCCUPATIONAL THERAPY (BOT) DEGREE PROGRAM

MEENAKSHI FACULTY OF OCCUPATIONAL THERAPY

Effective from the Academic year 2022-23

VISION AND MISSION OF MAHER

Vision

To be a world-class institution, transforming society through value-based diverse programs and healthcare advancements, leading to the all-round development of human resources, knowledge, innovation, entrepreneurship, and research.

Mission

- To become an institute of eminence by developing world-class professionals in the field of healthcare, science, liberal arts, technology, and research with a focus on the societal good.

- To create an enabling state-of-the-art infrastructure, and intellectual capital and provide the bestin-class learning experiencewith a freedom to innovate and invent.

- To foster values and ethics so as to develop students and learners into responsible citizens of the Nation and the world.

VISION AND MISSION OF
FACULTY OF OCCUPATIONAL THERAPY

Vision Statement

The vision of the Faculty of Occupational Therapy is to engage students and faculty in a lively learning community to satisfy the dynamic needs of a community and global society, in order to promote health, well-being and participation in life through occupational engagement and lifelong learning.

Mission Statement

The mission of the Faculty of Occupational Therapy Program is to produce creative, skilled, and ethical occupational therapists.

We meet this mission by:

- Emphasizing the importance of Experiential Learning, Evidence-based practice, and Professional reasoning

- Creating diverse and integrative learning experiences to develop Knowledge and depth of student perspectives

- Fostering collaborative engagement in scholarship and relationships that extends beyond campus to incorporate local and global communities

- Promoting Occupational participation to support health and resilience for individuals, communities and populations

PROGRAM OUTCOME (PO)

At the end of the Bachelor of Occupational Therapy Program, the graduate will attain the following skills

PO 1

Ability to apply the knowledge of basic sciences and clinical conditions and relate it to Occupational Therapy practice

PO 2

Ability to acquire knowledge about the different Frames of Reference and relate it with application in practice

PO 3

Ability to learn and understand assessment methods, tools of practice, intervention principles and techniques in all areas of Occupational Therapy

PO 4

Ability to demonstrate knowledge and ethical responsibilities in all areas of Occupational Therapy Clinical practice

PO 5

Ability to demonstrate the impact of Occupational Therapy knowledge on the society and be aware of the recent trends and research

PROGRAM SPECIFIC OUTCOMES (PSO)

On completion of the program Bachelor of Occupational Therapy the Graduates will have the following attributes as program specific outcomes

PSO 1

Ability to demonstrate clinical reasoning skills and equip oneself to become efficient Occupational Therapists

PSO 2

Ability to apply the acquired theoretical and practical knowledge in collecting data and carrying out research projects at the end of the program

PSO 3

Ability to coordinate with other rehabilitation professionals and learn to contribute as a productive member of the tea

MEENAKSHI ACADEMY OF HIGHER EDUCATION AND RESEARCH

(DEEMED TO BE UNIVERSITY) CHENNAI

Regulations of the University

In exercise of the powers conferred by the Board of Management, Meenakshi University, Chennai here by makes the following Regulations:

1. SHORTTITLE

These Regulations shall be called "THE CBCS REGULATIONS FOR THE BACHELOR OFOCCUPATIONAL THERAPY (BOT) DEGREE PROGRAM OF MEENAKSHI ACADEMYOFHIGHER EDUCATIONANDRESEARCH".

2. COMMENCEMENT

Theyshallcomeintoforcefromtheacademic year 2021-2022onwards.

The Regulations and the Syllabus are subject to modification by the Standing Academic Board from time to time.

3. TITLE OF THE PROGRAM

It shall be called Bachelor of OCCUPATIONAL THERAPY (BOT)

4. ELIGIBILITY FOR ADMISSION

a) Candidates belonging to all categories, seeking admission to the B.O.T degree Program should possess pass class in higher secondary (+2) examination and should have physics, chemistry, and biology/zoology and botany for admissions.

b) Graduate candidates should have qualified for the B.Sc. Degree of an Indian University recognized by the Association of Indian Universities and accepted as equivalent by the Standing Academic Board andBoard of Management of this University subject to such conditions as may be prescribed with one of the following subjects as major subject viz. Physics, Chemistry, Botany, Zoology and another prescribed Science subject of study atleast upto the ancillary level; provided that such candidates shall have passed the earlier qualifying examination (Higher secondary examination or an equivalent examination) with the subjects English, Physics, Chemistry, Biology /Botany and Zoology.

c) Wherever the State Board /Body of appropriate authority has taken into account only the Plus Two level marks to determine the class of the candidate and issue the statement of marks accordingly, it alone would be taken into consideration.

d) Wherever the State Board / Body or appropriate authority has taken into account themarks obtained at the Plus One and Plus Two level to determine the class of the candidate and furnish the statement of marks, accordingly, the aggregate of the two examinations shall be taken into consideration.

e) Candidates who have studied abroad, the equivalent qualification as determined bythe Association of Indian Universities shall form the guidelines to determine theeligibility and should have passed in the subjects of Physics, Chemistry, Biology(Botany/Zoology) andEnglish upto the12th Standard level.

f) Any criteria not covered under the above provisions, the ruling of the Eligibilitycommitteeshallbeadopted.

g) Candidates who have passed the Senior Secondary School examination of National Open School with minimum 5 subjects with any of the following groups of subjects:

   a) English,Physics,Chemistry,Botany,Zoology

   b) English, Physics, Chemistry, Biology and any other language (To be read along with "Qualification forAdmission" 'a' and 'b')

h) Improvement of marks in the Higher Secondary Examinations. Candidates belonging to all categories who have passed the qualifying examination without acquiring the stipulated minimum academic requirements prescribed in the first appearance are permitted two opportunities for improvement within one year of the first appearance in the qualifying examination for determining the eligibility for admission to the first year BOT Program.

i) Reappearance of failed candidates: Candidates belonging to all categories, who have failed in the qualifying examination in the first appearance are permitted two opportunities within a period of one year following the first appearance in the qualifying examination, for passing of failed subjects to determine the eligibility for admission to the first year BOT program.

5. AGE LIMIT FOR ADMISSION

A candidate should have completed the age of 17 years at the time of admission or wouldcomplete the age of 17 years on or before 31st December of the year of admission to the first year BOT Degree Program.

6. ELIGIBILITY CERTIFICATE

No candidate shall be admitted to the BOT Course unless the candidate has obtained and produced Eligibility Certificate issued by this University.

The candidate has to make an application to the University with the Original and Xerox copies of the following documents along with the prescribed fee:

1) Higher Secondary or equivalent Examination Mark Sheetand

2) Transfer Certificate

Candidate should obtain Eligibility Certificate before the last date for admission as notified by the University.

7. REGISTRATION

A candidate admitted to the BOT Program of this University shall register by remitting theprescribed fees along with the application form for registration duly filled in and forwarded to this University through the Head of the Institution within the stipulated date.

8. DURATION OF THE PROGRAM

The period of certified study for the Program of Bachelor of OCCUPATIONAL THERAPY shall extend over a period of 4 academic years and six months of Compulsory Rotatory Internship.

9. COMMENCEMENT OF THE PROGRAM

The course shall commence from 1st August of the Academic year.

10. ACADEMIC TERMS:

The commencement of the academic course shall be August of every year. Semester pattern shall be followed with two semesters in an academic year. The duration of each semester shall be of six months with a minimum of 120 working days including admission days, workshops, seminars and internal examinations and six months of Compulsory Rotatory Internship

11. WORKING DAYS IN AN ACADEMIC YEAR:

There shall be two semesters in an Academic year.Each semester shall consist of 20 weeks duration. Both the semesters together shall be of 40 weeks duration and shall consist of not less than 240 working days.

12. CUT-OFF DATES FOR ADMISSION TO EXAMINATION

The candidates admitted from 1st August to 30th September of the academic year will be registered to take up their First-Semester examination on1st February of the nextyear.

There will not be any admission after 30th September for the academic year.

13. ATTENDANCE REQUIRED FOR ADMISSION TO EXAMINATIONS

a) No candidate shall be permitted to any one of the parts of BOT examination unless he /she has attended the Course in the subject for the prescribed period and produces the necessary certificates of study and attendance from the Head of the Institution.

b) A candidate is required to put in minimum of 80% of attendance in both theory and practical/clinical separately in each subject before admission to the examination.

c) A candidate, who has not completed the course in any subject and not submitted the the course completion certificate from the Head of the Department, will not be permitted to appear for that particular subject alone. If the candidate has got adequate attendance in other subject she/he will be permitted to appear for examination in those subjects.

d) 80% attendance for the additional period is compulsory.

e) Attendance earned by the student should be displayed on the Notice Board of the department monthly and a copy of the same sent to the University for computerization and parents shall be informed regarding the shortage of attendance towards through e-

mail (if available) or by post by the Institution.

14. SUBMISSION OF LABORATORY RECORD NOTE BOOK PROJECT WORK

At the time of practical / clinical examination each candidate shall submit to the Examinershis / her laboratory notebook duly certified by the Head of the Department as a bonafide record othe work done by the candidate.

The practical record shall be evaluated by the concerned Head of the Department (Internal Evaluation) and the practical record marks shall be submitted to the University 15 days prior to the commencement of the theory examinations.

Inrespect of failed candidates, the marks awarded for records at previous examination will be carried over to the next examinations. If a candidate desires, he / she may be permitted to improve his/her performanceby submission of fresh records.

15. CONDONATION OF LACK OF ATTENDANCE

Condonation of shortage of attendance up to a maximum of 10% in the prescribed eligible attendance for admission to an examination rest with the discretionary powers of the Vice-Chancellor. A candidate lacking in attendance shall submit an application in the prescribed form and remit the stipulated fee 15days prior to the commencement of theory examination. The Head of the Department and Head of the Institution should satisfy themselves on the reasonableness of the candidates request while forwarding the application with their endorsements to the Controller of Examination who would obtain the Vice-Chancellor'sapproval for admission to the examinations. No application would be reviewed if it is not forwarded through proper channel.

Condonation of lack of attendance shall be taken up for consideration under the following circumstances:

a) Any illness afflicting the candidate. (The candidate should submit to the Head of the Institution a Medical Certificate from a registered Medical Practitioner soon after he/she returns to the Institution after treatment).

b) Any unforeseen tragedy in the family (The parent/ guardian should give in writing the reasonfor the ward's absence to the Head of the Institution).

c) Any other leave the Head of the Institution deems reasonable for condonation.

d) 50% of marks in Internal Assessment is compulsory for condonations of lack of attendance.

16. REVALUATION OF ANSWER SCRIPTS

There shall be no revaluation of answer papers of failed candidates in any under graduate examination. However, Re-totaling of failed subjects will be entertained on payment of the prescribed fee.

17. INTERNAL ASSESSMENT

a) A minimum of two written examinations shall be conducted in each subject during an academic semester and the average marks of performances shall be taken into consideration for the award of Internal Assessment marks.

b) A minimum of two Practical examinations shall be conducted in each subject during an academic semester and an average of performances shall be taken into consideration for award of InternalAssessment marks.

c) A failed candidate in any subject should be provided an opportunity to improve hisInternal Assessment marks by conducting a minimum of one examinations in theory and practical separately and the average may be considered for improvement. If failed candidates do not appear for an improvement in the failed subject (s) the internal marks awarded for the previous examination shall be carried over for subsequent appearance(s).

d) The internal assessment marks (both in written and practical taken together) shouldbe submitted to the University endorsed by the Head of the Institutions 15 days prior to the commencement of the theory examinations.

18. RE-ADMISSION AFTER BREAK OF STUDY

a) The calculation of the break of study of the candidate for readmission shall be calculated from the date of first discontinuance of the Course instead of from the date of admission.

b) Candidates having break of study shall be considered for readmission provided, they are not subjected to any disciplinary action and no charges are pending or contemplated against them.

c) All readmissions of candidates are subject to the approval of the Vice-Chancellor.

d) Acandidate having a break of study of less than 6 months shall apply for readmission for condonation to the Academic Officer of this University. The candidate may be readmitted in the corresponding program of study. The candidate has to fulfill the attendance requirements of the University and shall be granted exemption in the subject she has already passed.

e) A candidate having a break of study of more than 6 months but less than 2 years shall apply for readmission for condonation to the Academic Officer of this University. The candidate may be readmitted to the beginning of the academic year of the program. The candidate has to fulfill the attendance requirements of the University and shall be granted exemption in the subject she has already passed.

f) A candidate having a break of study of more than 2 years and upto 5 years shall apply for the readmission for condonation to the Academic Officer of this University. The candidates may be readmitted in the corresponding program of study. The candidate has to fulfill the attendance requirements of the University and shall not be granted exemption in the subject she has already passed.

g) Candidates having a break of study of 5 years and above from the date of discontinuance and more than two spells of break will not be considered for readmission.

19. MIGRATION/TRANSFER OF CANDIDATES

a) Migration/ Transfer of candidates from one recognized College to another recognized College of this University or from another University shall be granted as per the recommendations of the Head of the Institutions regulations.

Migration may be considered in exceptional causes* or extreme compassionate ground.

b) Deathofasupportingguardian,illnessofthecandidatecausingdisability,

c) The combination of attendance shall be granted to a transferee for admission to theexaminations of this University on payment of the necessary fee and satisfying theregulations.

d) Migration during clinical course of study and Internship shall not be allowed on anyground.

e) Allmigrations/transfers areallowedonpaymentoftheprescribedfee.

f) Allmigrations /transfers aresubjecttotheapprovaloftheVice-Chancellor

20. CLASSIFICATION OF SUCCESSFUL CANDIDATES

a) A successful candidate who secures 75% and above of the marks in his / her first appearance in all the subjects within the prescribed period will be declared to have passed in first class with Distinction.

b) A successful candidate who secures 75% and above of the marks in his / her first appearance in a subject within the prescribed period will be declared to have passed in first class with Distinction in that particular subject.

c) A successful candidate who secures 60% and above of the marks in his / her first appearance in all the subjects within the prescribed period will be declared to have passed in the FirstClass.

d) All other successful candidates' shall be declared to have passed in Second class.

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OCCUPATIONAL THERAPY

DEFINITION:

'Occupational Therapy is a holistic evidence-based client - centered first contact and/ or referral profession of modern health care system, based on science of occupation, with primary focus on purposeful goal-oriented activity/occupations, enhanced with the use of latest technological systems for evaluation, diagnosis, education and treatment of the patients (clients) of any age group, whose function(s) is (are) impaired by physical, psychosocial and cognitive impairments, development disorders, or the ageing process affecting their quality of life, with the aim to prevent disability, promote health & well-being and return to optimum occupationalroles.

Specific occupational therapy services include but are not limited to: preventive health literacy, assessment & interventions in activities of daily living(ADL),work & productive activities, play, leisure and spiritual activities; functional capacity analysis, prescription, designing and training in the use of assistive technology, adaptive equipment & splints, and environmental modifications to enhance functional performance.

An occupational therapist as someone who "helps people across the lifespan participate in the things they want and need to do through the therapeutic use of everyday activities (occupations). Common occupational therapy interventions include helping children with disabilities to participate fully in school and social situations, helping people recovering from injury to regain skills, and providing supports for older adults experiencing physical and cognitive changes.

Typically, occupational therapists are university-educated professionals and must pass a licensing exam to practice.Occupational therapists often work closely with professionals in physical therapy, speech therapy, nursing, social work, and medicine. The OT curriculum focuses on the theoretical basis of occupation and the clinical skills require to practice occupational therapy.

Students must have knowledge of physiology, anatomy, medicine, psychology, and neurology to understand interventions and their client's medical history. All OT education programs include periods of clinical education, consisting of direct work with a practicing OT.

PREAMBLE

The 2015 Occupational Therapy Code of Ethics (Code) of the American Occupational Therapy Association (AOTA) is designed to reflect the dynamic nature of the profession, the evolving health care environment, and emerging technologies that can present potential ethical concerns in research, education, and practice. AOTA members are committed to promoting inclusion, participation, safety, and well-being for all recipients in various stages of life, health, and illness and to empowering all beneficiaries of service to meet their occupational needs. Recipients of services may be individuals, groups, families, organizations, communities, or populations (AOTA, 2014b). It outlines Standards of Conduct the public can expect from those in the profession. It should be applied to all areas of occupational therapy and shared with relevant stakeholders to promote ethical conduct. Occupational therapy personnel, including students in occupational therapy programs, are expected to abide by the Principles and Standards of Conduct within this Code. Personnel roles include clinicians (e.g., direct service, consultation, administration); educators; researchers; entrepreneurs; business owners; and those in elected, appointed, or other professional volunteer service.

ESSENTIAL REQUIREMENTS

The following "essential requirements" specify those attributes that the faculty consider necessary for completing the professional education enabling each graduate to subsequently enter clinical practice. The purpose of this curriculum is to delineate the cognitive, affective and psychomotor skills deemed essential for completion of this program and to perform as a competent occupational therapist who will be able to evaluate, plan & execute Occupational Therapy treatment independently.

COGNITIVE LEARNING SKILLS:

The student must demonstrate the ability to receive,interpret, remember, reproduce and use information in the cognitive, psychomotor, and affective domains of learning to solve problems, evaluate work, and generate new ways of processing or categorizing similar information listed in course objectives.

PSYCHOMOTOR SKILLS:

The student must demonstrate the following skills.

1. **Locomotion ability**:

Get to lecture, laboratory and clinical locations, and move within rooms as needed for changing groups, partners and work stations. Move quickly in an emergency situation to protect the patient (e.g. from falling).

2. **Manual tasks**:

a. Maneuver another person's body parts to effectively perform evaluation techniques. Manipulate common tools used for screening tests of the cranial nerves, sensation, range of motion, blood pressure, e.g., cotton balls, safety pins, goniometer, Q-tips, sphygmomanometer. Safely and effectively guide, facilitate, inhibit, and resist movement and motor patterns through physical facilitation and inhibition techniques

(including ability to give timely urgent verbal feedback).

b. Manipulate another person's body in transfers, gait, positioning, exercise, and mobilization techniques. Manipulate evaluation and treatment equipment safely and accurately apply to patients. Manipulate bolsters, pillows, plinths, mats, gait assistive devices, and other supports or chairs to aid in positioning, moving, or treating a patient effectively.

c. Competently perform and supervise cardiopulmonary resuscitation

3. Fine motor/hand skills:

a. Legibly record thoughts for written assignments (including diagrams) and tests. Document evaluations, patient care notes, referrals, etc. in standard medical charts in hospital/clinical settings in a timely manner and consistent with the acceptable norms of clinical settings.

b. Safely apply and adjust the dials or controls of therapeutic modalities.

c. Safely and effectively position hands and apply mobilization and therapeutic techniques.

4. **Visual acuity to**:

a. Read written and illustrated material in the English language, in the form of lecture handouts, textbooks, literature and patient's chart.

b. Observe active demonstrations in the classroom.

c. Visualize training videos, projected slides/overheads, X-ray pictures, and notes written on a blackboard/whiteboard.

d. Receive visual information from patients, e.g., movement, posture, body mechanics, and gait necessary for comparison to normal standards for purposes of evaluation of movement dysfunctions.

e. Receive visual information from treatment environment, e.g., dials on modalities and monitors, assistive devices, furniture, flooring, structures, etc.

f. Receive visual clues as to the patient's tolerance of the intervention procedures. These may include facial grimaces, muscle twitching, withdrawal etc.

5. **Auditory acuity to**:

a. Hear lectures and discussion in an academic and clinical setting.

b. Distinguish between normal and abnormal breathing, lung and heart sounds using a stethoscope.

6. **Communication**:

a. Effectively communicate information and safety concerns with other students, teachers, patients, peers, staff and personnel by asking questions, giving information, explaining conditions and procedures, or teaching home programs. These all need to be done in a timely manner and within the acceptable norms of academic and clinical settings.

b. Receive and interpret written communication in both academic and clinical settings in a timely manner.

c. Receive and send verbal communication in life threatening situations in a timely manner within the acceptable norms of clinical settings.

d. Occupational therapy education presents exceptional challenges in the volume and breadth of required reading and the necessity to impart information to others. Students must be able to communicate quickly, effectively and efficiently in oral and written English with all members of the health care team.

7. **Self care**:

Maintain general good health and self care in order not to jeopardize the health and safety of self and individuals with whom one interacts in the academic and clinical settings.

EFFECTIVE LEARNING SKILLS:

The student must be able to:

1. Demonstrate respect to all people, including students, teachers, patients and medical personnel, without showing bias or preference on the grounds of age, race, gender, sexual preference, disease, mental status, lifestyle, opinions or personal values.

2. Demonstrate appropriate affective behaviors and mental attitudes in order not to jeopardize the emotional, physical, mental, and behavioral safety of patients and other individuals with whom one interacts in the academic and clinical settings and to be in compliance with the ethical standards of the profession.

3. Acknowledge and respect individual values and opinions in order to foster harmonious working relationships with colleagues, peers, and patients.

PROFESSIONAL DRESS CODE STANDARDS:

It is important to portray a professional image. A clinician with inappropriate dress, grooming or conduct can damage the patient's confidence in the quality of their care, sometimes even resulting in a delay in the restoration of health.

Haircuts, hairstyling, and personal grooming need to be neat, conservative and inconspicuous. Grooming and style should be practical and allow one's duties to be

performed without embarrassment or inconvenience

DRESS:

- Clinical /Lab Dress: Aprons for all clinical assignments, any class that is held in a clinical facility and in any class where patients are present.

FRAMEWORK OF THE CURRICULUM

COURSE DURATION: Four years and Six months of Internship.

I B.O.T

a. The students will study about normal and altered human mind & behavior by studying Psychology & sociology. They will also learn skills required for effective communication with the patients and care givers.

b. Deals with the basic foundation in medical as well as Occupational Therapy subjects. The foundation of human body structure & function is achieved by studying the subjects Human Anatomy, Physiology.

c. The student will be able to demonstrate a basic understanding of the scope and aims of Occupational Therapy, and a practical knowledge of Occupations and Activities used in Treatment

II B.O.T

d. The students will study about General Medicine, General Surgery, Pediatrics, Pharmacology and ENT. They will also learn skills required for effective communication with the patients and care givers.
e. Deals with the basic foundation in pathology and microbiology.
f. The students will study about clinical orthopedics and neurology.

III B.O.T

g. The student will be able to demonstrate a basic understanding of the scope and aims of Occupational Therapy in psychiatry, they will also learn about clinical psychology and assessments.
h. Students to understand the effects of environment and the community dynamics on the health of the individual

i. The student will be able to demonstrate a basic understanding of the scope and aims of Occupational Therapy in paediatrics, orthopedics and neurology,. They will also learn skills required for effective communication with the patients and care givers.

IV B.O.T

j. The students will study about cardio thoracic conditions with commonly cause disability.

k. Students will be able to demonstrate an understanding of the principles and methods of organization, administration and work study as appropriate to the OT healthcare delivery system, patient treatment and training.

l. The student will be able to demonstrate an understanding of the occupational therapy role in medical and surgical conditions, and rehabilitation methods for people with residual disability.

INTERNSHIP

a. A period of 6 months (26 weeks) of continuous clinical practice to enhance the clinical reasoning, judgment, programme planning, intervention, evaluation of intervention, follow up and referral skills of all the dysfunctions and impairments learnt throughout the curriculum of four years.

b. Those candidates declared to have passed the final year examination in all subjects shall be eligible for internship.

c. Internship shall be done in a teaching hospital recognized by the University. A degree certificate shall be awarded ONLY on successful completion of six months of internship.

d. The Internship will be Rotatory and shall cover clinical branches concerned with occupational Therapy such as Orthopedics, Cardiovascular & Respiratory including ICU, Neurology & Neurosurgery, Pediatrics,General Medicine, Surgery, psychiatry ,Obstetrics and Gynecology both inpatient and outpatient services.

e. 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 all the postings, the duly completed logbook will be submitted to the Principal/Head of program to be considered as having successfully completed the internship program.

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BOT REGULATION & CURRICULUM 2022-2023

1. ELIGIBILITY

3.1 Qualifying Examination

A Candidate seeking admission to first year Bachelor in Occupational therapy (BOT):

i) Should have passed Higher Secondary Examination (10+2) of Tamil Nadu, with English as one of the subjects and Physics, Chemistry and Biology as optional subjects. The candidate shall have passed subjects of English, Physics, Chemistry and Biology as optional subjects. The candidate shall have passed subjects of English, Physics, Chemistry and Biology individually also.

OR

ii) Shall have passed any other examination conducted by Boards/ Councils/ Intermediate examination established by State Government/Central Government and recognized as equivalent to a Higher Secondary Examination (10+2) of Tamil Nadu by Saveetha University/ Association of Indian Universities (AIU), with English as one of the subjects and Physics, Chemistry and Biology as optional subjects. The candidate shall have passed subjects of English, Physics, Chemistry and Biology as optional subjects. The candidate shall have passed subjects of English, Physics, Chemistry and Biology individually also.

3.2. Marks

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 50% marks taken together in Physics, Chemistry and Biology in the qualifying examination. In respect of candidates belonging to Scheduled Castes, Scheduled Tribes or Category I, the marks obtained in Physics, Chemistry and Biology together in qualifying examination is not less than 45% instead of 50% as above.

3.3. Age

A candidate seeking admission to Bachelor of Occupational therapy course should have completed 17years of age, as on 31st December of the year of admission.

Every candidate before admission to the course shall furnish to the Institution a certificate of Medical Fitness from an authorized Medical Officer to the effect, that the candidate is physically fit to undergo Occupational therapy course.

2. DURATION OF THE COURSE COMPLETITON

The duration of the BOT Course shall be **four years (8 semesters) with additional six months of internship.** The maximum duration for completion of the course isdouble the duration of the course i.e. 8 years to pass all the examinations from the date of joining the course. The candidate who fails to complete the 8 semesters within the period of 8 years shall be discharged.

4.1 ACADEMIC TERM

The commencement of the academic course shall be August of every year. Semester pattern shall be followed with two semesters in an academic year. The duration of each semester shall be of six months with a minimum of 120 working days including admission days, workshops, seminars and internal examinations.

3. MEDIUM OF INSTRUCTION AND EVALUATION

The medium of instruction and evaluation for all the courses of study for BOT Programme will be in English.

4. COURSE OF STUDY –SUBJECTS AND HOUR DISTRIBUTION

S.No	Course Code	Subjects	Teaching hours/ sem			Total hours/ sem
			L	P	Credits	
Semester – I						
1	**OTCT001**	Anatomy I	60	60	4+2	120
2	**OTCT002**	Physiology I	60	60	4+2	120
3	**OTCT003**	General Psychology & Sociology	90	–	6	90
4	**OTDE001**	Disaster management	15	30	2	45
5	**OTAE001**	Effective English communication	30	15	NC	45
6	**OTSE001**	Basics of computer (or) Personality development	30	15	NC	45
Total no. of credits and hours / semester			**285**	**180**	**20**	**465**
Semester – II						
1	**OTCT004**	Anatomy II	60	60	4+2	120
2	**OTCT005**	Physiology II	60	60	4+2	120
3	**OTCT006**	Basic Occupational Therapy/ Analysing Occupations and Activities	60	90	4+3	150

4	**OTDE002**	Environmental science	30		2	30
Total no. of credits and hours / semester			**210**	**210**	**21**	**420**
Semester – III						
1	**OTCT007**	General Medicine, Paediatrics & Surgery	150		10	150
2	**OTCT008**	ENT, Ophthalmology &Pharmacology	60		4	60
3	**OTCT009**	Fundamentals for occupational therapy	90	60	5+2	150
4	**OTCT010**	Biomechanics	120	–	8	120
5	**OTSE002**	Film making (or) Introduction to public speaking	30	15	NC	45
6		Clinical Posting II		120	2	120
Total no. of credits and hours/semester			**450**	**195**	**31**	**645**
Semester – IV						
1	**OTCT011**	Clinical neurology	60	–	4	60
2	**OTCT012**	Clinical orthopedics with traumatology	60	–	4	60
3	**OTDE003**	Microbiology and Pathology	90		6	90
4	**OTGE001**	Introduction to quality and patient safety	30		2	30
5		Supervised Clinical Training I		120	2	120
Total no. of credits and hours/semester			**240**	**120**	**18**	**360**
Semester – V						
1	**OTCT013**	Community medicine	60		4	60
2	**OTCT014**	Health psychology, Clinical psychology and Clinical psychiatry	90		6	90
3	**OTCT015**	Occupational Therapy in Psychiatry	90	30	6+1	120
4	**OTDE004**	Basic nursing and first aid	30	30	2+1	60
5	**OTGE002**	Yoga for occupational therapy	30	30	2+1	60
6	**OTSE003**	Basic life support training (or) web designing	30	15	NC	45
7		Supervised Clinical Training II		120	2	120
Total no. of credits and hours/semester			**330**	**225**	**25**	**555**
Semester – VI						
1	**OTCT016**	Occupational Therapy in Paediatrics	90	60	6+2	150
2	**OTCT017**	Occupational Therapy in Orthopaedics & Neurology	90	60	6+2	150

3	**OTCT018**	Biostatistics and research methodology	60		4	60
4	**OTGE003**	Diagnostic imaging for occupational therapy	30		2	30
5		Supervised Clinical Training III		120	2	120
Total no. of credits and hours / semester			**270**	**240**	**24**	**510**
Semester – VII						
1	**OTCT019**	Rehabilitation Medicine	60	–	4	60
2	**OTCT020**	Clinical Cardio-Respiratory / Work Physiology	90	30	6+1	120
3	**OTCT021**	Organization and Administration & Work study in Occupational Therapy	60	-	4	60
4		Supervised Clinical Training IV		180	3	180
Total no. of credits and hours/semester			**210**	**210**	**18**	**420**
Semester – VIII						
1	**OTCT 022**	Group Process in Occupational Therapy	120	30	8+1	150
2	**OTCT023**	OT in rehabilitation	120	60	8+2	180
3	**OTCT024**	Project	-	180	6	180
4	**OTGE004**	Dramatics and music	30	15	2+1	45
5		Supervised Clinical Training V		120	2	120
Total no. of credits and hours / semester			**270**	**405**	**30**	**675**
Total no. of credits and hours at the end of 8 semesters					**187**	**4050**
Continuous Rotatory Internship			26 weeks		**21**	**1248**
Total no. of credits and hours at the end of the course					**208**	**5298**

Credit points: 15 hours of theory = 1 credit, 30 hours of practical = 1 credit,
60 hours of clinical = 1 credit

7. TOTAL NUMBER OF COURSES OFFERED UNDER BOT PROGRAM

S.no	TYPE OF COURSE	TOTAL NUMBER
1	Core course	24
2	Ability enhancement	1
3	Disciplinary elective	4
4	Skill enhancement	6
5	Generic electives	4
	TOTAL	39

8. ATTENDANCE

i) A candidate is required to attend a minimum of 80 percent of the total classes conducted in a semester in all subjects prescribed for that semester, separately, in theory, practical and clinical to become eligible to appear for the university examination in the first attempt.

ii) A candidate lacking in the prescribed attendance in any one or more subjects in theory and practical shall not be permitted for appearing for examinations for that particular Subject. However the candidate cannot progress to the next semester and will be detained in the same semester until he/she fulfills the required attendance percentage by attending classes during the extension/detention period in the said subject(s) and passes the examination.

iii) The Subject in which he/she detained from writing the examination for lack of attendance shall not be treated as a failed subject(s) and will not be permitted to carry over the said subject(s) to the next semester of study.

9. INTERNAL ASSESSMENT

It shall be based on evaluation of periodic tests assignments, log book maintenance; record book and clinical presentations whichever applicable for that semester. Regular periodic examinations should be conducted throughout the course. There should be a minimum of three (3) session examinations during each semester. The average of the three examination marks should be reduced to 30 for theory, 10 for log book, 5 for attendance and 5 for assignments/seminars collectively calculated for 50 as internal 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 Principal.

Continuous Internal Assessment:

A candidate shall secure a minimum of 50% marks in the Internal Assessment (separately for Theory and Practical wherever applicable) to become eligible to appear for the University written examination. If the student fails to secure the minimum required marks in the I.A. he will be detained from appearing for the University examination in the subject concerned.

1. However, such candidate shall be permitted to go to the next semester with the condition that he should improve and obtain a minimum of 50% of marks in I.A. in the subject(s) in which he was detained and qualify himself to appear for the subsequent University Examination as an arrear subject(s) along with the subjects of the current semester.
2. If the candidate did not improve the I.A. and qualify himself for writing the exa
3. mination in the said subject(s) as an arrear paper within the said period will not be permitted to write the entire examination of the current semester till he secures the minimum of 35 % of marks in the subject in which he was detained and not allowed to go to the next semester. On fulfillment of the required I.A. he will appear for the University Examination and will join the subsequent semester during the next academic year when it is offered by the college.
3. Similarly the candidate who secured minimum 35% of marks and appeared for the University examination and could not pass the examination for want of securing 50 % marks in aggregate (both written examination and I.A. put together) shall also be permitted one semester time to improve the I.A. to make up the required 50% aggregate marks to pass the subject/examination and reappear for the University examination. However, the students detained under break of study are not eligible to avail this provision during the period of break.
4. The faculty member shall ensure and provide opportunity to students to improve the I.A. within the permitted one semester.

9. SCHEDULE OF EXAMINATION

There will be two examinations in a year, to be conducted as per notification issued by the University from time to time. The particulars of courses for various examinations and distribution of marks are shown separately under subtitle 12.1 &12.2 respectively. The examination for all courses shall be conducted by the University.

10. CRITERIA FOR PASS

10.1. Core Course

- A candidate is declared to have passed university examination in each course, if she/he secures 50 % of the marks in theory and 50 % in practical separately in same attempt and in aggregate.
- Computation of theory marks will be based on addition of the marks scored in University conducted written exam and Internal Assessment.

10.2. Elective Course

Elective course is mandatory and a candidate can select any one of the three courses available in I semester, III semester and V semester. Elective course will be offered for a course if at least 20 candidates opt for that course. Criteria for pass are as applicable for 11.1.

10.3. Non Credit Courses

For a pass in Non Credit Courses, a candidate shall secure 50% of the total marks

prescribed for the course. The candidate scored less than 50% will be termed „Unsatisfactory" and candidate who have scored 50% and above will be termed as „Satisfactory". The candidate will have to repeat the examination till he/she obtains a „Satisfactory" report. The report shall be sent to the University prior to the commencement of University examination. If the student obtained "Non Satisfactory" report can be permitted to move to the next semester with a condition that they should complete non credit courses with a satisfactory report before they enter the Internship training.

DISTRIBUTION OF MARKS FOR COURSE

11. SCHEME OF EXAMINATION

11.1 Distribution of Marks for Course

S. No	Course	Time	Theory				Practical		Viva		Total	
			Written		Internal Assessment							
			Min marks	Max marks	Min marks	Max marks	Min marks	Max marks	Min marks	Max marks	Min marks	Max marks
	Semester I											
1	Anatomy I	3hrs	50	100	25	50	-	-	25	50	100	200
2	Physiology I	3hrs	50	100	25	50	-	-	25	50	100	200
3	Section A General Psychology	3hrs	50	50	25	25	_	_	-	-	75	150
	Section B General Sociology			50		25	_	_	-	-		
4	Disaster management	1.5 hrs	25	50	25	50	-	-	-	-	50	100
	Semester II											
1	Anatomy II	3hrs	50	100	25	50	-	-	25	50	100	200
2	Physiology II	3hrs	50	100	25	50	-	-	25	50	100	200

3	Basic Principles of Occupational Therapy	3hrs	50	100	25	50	25	50	25	50	125	250
4	Environmental science	1.5 hrs	25	50	25	50	-	-	-	-	50	100
Semester III												
1	General Medicine, Paediatrics & Surgery	3hrs	50	100	25	50	-	-	25	50	100	200
2	Fundamentals of occupational therapy	3hrs	50	100	25	50	25	50	25	50	125	250
3	Pharmacology, ENT, Ophthalmology	3hrs	50	100	25	50	-	-	-	-	75	150
4	Biomechanics	3hrs	50	100	25	50	-	-	25	50	100	200
Semester IV												
1	Clinical neurology	3hrs	50	100	25	50	-	-	25	50	100	200
2	Clinical orthopedics and traumatology	3hrs	50	100	25	50	-	-	25	50	100	200
3	Microbiology and Pathology	3hrs	50	100	25	50	-	-	-	-	75	150
4	Introduction to quality and patient safety	1.5 hrs	25	50	25	50	-	-	-	-	50	100
Semester V												
1	Community medicine	3hrs	50	100	25	50	-	-	-	-	75	150

2	Health psychology, Clinical psychology and Clinical psychiatry	3hrs	50	100	25	50	-	-	-	-	75	150
3	Occupational Therapy in Psychiatry	3hrs	50	100	25	50	25	50	25	50	125	250
4	Basic nursing and first aid	1.5 hrs	25	50	25	50	-	-	-	-	50	100
5	Yoga for occupational therapy	1.5 hrs	25	50	25	50	-	-	-	-	50	100
Semester VI												
1	Occupational Therapy in Paediatrics	3hrs	50	100	25	50	25	50	25	50	125	250
2	Occupational Therapy in Orthopaedics & Neurology	3hrs	50	100	25	50	25	50	25	50	125	250
3	Biostatistics and research methodology	3hrs	50	100	25	50	-	-	25	50	100	200
5	Diagnostic imaging for occupational therapy	1.5 hrs	25	50	25	50	-	-	-	-	50	100
Semester VII												
1	Rehabilitation Medicine	3hrs	50	100	25	50	-	-	-	-	75	150
2	Clinical Cardio-Respiratory / Work Physiology	3hrs	50	100	25	50	-	-	25	50	100	200
3	Organization and Administration & Work study in Occupational Therapy	3hrs	50	100	25	50	-	-	-	-	75	150

Semester VIII												
1	Group Process in Occupational Therapy	3hrs	50	100	25	50	_	_	-	-	75	150
2	Occupational therapy in rehabilitation	3hrs	50	100	25	50	25	50	25	50	125	250
3	Project	3hrs	-	-	-	-	-	-	50	100	50	100
4	Dramatics and music	1.5 hrs	25	50	25	50	-	-	-	-	50	100

11.2. Question Paper Pattern for BOT Examination

THEORY

Courses having maximum marks = 100		
Type of question	**Number of questions**	**Marks for each question**
Essay type	2 questions	**15**
Short essay type	10 questions	**5**
Short answer type	10 questions	**2**

Courses having maximum marks = 50		
Type of question	**Number of questions**	**Marks for each question**
Essay type	1 question	**15**
Short essay type	5 questions	**5**
Short answer type	5 questions	**2**

Practical / viva voce [150 marks]		
Type of question	**Examiner**	**Marks**
case/question	**1 - External**	**75**
case/question	**1 - Internal**	**75**

12. DECLARATION OF GRADING SYSTEM

As per guidelines of the UGC following grade points have been introduced from this academic year for fair processing of Evaluation.

Grading system to be adopted based on percentage obtained in university examinations

S.NO	**Range of marks**	**Letter Grade**	**Grade Point**	**Description**
1	90-100	9.0-10.0	O	Outstanding
2	80-89	8.0-8.9	A+	Excellent
3	75-79	7.5-7.9	A	Disctinction
4	70-74	7.0-7.4	B+	Very good
5	60-69	6.0-6.9	B	Good
6	50-59	5.0-5.9	C	Satisfactory
7	<50	<5.0	F	Fail/Reappear

Computation of GPA and CGPA:

Ci = Credits earned for course i in any semester.
Gi = Grade Points obtained for course i in any semester.
n refers to the semester in which such courses were credited.

For a Semester:

GRADE POINT AVERAGE [GPA] = $\sum i\ Ci\ Gi / \sum i\ Ci$

$$GPA = \frac{\text{Sum of the multiplication of grade points by the credits of the courses}}{\text{Sum of the credits of the courses in a semester}}$$

For the entire programme:

CUMULATIVE GRADE POINT AVERAGE [CGPA] = $\sum n \sum i\ CniGni / \sum n \sum i\ Cni$

$$CGPA = \frac{\text{Sum of the multiplication of grade points by the credits of the entire programme}}{\text{Sum of the credits of the courses of the entire programme}}$$

CGPA	**GRADE**	**CLASSIFICATION OF FINAL RESULT**
9.5 - 10.0	O+	FIRST CLASS-EXEMPLARY*
9.0 and above but below 9.5	O	
8.5 and above but below 9.0	A++	FIRST CLASS WITH DISTINCTION*
8.0 and above but below 8.5	A+	
7.5 and above but below 8.0	A	
7.0 and above but below 7.5	B++	FIRST CLASS
6.5 and above but below 7.0	B+	
6.0 and above but below 6.5	B	

5.5 and above but below 6.0	C+	SECOND CLASS
5.0 and above but below 5.5	C	
Below 5.0	F	FAIL / REAPPEAR

* The candidates who have passed in the first appearance and within the prescribed semester of the UG/PG Programme are eligible.

CONVERSION FORMULA:

The conversion formula for Cumulative Grade Point Average (CGPA) to percentage is :

Percentage equivalent of CGPA = CGPA*10
For example, CGPA 8.85 is considered equivalent to 88.50%

13. VIEWING AND REVALUATION

Viewing the answer books and Revaluation shall be done as prescribed in the Regulations of the University for viewing the answer books and revaluation of failed subjects in the University examination for Undergraduate courses.

14. EXAMINERS

Occupational Therapists who hold MOT degree with minimum 3 years of teaching experience shall be appointed as examiners.

15. CARRY OVER OF FAILED SUBJECTS

The candidate can carry over the first semester failed subjects to the second semester. The candidate shall be permitted to go to the IIIrd semester only after passing the Ist year subjects (both 1st and 2nd semesters). The failed subjects in the third, fourth and fifth semesters can be carried over to the sixth semester but the candidate should pass all the failed subjects‟ upto sixth semester to enter into the seventh semester. On passing all the subjects of VII and VIII semesters, the candidate will be permitted to enter the internship.

15.1 Classification of Course Core Courses - Anatomy, Physiology, GeneralPsychology, Sociology, Pathology, Microbiology, Biochemistry, Pharmacology, Biomechanics, Orthopedics & Traumatology, General Medical & Surgical conditions, Paediatrics, Neurology, Community Medicine, Behavioral Science, OT in Orthopedics & Traumatology & Neurology, OT in Cardio-respiratory and other surgical Conditions, OT in paediatrics, Community Based Occupation therapy, Rehabilitation Medicine & Management studies, Research Methodology & Biostatistics.

ELECTIVE COURSES

- **Discipline Specific Elective (DSE) Course–** Organization & Administration in OT.
- **Generic Elective (GE) Course** – OT in Rehabilitation.
- **Project**- An elective course designed to acquire special/advanced knowledge,such as supplement study/support study to a project work, and a candidate studies such a course on his own with an advisory support by a teacher/faculty member
- **Non Credit Courses -** Film making, Introduction to public speaking, Effective English communication , Basics of computer, Personality development , Basic life support training, Web designing, Artificial intelligence

15.2 Eligibility for CRI

A candidate will not be permitted to undergo compulsory Rotatory internship until he/she passes all the subjects up to eighth semester.

16. CLINICAL POSTING

- The clinical posting of BOT degree shall be on graded Responsibilities in the observation, management and treatment of patients entrusted to his / her care corresponding to the semester of study. The Participation of all the students in all facets of clinical posting is essential. Every candidate should take part in small group discussions, assignment, clinical rounds, case demonstrations and clinics.

- It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring is done by the staff of the concerned clinical department based on participation of students in various activities as mentioned above. It may be structured and assessment be done using checklists that assess various aspects.

- Every candidate shall maintain a work diary/log book and record his/her participation in the training programmes conducted by the concerned clinical department. The work diary shall be scrutinized and certified by the concerned clinical department in-charge/ principal.

17. PROJECT

17.1. Project work

- This assignment of Project work is designed to develop the aptitude among students towards research. The student is advised to undergo research based on experimental studies of Occupational therapy management/evaluation procedure or shall conduct observational study in a selective group of patients/normal subjects/laboratory animals.

- The project shall be certified by the guide and Principal. The candidate must follow the guidelines for project report given in annexure. The student has to clear Scientific Review Board and Institutional Ethical Committee prior to data collection.

- Four hard bound copies of project and a soft copy of project in a CD thus prepared shall be submitted to the controller of examinations through principal, one month before final examination/ on or before the dates notified by the university.

17.2. Project guide

- Occupational therapists with minimum 3 years of teaching experience after MOT shall be appointed as guide for UG project work. The guide student ratio should be 1:7 for each year.

12. INTERNSHIP

18.1. Internship Training

There shall be six months (26 weeks) with total of 1274 hours of Internship after the eighth semester examination for candidates declared to have passed the examination in all the courses. The hours for internship will be calculated with 7 hours of training/day. No candidate shall be awarded degree certificate without successfully completing 26weeks of Internship.

The Internship should be rotatory and cover clinical branches concerned with Occupation therapy. The 26 weeks of rotational posting must be covered in the following pattern with total of 1274 hrs.

1. Paediatrics - One month
2. Orthopaedics and Hand, Burns & Plastic surgery - One month
3. Community based Rehabilitation - One month
4. Neurology - One month
5. Psychiatry - One month
6. Physical Medicine & Rehabilitation - One month
7. (Rheumatology, Cardio Respiratory and Prosthetic & Orthotics unit)

TOTAL 26 weeks 1274 hours

The student must maintain a clinical logbook during internship. 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 all eight postings, the duly completed logbook will be submitted to the Principal to be considered as having successfully completed the internship program.

18.2. Condonation of Break in C.R.I

- After the commencement of Internship training if the candidate has entered on break in Internship training for less than forty five days for the prescribed period of six months internship training, the Dean/Principal of the concerned college may condone the break in internship training and permit the candidates to continue their Internship training programme.
- If **after completion of 50%** of internship posting and entered on break for more than a period of one year the candidate has to re-do the entire period of internship training programme without any break.
- **No Piece meal internship** training programme **is allowed**. If the candidate hasundergone piecemeal training Programme in more than two departments during their internship period, the

candidate has to redo the entire period of Internship training and complete the internship training without any break.

- If the break in Internship training Programme is between three years to five years, the candidate has to undergo six months refresher course from the institution of following core courses for one month each, Occupational therapy in Orthopedics & Traumatology, Occupational therapy in Cardio-respiratory and other surgical Conditions, Occupational therapy In Neurology, Occupational therapy in Obstetrics and Gynaecology, Physical Diagnosis, which the candidate has last studied. After the completion of Refresher course, the candidate has to re-commence the entire period of Internship training programme and complete the internship without any break.

- If the break in Internship training programme is between six years to nine years the candidate has to undergo one year refresher course from the institution of following core courses for two months each, Occupational therapy in Orthopedics & Traumatology, Occupational therapy in Cardio-respiratory and other surgical Conditions, Occupational therapy In Neurology, Occupational therapy in Obstetrics and Gynecology, Physical Diagnosis, which the candidate has last studied. After the completion of Refresher course the candidate has to recommence the entire period of internship training programme and complete the internship without any break.

- If the break in Internship training programme is more than nine years, the candidate has to undergo the study period of following core courses, Occupational therapy in Orthopedics & Traumatology, Occupational therapy in Cardio-respiratory and other surgical Conditions, Occupational therapy In Neurology, Occupational therapy in Obstetrics and Gynecology, Physical Diagnosis, which the candidate has last studied. After passing the core course examination of this university, the candidate has to recommence the internship training programme and complete the internship without any break.

Definition for Refresher Course

Refresher course means, the course to be undergone by the candidate covering all the courses in the third and fourth year of their respective course at a pro-rata basis

19. BREAK OF STUDY AND READMISSION AFTER BREAK OF STUDY

Break of Study and Eligibility for readmission after Break of Study for the Course shall be as prescribed in the Regulations of this University for the Break of Study.

SUBJECTS SCHEDULE

I BOT

TRANSCRIPT HOURS – 885

Sr. No.	SUBJECTS	Teaching Hrs
	SEMESTER – I	
1	Anatomy I	**120**
2	Physiology I	**120**
3	General Psychology & Sociology	**90**
4	Disaster management	**45**
5	Effective English communication	**45**
6	Basics of computer (or) Personality development	**45**
	Total	**465**
	SEMESTER – II	
1	Anatomy II	**120**
2	Physiology II	**120**
3	Basic Occupational Therapy/ Analysing Occupations and Activities	**150**
4	Environmental science	**30**
	Total	**420**

II BOT

TRANSCRIPT HOURS – 1005

	SEMESTER – III	
1	General Medicine, Paediatrics & Surgery	**150**
2	Fundamentals of occupational therapy	**150**
3	Biomechanics	**120**
4	Pharmacology, ENT, Ophthalmology	**60**
5	Film making (or) Introduction to public speaking	**45**
6	Clinical Posting	**120**
	Total	**645**
	SEMESTER – IV	
1	Clinical neurology	**60**
2	Clinical orthopaedics	**60**
3	Microbiology and Pathology	**90**
4	Introduction to quality and patient safety	**30**
5	Supervised Clinical Training I	**120**
	Total	**360**

III BOT

TRANSCRIPT HOURS –1065

	SEMESTER – V	Teaching hrs
1	Community medicine	**60**
2	Health psychology, Clinical psychology and Clinical psychiatry	**90**
3	Occupational Therapy in Psychiatry	**120**
4	Basic nursing and first aid	**60**
5	Yoga for occupational therapy	**60**
6	Basic life support training (or) web designing	**45**
7	Supervised Clinical Training II	**120**
	Total	**555**
	SEMESTER – VI	
1	Occupational Therapy in Paediatrics	**150**
2	Occupational Therapy in Orthopaedics & Neurology	**150**
4	Biostatistics and research methodology	**60**
6	Diagnostic imaging for occupational therapy	**30**
7	Supervised Clinical Training III	**120**
	Total	**510**

IV BOT

TRANSCRIPT HOURS – 1095

	SEMESTER – VII	**Teaching hrs**
1	Rehabilitation Medicine	**60**
2	Clinical Cardio-Respiratory / Work Physiology	**120**
3	Organization and Administration & Work study in Occupational Therapy	**60**
7	Supervised Clinical Training IV	**180**
	TOTAL	**420**
	SEMESTER – VIII	
1	Group Process in Occupational Therapy	**150**
2	Occupational therapy in rehabilitation	**180**
3	Project	**180**
4	Dramatics and music	**45**
5	Supervised Clinical Training V	**120**
	Total	**675**

1st SEMESTER

ANATOMY –I

Total -120hrs

1. HUMAN ANATOMY 1

The major focus of this course is an in-depth study and analysis of the basic elements of human anatomy, embryology, formation and types of bones, muscles and joints. Emphasis is placed upon structure and function of human movement concerned with upper limb, lower limb, thorax, abdomen and pelvis. A comprehensive study of human anatomy with emphasis on the respiratory system and cardio vascular systems are incorporated. Introduction to general anatomy lays the foundation of the course. Dissection and identification of structures in the cadaver supplemented with the study of charts, models, prosecuted material and radiographs are utilized to identify anatomical landmarks and configurations of the upper limb, thoracic region, lower limb, abdomen pelvis.

Learning Objectives

Cognitive

At the end of the training, the student should be able to –

1. Describe the gross anatomy of the human body and correlate the knowledge of structure and function of thorax, abdomen, pelvis, upper limb and lower limb.
2. Describe the cross section anatomy of the human body and correlate the knowledge of structure and function.
3. Interpret the anatomical basic of symptoms and signs of clinical conditions related to of thorax, abdomen, pelvis upper limb and lower limb.
4. Describe the formation and maturation of various systems in the body.
5. Describe the anatomical structure and clinical aspects of cardio vascular and respiratory system.

Psychomotor

At the end of the training, the student should be able to –

1. Dissect and demonstrate organelles of thorax, abdomen, pelvis, upper limb and lower limb.
2. Demonstrate surface landmarks and living anatomy pertaining to muscle power, testing of nerves and palpating vessels.
3. Prepare and deliver lectures on various topics of human anatomy using audio – visual aids.
4. Present paper / poster in conference emphasizing on the anatomy and clinical anatomy.

Affective Domain

At the end of training the student should be able to correlate the knowledge of anatomy and its relevance in the Occupational therapy profession.

SYLLABUS

S.No	Topics
1	**INTRODUCTION**
	• Define anatomy and its subdivisions • Name regions, cavities and systems of the body • Define anatomical positions and anatomical terms • Development of limbs-Axial and appendicular skeleton
2	**GENERAL EMBRYOLOGY**
	• Define a cell • Mention shape, size and parts of a cell • Reproduction of cells • Review of Mitosis, Meioses, chromosomes and Genes • Process, organisation and gestational period of human embyo • Nutrition of embryo • Development of various systems.
3	**TISSUES**
	• Types of Tissues • Classify Microscopic structure of epithelial connective, muscular, nervous tissue • Appendages of skin.

4	**INTRODUCTION TO BONES(OSTEOLOGY)**
	• Define skeleton • Mention subdivisions,Name the bones in each subdivisions, number of bones • Classify the bones with examples • Define ossification, types of ossification with examples.
5	**INTRODUCTION TO JOINTS(ARTHROLOGY)**
	Define joint or articulation. • Classify joints with examples, individual articulations and bones. • Basic feature of synovial joints • Define the axis and movements possible in aaynovial joint • Define range of movement and limiting factors • Indicate the blood supply and nerve supply • Define stability of joint Chief muscles producing movement in all individual joints
6	**INTRODUCTION TO MUSCLES(MYOLOGY)**
	• Define a skeletal muscle, fascia, tendon, aponeurosis. • Classify skeletal muscles with examples • Classify skeletal muscles with examples and action of skeletal muscles.
7	**UPPER EXTREMITY**
	Pectoral region Features of pectoral region. Sternum, clavicle, scapula, andhumerus-borders, surfaces Identify muscles of pectoral region-origin, insertion, supply and action Scapular region Features of region Bony landmarks of scapula, humerus and clavicle. Muscles of region -origin, insertion, nerve supply, action. Axilla. Identify boundaries and contents of axilla Branches of axillary artery Identify and illustrate the formation of brachial plexus. Shoulder girdle features and function of the joints movements of scapula Muscles of shoulder girdle articular disc and ligaments.

	Shoulder Joint Type ,articular surface and ligaments of shoulder jointmovements of shoulder jointmuscles producing the movements and limiting factors blood and nerve supply of the joint Upper arm identify borders, surfaces of humerus Muscles at front and back of upper arm Identify course, relation and distribution of Radial and Musculo-cutaneous nerve Elbow joint. Type,articular surface and ligaments movements possible and muscles producing the movements factors for stability and limiting factors Carrying angle cubitusvarus and valgusFore-arm, Wrist and Hand Features of radius, ulna, carpal, metacarpal bones and phalanes. Muscles of front and back of the forearm-origin, insertion, nerve supply and action Movements and muscles producing these movements. Identify course relation and distribution of median, ulnar and radial nerves Blood and nerve supply Prehension, types of grip Lymphatic drainage and location of lymph nodesin upper limb. Identify cutaneous nerves and illustrate the areas of theirdistribution, dermatomes.
8	**LOWER EXTREMITY**
	Features of hip bone, femur, tibia, fibula and patella. Muscles in front of thigh-origin, insertion,nerve supply and action Mention the boundaries and contents offemoral triangle and subsartorial canal Indicate the position, course and distribution offemoral nerve Indicate the course and main branches offemoral artery and mention the blood supply of neck of femur Indicate the position of femoral vein Medial side of thigh Name and identify the muscles of the medialside of thigh. Mention their origin, insertion, nerve supply and action Indicate the course, relations and

	distributionofobturator nerve Back of thigh Identify and mention the position, origin,insertion, nerve supply and action of the hamstring muscles. Indicate the position, course, relation and distribution of sciatic nerve Gluteal region Identify and mention the position, origin, insertion, nerve supply and action of the muscles. Name and mention the position and course of the nerves found there and name the arteries there. Hip joint Mention the type, articular surface andligaments. Define the movement and name the chiefmuscles producing the movements. Mention the blood supply, nerve supply, factorfor stability and limiting factors Indicate applied anatomy Knee joint Mention the type, articular surfaces and ligaments. Define the movement and name the chief muscles for the movements Analyse the movements Know the blood supply and nerve supply Indicate applied anatomy Define locking and unlocking of the joint Popliteal fossa Indicate the boundaries and contents Mention the position and branches of tibialandcommonperoneal nerves Front of leg and dorsum of foot Name and identify the tarsal bones, metatarsalbones and phalanges in an articulated foot Name and identify the muscles Mention the positions, origin, insertion, nerve, supply and action of the muscles Position and distribution of deep peronealnerve Indicate the position and attachment ofextensorretinaculae Mention and identify the features of the tibial and fibula Lateral side of leg Name and identify the muscles Mention the position, origin, insertion, nerve

	supply and action of muscles State the position, course and distribution of superficial peroneal nerve State the position and attachment of peroneal retinacula Back of leg and sole of foot Name and identify the features of the bones ofthe foot Name and identify the muscles of back of leg Mention the position, arrangement, origin,insertion, nerve supply and action of the muscles. State the position course and distribution oftibial artery State the position, and distribution of posteriortibial artery Mention the position, and attachment of flexorretinaculum. Mention the arrangement, origin, insertion,nerve supply and action of muscles of the foot Indicate the type of formation, and factors forthe maintenance of the arch of foot Mention the type, articular surface, ligaments, movements chief muscles for the movement. Axis of movements and applied anatomy of tibiofibular joints, ankle joints, subtalar joints, M.P. joints and I.P. joints. Palpate and identify the tendons around theankle and dorsum of foot Nerves Indicate the position, formation and branchesof lumbar and sacral plexuses Mention the root value of the nerves Mention the position, course, relation anddistribution of thenerves Predict the result of injury to the nerves Illustrate cutaneous innervation of dermatomes Blood vessels Indicate the position of arteries and their mainbranches Indicate the position of veins and their maintributaries Indicate the position of lymph nodes
9	**RESPIRATORY SYSTEM**
	Parts of respiratory system with basic functionalAnatomy Position extent of bronchi, bronchioles and lungs Arrangement & Microscopic structure of

	parietalpleura Extent of trachea Distinguishing feature of the right and the left lung– border and surfaces Name the bronchopulmonary segments Mechanics of respiration & diaphragm
10	**CARDIO VASCULAR SYSTEM**
	Position of heart – chambers, borders, valves ofHeart Identify – aorta, pulmonary vessels, venacava Blood supply and nerve supply of heart Myocardium and its functions Coronary artery and coronary system Conductive system of heart Microscopic structure of blood vessels Myocardial infarction and prognosis
11	**THORAX**
	Define thoracic wall & thoracic cavity Thoracic vertebrae – features Sternum – deformities and clinical implications Ribs & joints of thorax Phrenic nerves Intercostal space & contents
12	**ABDOMEN & PELVIS**
	Define Lumbar & sacral Vertebra Pelvis – distinguish between male & female pelvis Articular surfaces, Ligaments and movements ofjoints of pelvis Layer of muscles forming the abdominal wall Origin Insertion Nerve supply Action of muscle Inguinal canal – Position, extent, formation and contents Define Inguinal hernia and its clinical implications. Formation and location of Lumbar plexus – its branches Branches and distribution of abdominal aorta &iliac arteries Identify muscles of pelvic floor and mention their attachments, actions & nerve supply

PRACTICALS

- Upper extremity including surface Anatomy
- Lower extremity including surface Anatomy
- Identification of body prominences on inspection and by palpation especially of extremities
- Thorax including surface anatomy, abdominal muscles joints
- Histology-Elementary tissue including surface Anatomy
- Embryology-models, charts & X-rays
- Demonstration of the muscles of the whole body and organs in thorax and abdomen.
- Demonstration of movements in important joints.

- Surface making of the lung, pleura, fissures and lobes of lungs, heart, liver, spleen, Kidney.

Practical procedure:

- Learning through charts models and specimens.
- Identification and location of systems in models and cadaver
- Location of anatomical parts in dissected cadaver
- Identification of specimens

Recommended Text books:

1. Gray‘s anatomy 37th edition edited by – Peter L. Williams, Mary Dyson
2. Text book of human anatomy by T.S. Ranganath
3. SNELL [Richard S], Clinical Anatomy for Medical students : Ed. 6. Little Brown andCompany Boston. 1995, p898,
4. B.D Chaurasia‘s Human Anatomy – Regional And Applied; Volume I, Volume Ii And VolumeIii.
5. MOORE [Kieth L], Clinically Oriented Anatomy. Ed.3., Williams and Wilkins, Baltimore,1992, p917
6. DATTA[A.K], Essentials of human Anatomy: Thorax and Abdomen Ed 2. Vol. I Current Book International, Culcutta 1994, p433,
7. SINGH [Inderbir], Text book of Anatomy with colour atlas: Introduction, Osteology, UpperExtremity, Lower Extremity. Vol I. P Brothers, New Delhi 1996,
8. SINGH [Inderbir], Text book of Anatomy with colour Atlas: Thorax and Abdomen. Vol II. JPBrothers, New Delhi 1996,
9. SINGH [Inderbir],Human Osteology. JP Brothers, New Delhi 1990,p191,

PRACTICALS

1. ROMANES [G J], Cunningham manual of practical anatomy: upper and lower limbed 15Vol 1 Oxford Medical Publication, Oxford 1996, P263,
2. ROMANES [G J], Cunningham manual of practical anatomy : Thorax and abdomen ed15 Vol II Oxford Medical Publication, Oxford 1996, P298,

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

PRACTICALS /VIVA VOICE-50 Marks	**Maximum Marks**
Total	**50**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practical) as per University pattern**

PHYSIOLOGY I

Total - 120hrs

COURSE DESCRIPTION

The course along with the anatomy forms the fundamental basis for every Occupational therapy professional. The course is designed to study the function of the human body at the molecular, cellular, tissue and systems levels. The major emphasis is placed on general physiology, physiology of exercise and applied physiology. The general physiology focus on blood, nerve muscle function, cardiovascular and respiratory system.The applied physiology focus on the functions and dysfunctions of cardio respiratory system, nervous system and muscular system.

Learning Objectives

Cognitive

1) To know about the principles related to maintenance of body equilibrium and composition.

2) To understand the basic mechanism operating across the biological membrane.

3) To understand the functional mechanisms of cardio respiratory system, nervous system and muscular system.

4) To understand interaction and integration of cardio respiratory system, nervous system and muscular system in health and diseases.

5) To understand the influence of various environmental factors including personal stressors like exercise on various systems.

Psychomotor

1) To be able to perform the tests or techniques to evaluate the functions of cardio respiratory system, nervous system and muscular system

2) To be efficient to handle the equipment related to these tests.

3) To be able to derive, analyze, interpret the test results.

4) To be able to present the facts in a precise manner regarding knowledge and skill acquired.

Affective

At the end of training the student should be able to -

The student should be able to correlate the knowledge of physiology and its relevance in the Occupational therapy profession.

SYLLABUS

S.NO	TOPIC
1	**General Physiology**
	Cell Morphology: Organelles: their structure and functions Transport Mechanisms across the cell membrane Body fluids: Distribution, composition. Tissue fluid – formation **Blood** Introduction: Composition and functions ofblood. Plasma:Composition,formation,functions. Plasma proteins RBC: count and its variations. Erythropoiesis-stages,factorsregulating. Reticulo-endothelialsystem (in brief) Haemoglobin-Anaemia (in detail), types of Jaundice. Blood WBC: Classification, Morphology,functions,indices, PCV,ESRcount, its variation of each ImmunityPlatelets:Morphology,functions,count,its variations. Hemostatic mechanisms: Blood coagulationfactors, mechanisms. Their disorders. Anticoagulants. Blood Groups: Landsteiner's law. Types significance, determination Erythroblastosisfoetalis. Blood Transfusion: Cross matching. Indications and complications. Lymph: Composition, formation, circulation and functions. **Nerve Muscle Physiology** Introduction: Resting membrane potential. Action potential – ionic basis and properties. Nerve: Structure and functions of neurons. Classification, Properties and impulse transmissionof nerve fibres. Nerve injury – degeneration and regeneration. Neuroglia: Types and functions. Muscle: Classification. Skeletal muscle: Structure.

	Neuromuscular junction:Structure. Neuromuscular transmission, myasthenia gravis.Excitation-Contraction coupling.Rigormortis. Motor unit. Properties of skeletal muscles, Strength-Duration curve, Length-tension relationship, fatigue, load. Smooth muscle: Structure, types, mechanism of contraction. Plasticity **Cardiovascular System** Introduction: Physiological anatomy and nerve supply of the heart and blood vessels.Organisation of CVS. Cardiac muscles: Structure. Ionic basis of action potential and pacemaker potential,Properties. Conducting system: Components. Impulse conduction Cardiac Cycle:Definition. Phases of cardiac cycle.Pressure and volume curves. Heart sounds – causes, character. ECG: Definition.Different types of leads. Waves and their causes.P-R interval.Heart block. Cardiac Output: Definition. Normal value.Determinants.Stroke volume and its regulation.Heart rate and its regulation. Their variations Arterial Blood Pressure: Definition. Normal values and its variations.Determinants.Peripheralresistance.Regulation of BP. Arterial pulse. Shock – Definition. Classification–causes and features Regional Circulation: Coronary, Cerebral and Cutaneous circulation Cardiovascular changes during exercise **Respiratory System** Introduction: Physiological anatomy – Pleura,tracheo-bronchialtree,alveolus,respiratorymembrane and their nerve supply. Functions of respiratory system.Respiratory muscles Mechanicsofbreathing:Intrapleural and Intrapulmonary Pressurechangesduringrespiration. Chest expansion.

	Lung compliance Normal value, pressure-volume curve, factorsaffecting compliance and its variations. Surfactant – Composition, production, functionsRDS Spirometry: Lung volumes and capacities. Timedvitalcapacityanditsclinicalsignificance,Maximumventilationvolume,Respiratory minute volume.Dead Space: Types and their definition PulmonaryCirculation.Ventilation-perfusionratio and its importance Transport of respiratory gases: Diffusion acrossthe respiratory membrane. Oxygen transport – Differentforms,oxygen-haemoglobindissociationcurve. Factorsaffectingit. P50,Haldane and Bohr effect. Carbon dioxidetransport: Different forms, chloride shift. Regulation of Respiration: Neural RegulationHering-breuer'sreflex.Voluntarycontrol.Chemical RegulationHypoxia: Effects of hypoxia. Typesofhypoxia.Hyperbaricoxygentherapy. AcclimatizationHypercapnoea. Asphyxia. Cyanosis types andfeatures. DysbarismDisorders of Respiration: Dyspnoea. Orthopnoea. Hyperpnoea, hyperventilation, apnoea, tachypnoea. periodic breathing – types ArtificialRespirationRespiratory changes during exercise.
2	**Physiology of exercise**
	Effects of acute and chronic exercise on 1) O2 transport 2) Muscle strength/power/endurance 3) B.M.R./R.Q 4) Hormonal and metabolic effect 5) Cardiovascular system 6) Respiratory system 7) Body fluids and electrolyte 8)Effect of gravity / altitude /acceleration pressure on physical parameters 9) Physiology of Age
3	**Applied physiology**
	CVS The heart and circulation Determinants of cardiac performance Normal& Abnormal E.C.G. Maintenance of blood pressure Cardiac arrest and heart failure Cardiovascular compensation for postural and

	gravitational changes Hypertension oedema Central and peripheral venous pressure Nervous system and muscles Reflex action, reciprocal innervation Degeneration and regeneration of nerves Control of posture Outline of voluntary movement Cutaneous, deep and superficial sensation Synaptic transmission Neuro muscular transmission Respiration Normal& abnormal Breath sounds Gas tension in air at sea level, tracheal air, cellular air, mixed air, plasma, arterial blood and mixed venous blood. Altered Lung volume Oxygen and carbon dioxide transport Acid base reactions in blood Effects off exercise on respiration Artificial respiration. hypertension Oedema Central and peripheral venous pressure

Practical

I. Haematology

1. Haemoglobinometer and total R.B.C. count.
2. Total W.B.C. count
3. Preparation and staining of blood smears, determination of differential W.B.C. count.
4. Blood grouping
5. Erythrocyte sedimentation rate
6. Bleeding and clotting time.

II. Clinical Examination

1. Examination of Radial pulse.
2. Recording of blood pressure
3. Examination of CVS
4. Examination of Respiratory system

III. Demonstration and Dry chart Explanation

1. Simple muscle curve.
2. Effect of increasing the strength of the stimuli
3. Effect of temperature on muscle contraction.
4. Effect of two successive stimuli.
5. Effect of Fatigue.

6. Effect of load on muscle contraction
7. Genesis of tetanus and clonus.
8. Velocity of impulse transmission.
9. Normal cardiogram of amphibian heart.
10. Properties of Cardiac muscle
11. Effect of temperature on cardiogram.

IV. Recommended Demonstrations

1. Spirometry
2. Artificial Respiration
3. 6 Minute walk test
4. 12 Minute walk test
5. ECG
6. Perimetry
7. Mosso'sErgometry

Text books

a) Text book on Medical Physiology – Guyton
b) Textbook of Physiology – A K Jain
c) Text book of medical physiology- Sembulingam

Reference books

1. Review of Medical Physiology – Ganong
2. Samson & Wright's Applied Physiology
3. Textbook of Medical Physiology – Bern and Levy

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions 10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions 10x2=20 10 questions- 2 marks each	**20**
Total	**100**

PRACTICALS /VIVA VOICE-50 Marks	Maximum Marks
Total	**50**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practical) as per University pattern**

GENERAL PSYCHOLOGY & SOCIOLOGY

Didactic 90hrs -total 90hrs

COURSE DESCRIPTION

This course serves as a broad introduction to the field of contemporary psychology, which is explored as a science, a profession, and a means of promoting human welfare. Students are exposed to psychology and sociology as both a natural and social science through reading

assignments, lectures, discussions, and demonstrations. Occupational therapy as a profession necessitates socialization and analyzing the psychology of patients with suffering.

OBJECTIVES:

At the end of the course, the candidate will be able to:

Cognitive:

Define the term Psychology & its importance in the Health delivery system, & will gain knowledge of Psychological maturation during human development & growth & alterations during aging process.

b. Understand the importance of psychological status of the person in health & disease; environmental & emotional influence on the mind & personality.

c. Have the knowledge and skills required for good interpersonal communication, learning and situational analysis.

Psychomotor:

a. Enumerate various Psychiatric disorders with special emphasis to movement / Pain & ADLs, intelligence, motivation, emotion and personality.

b. Apply the knowledge in brief, about the pathological & etiological factors, signs / symptoms & management of various Psychiatric conditions in profession.

c. Demonstrate skills of understanding the patient more empathetically giving due consideration to social issues and problems in socialization.

Affective

The student should be able to correlate the knowledge of general psychology and sociology and understand the clinical application of the same in patient handling, evaluation and treatment in the Occupational therapy profession.The student should respect others without showing bias or presences on the grounds of age, race and gender. The student should learn to respect and positively respond to the instructions and suggestions of the peers, superiors and respect the values of Occupational therapy profession.

SYLLABUS

S. NO	TOPIC
1	**Definition of Psychology**
	Define of Psychology, basic information in relation tofollowing schools methods and branches. Schools: Structuralism, functionalism, behaviourism, psychoanalysis, gestalt psychology Methods: Introspection, observation, inventory and Experimental method Branches: General, child, social, abnormal, Industrial, clinical, counseling, Educational.
2	**Heredity and Environment**
	Twins relative importance of heredity and environment,their role in relation to physical characteristics,intelligence .and personality, nature-nature controversy.
3	**Development and Growth Behavior**
	Infancy, childhood, adolescence, adulthood, middle age, old age.
4	**Intelligence**
	Definitions – IQ, Mental Age, List of various intelligence tests- WAIS, WISC, Bhatia‘s performance test, Raven‘sprogressive matrices test.
5	**Motivation**
	Definitions: motive, drive, incentive and reinforcement,Basic information about primary needs: hunger, thirst,sleep elimination activity, air, avoidance to pain, and attitudeto sex. Psychological needs: Information, security, self-esteem,competence, love and hope
6	**Emotions**
	Definition, differentiate from feelings, physiologicalchanges of emotion, role of RAS, hypothalamus, cerebralcortex, sympathetic nervous system, adrenal gland,heredity and emotion. Nature and control of anger, fearand anxiety.
7	**Personality**
	Definition, List the components: Physical characteristics,character abilities, temperament interest and attitudes.Discuss briefly the role of heredity, nervous system,physical characteristics, abilities, fam8ily and culture onpersonality development. Basic concepts of Freud: Unconscious, conscious Ide, egoand superego list and define the oral, anal and phallicgenita, latency stages of personality development. Listand define the 8 stages as proposed by Erickson, 4concepts of learning as proposed by

	Dollard and Miller,drive, cue, response and reinforcement. Personality assessment: interview, standardized non - standardized, Exhaustive and stress interviews, list and define inventories BAI, CPI and MMPI. Projective tests, Rorschach, TAT and sentence completion test.
8	**Learning**
	Definition, List the laws of learning as proposed by Thorndike. Types of learning: Briefly describe classical conditioning, operant conditioning, insight, observation and Trial and Error type. List the effective ways to learn: Massed Vs. Spaced, Whole Vs. Part, Recitation Vs. Reading, Serial Vs. Free recall, knowledge of results, Association, Organization, Mnemonic methods, Incidental Vs. International learning, role of language.
9	**Thinking**
	Definition, concepts, creativity, steps in creative thinking;list the traits of creative people, delusions.
10	**Frustration**
	Definition, concepts, creativity, steps in creative thinking;list the traits of creative people, delusions. Definition, Sources, solution – conflict: approach – approach, avoidance – avoidance, and approach – Avoidance, solution.
11	**Sensation, Attention and Perception**
	List the senses, Vision, hearing, Olfactory, Gustatory andcutaneous sensation, movement, equilibrium and viscerasense. Define attention and list factors that determineattention: nature of stimulus intensity, colour, changeextensity, repetition, movement size curiosity, primarymotives. Define perception and list the principles of perception: Figure ground, constancy, similarity, proximity, closure,continuity, values and interests, past experience context,needs, moods, religion, sex and age, perceived benefits,and socioeconomic status. Define illusion and hallucinationList visual, auditory, cutaneous, gustatory and olfactoryhallucination.
12	**Defense mechanisms of the ego**
	Denial, rationalization, projection, reaction formation,identification, repression, emotional insulation, undoing,introjection, acting out, depersonalization.
13	**Democratic and Authoritarian leadership**
	Qualities of leadership: Physical factors, intelligence,self-confidence, sociability, will and dominance. Defineattitude, change of attitude by:

	Additional information, changes in group, affiliation, enforced modification by law and procedures that affect personality Psychotherapy. Counseling and religious conversion.

Recommended books

1. Cliford T. Morgan – Introduction to Psychology
2. Morgan & King – Introduction to Psychology
3. Hilgard & Atkinson – Introduction to Psychology

SOCIOLOGY

SYLLABUS

S. NO	TOPIC
1	**Definition of Sociology**
	Understanding Sociology Definition and scope of Sociology Its relation to Anthropology and Psychology Sociological understanding and sociological thinking.
2	**Sociology Approaches**
	Sociological approaches to health care Main features of positivistic and naturalisticapproaches to sociological thinking andtheorizing Sociological approaches to health-care Concepts of social groups; influence of formaland informal groups on health and sickness. The SCP [Society-Culture-Personality] Modeland the health care
3	**Social Health**
	• Social class and health experience • Culture types and practices universal and variability‘s of culture. • The role of primary groups and secondarygroups in the hospital and rehabilitation. • Gender and health issues in India.
4	**Family**
	• Family • The family, meaning and definitions. • Functions of types of family • Changing family patterns

	• Influence of family on the individuals health,family and nutrition, the effects of sickness inthe family and psychosomatic disease andtheir importance to Occupational therapy.
5	**Community**
	Rural community: Meaning and features –Health hazards of ruralities, health hazards totribal community. Urban community: Meaning and features-Health hazards of urbanities.
6	**Social worker**
	Meaning of Social Work The role of a Medical Social Worker

Recommended books

1. Sachdeva and Vidyabushan (1990), *Introduction to the study of Sociology,* KitabMahal. Allahabad.
2. Indrani T K, *Text Books of Sociology for Graduates Nurses and Occupational therapyStudents*, JP Brothers, New Delhi.
3. Gilbert (1973), *Fundamentals of Sociology*, 3rd ed. Bombay, Orient Longman
4. William J Goode (1977 *Principles of Sociology* McGraw-Hill Book Co. New York
5. Mark Walsh (2004). *Introduction to Sociology for Healthcares*. Nelson Thomes, UK

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory) as per University pattern**

DISASTER MANAGEMENT (Non-credit)

Didactic30hrs+Practical 15hrs=45hrs

COURSE DESCRIPTION

The course gives an overview of issues related to disaster management including a history of the field, comprehensive emergency management and integrated emergency management, risk reduction and management and current issues in the field.

OBJECTIVES:

At the end of the course, the candidate will be able to:

Cognitive:

a. Defining disaster and the brief history of disasters and its classification
b. Understanding the various approaches to disaster risk reduction and disaster management skills.
c. Comprehending the relationship between disaster and development

Psychomotor

a. To be able to present various disaster and relate it to development and analyse the same.
b. Field work on minimizing the disaster and building the culture of safety.
c. Performing project work, which is creatively designed based on the geographical location and hazard profile of the region where the college is located.

Affective

In the view of disaster, the student should be able to understand and volunteer towards the needs of the society based on the requirements.

The course gives an overview of issues related to disaster management including a history of the field, comprehensive emergency management and integrated emergency management, risk reduction and management and current issues in the field.

OBJECTIVES:

At the end of the course, the candidate will be able to:

Cognitive:

a. Defining disaster and the brief history of disasters and its classification
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Affective

In the view of disaster, the student should be able to understand and volunteer towards the needs of the society based on the requirements.

SYLLABUS

S. NO	TOPIC
1	**Introduction to Disasters**
	Concepts, and definitions (Disaster, Hazard, Vulnerability,Resilience, Risks)
2	**Disasters**
	Classification Causes, Impacts (including social,economic, political, environmental, health, psychosocial, etc.) Differential impacts- in terms of caste, class,gender, age, location, disabilityGlobal trends in disasters.urban disasters,pandemics, complex emergencies,ClimateChange
3	**Approaches to Disaster Risk reduction**
	Disaster cycle - its analysis,Phases, Culture of safety,prevention,mitigationand preparednesscommunity based DRR, Structural-nonstructuralnesures,roles and responsibilities of-community,Panchayati Raj Institutions/UrbanLocal Bodies (PRIs/ULBs), states, Centre, andother stake-holders.
4	**Inter-relationship between DisastersandDevelopment**
	Factors affecting Vulnerabilities, differential impacts, impact of Development projects such as dams, embankments, changes in Land-use etc. Climate Change Adaptation. Relevance of indigenous knowledge, appropriate technology and local resources.
5	**Disaster Risk Management in India**

	Hazard and Vulnerability profile of IndiaComponents of Disaster Relief: Water, Food,Sanitation, Shelter,Health, Waste ManagementInstitutionalarrangements(Mitigation, Responseand Preparedness,DM Act and Policy, Otherrelated policies, plans, programmesand legislation).
6	**Project Work: (Field Work, Case Studies)**
	The project /fieldwork is meant for students tounderstand vulnerabilities and to work on reducing disaster , risks and to build a culture of safety.Projects must be conceived creatively based on the geographic location and hazard profile of the regionwhere the college is located.

Suggested Reading list:

- Alexander David, Introduction in 'Confronting Catastrophe', OxfordUniversity Press, 2000
- Andharia J. Vulnerability in Disaster Discourse, JTCDM, Tata Institute of Social Sciences Working Paper no. 8, 2008
- Blaikie, P, Cannon T, Davis I, Wisner B 1997. At Risk Natural Hazards,Peoples' Vulnerability and Disasters, Routledge.
- Coppola P Damon, 2007. Introduction to International Disaster Management,
- Carter, Nick 1991. Disaster Management: A Disaster Manager's Handbook.Asian Development Bank, Manila Philippines.
- Cuny, F. 1983. Development and Disasters, Oxford University Press.
- Document on World Summit on Sustainable Development 2002.Govt. of India: Disaster Management Act 2005, Government of India, NewDelhi.
- Government of India, 2009. National Disaster Management Policy,
- Gupta Anil K, Sreeja S. Nair. 2011 Environmental Knowledge for DisasterRisk Management, NIDM, New Delhi Indian Journal of Social Work 2002. Special Issue on Psychosocial Aspects of Disasters, Volume 63, Issue 2, April.
- Kapur, Anu& others, 2005: Disasters in India Studies of grim reality, RawatPublishers, Jaipur KapurAnu 2010: Vulnerable India: A Geographical Study of Disasters, IIAS and Sage Publishers, New Delhi.
- Parasuraman S, AcharyaNiru 2000. Analysing forms of vulnerability in adisaster, The Indian Journal of Social Work, vol 61, issue 4, October
- Prof. tanki B. AndhariaDr:Anil Kumar GuptaDrThuryaPrakashPelting Mark, 2003 The Vulnerability of Cities: Natural Disaster and SocialResilienceEarthscah publishers, London
- Reducing risk of disasters in our communities, Disaster theory, Tearfund,2006.
- UNISDR, Natural Disasters and Sustainable Development: Understanding thelinks between Development, Environment and Natural Disasters, BackgroundPaper No. 5. 2002.IFRC, 2005. World Disaster Report: Focus on Information in Disaster, pp.182-225.
- Publications of National Institute Of Disaster Management (NIDM) and
- National Disaster Management Authority (NDMA)

EFFECTIVE ENGLISH(Non-credit)

Didactic-45 Hrs + Practical/ Laboratory-45 HRS

Course Objective:

The objectives of this course is that after 40 hours of lectures, demonstrations and practicals the student will be able to Speak fluently, intelligibly and appropriately to teachers, Colleagues, Doctors, Patients and friends at the college, Hospital and hostel etc. about academic or (occupational) areas of interest. Course Outcome: 1. Students can gain knowledge about the various traditions writer and followed in English 2. Individuals can gain self – confidence in their own voice and speak out their opinions with confidence 3. Students will gain the ability to become a accomplished active readers 4. Helps to build the knowledge and understanding simultaneously through listening and give their point of view 5. Students will be able to write effectively in variety of professional and social setting 6. Acquire the ability to read and understand the literature and have the ability to identify the topics and formulate questions 7. Good communication skills which helps in easy rapport between the patient and therapist 8. Gain

the fluency in speaking which helps in easy teaching method and presentation

1. **UNIT – I INTRODUCTION**
   1. History of the language
   2. Regional distribution
   3. Variation in dialect and accent

2. **UNIT – II PHONOLOGY**
   1. Consonants and vowels
   2. Phontactics
   3. Stress, rhythm and intonation
   4. Regional variation

3. **UNIT – III GRAMMER**

   1. Noun, Pronoun
   2. Verb, Tense
   3. Adjuncts
   4. Adjectives

4. **UNIT – IV SYNTAX**
   1. Clause syntax
   2. Auxillary verbs
   3. Vocabulary
   4. Word formation
   5. Pronounciation

5. **UNIT – V PRESENTATION**
   1. Oral presentation & Panel discussion
   2. Interview preparation
   3. Clarity and specificity

Text Book:

1. O' Connor, I.D., Better English Pronunciation - Cambridge, Cambridge University.2009

Reference:

1. Water F.V.A , Proficiency Course in English – Hodder and Stronghton, London.1994

2. Tone Daniel, I.M. , English Pronouncing Dictionary –Dent and sons Ltd. London.2004

BASICS OF COMPUTER
(Non-credit)

Didactic & practical -45 Hrs

Learning objectives
Upon successful completion of this subject, students should

1. To obtain the basic knowledge on computer, devices used in computers.
2. To know the uses of computers like MS office, Power point Presentations, Excel documents.
3. To know about uses of internet, its advantages in regular updating the knowledge in Occupational therapy profession.

SYLLABUS

Sr. No.	Topics
1	**Introduction**
	1. Introduction to computers-History of Computer, Generation of Computer, Classification of Computers, Input Devices, Output Devices, Central Processing Unit, Components of CPU, Memory Unit, Peripheral Devices 2. Introduction to M.S. Windows 3. Internet and its applications 4. Saveetha web forum & portal 5. Google Applications 6. Introduction to M.S. Office - Word, Power Point, Excel, Publisher
2	**The Digital Age**
	Computer and communications, the five operations of a computer-and communication system- input, processing, output, storage and communications as well as the corresponding categories of hardware, five major categories of computers, development I communication Technology.
3	**Applications Software**
	Applications and systems software, ethics of copying software, four types of applications software, entertainment education and reference, productivity and business and specialized, key functions of word processors, spreadsheets, database managers, graphics programs and suites, group-ware, and internet web browsers.
4	**Storage Devices**
	Units of storage capacity, primary and secondary storage, data compression, data storage on diskette, hard disks, optical disks, and magnetic tape and describe the purposes of storage media.
5	**Communications**
	Usage of communications technology, telephone-related services, online information services, the internet
6	**Multimedia**

	What is multimedia – Multimedia PC– Multimedia Hardware - Central processor – color display, Multimedia accessories – CD ROM – Digital Audio – Audio speakers – Digital video – MIDI – deodisc Read/write storage device- Multimedia software
7	**Radio propagation:**
	Use of computers in physical therapy – Application Packages used in statistical analysis.

Recommended books

1. Free T. Hotstetter, ―Multimedia Literacy‖ M<egraw Hill,
2. Simon J. Gibbs, Dinoysios C. Tsichritziz, ―Multimedia programming‖, Addison Wesley
3. John F.Koefgel Buford, ―Multimedia Systems‖, Addison Wesley
4. John Vince, ―Virtual Reality Systems‖ Addison Wesley.
5. AndressF.Molisch, ―Wideband Wireless digital communication‖ Pear Education Asia

INTERNAL ASSESSMENT:

1. **Internal assessment as per University pattern**

PERSONALITY DEVELOPMENT (Soft Skill Training)

Total hours- 45 hours

UNITI IntroductiontoPersonalityDevelopment

The concept of personality - Dimensions of personality – Theories of Freud & Erickson- Significance ofpersonality development. The concept of success and failure: What is success? - Hurdles in achieving success - Overcoming hurdles - Factors responsible for success – What is failure - Causes of failure.SWOTanalysis.

Attitude - Concept - Significance - Factors

UNITII Attitude&Motivation

affecting attitudes - Positive attitude – Advantages –Negativeattitude- Disadvantages - Ways to develop positive attitude - Differences between personalities havingpositive and negative attitude. Concept of motivation - Significance – Internal and external motives - Importanceofself-motivation-Factors leadingto de-motivation

UNITIII Self-esteem

Term self-esteem - Symptoms - Advantages - Do's and Don'ts to develop positive self-esteem – Low self-esteem - Symptoms - Personality having low self esteem - Positive and negative self esteem. InterpersonalRelationships – Defining the difference between aggressive, submissive and assertive behaviours - Lateralthinking.

UNITIV OtherAspectsofPersonalityDevelopment

Bodylanguage-Problem-solving-ConflictandStressManagement-Decision-makingskills-Leadership and qualities of a successful leader – Character building -Team-work – Time management -Workethics–Good manners and etiquette.

UNITV Employability Quotient

Resume building- The art of participating in Group Discussion – Facing the Personal (HR &Technical)Interview-FrequentlyAsked Questions-PsychometricAnalysis-MockInterview Sessions.

TextBooks:

1. Hurlock,E.B(2006).PersonalityDevelopment,28thReprint.NewDelhi:TataMcGrawHill.
2. StephenP.RobbinsandTimothyA.Judge(2014), *Organizational Behavior16thEdition:* PrenticeHall.

ReferenceBooks:

1. Andrews,Sudhir.Howto Succeedat Interviews.21st(rep.)NewDelhi.TataMcGraw-Hill 1988.
2. Heller,Robert.Effectiveleadership.EssentialManagerseries.DkPublishing,2002
3. Hindle,Tim.ReducingStress.EssentialManagerseries.DkPublishing,2003
4. Lucas,Stephen.ArtofPublicSpeaking.NewDelhi.Tata-Mc-GrawHill.2001
5. Mile,D.JPowerof positivethinking.Delhi. RohanBookCompany, (2004).
6. PraveshKumar.AllaboutSelf-Motivation.NewDelhi.Goodwill PublishingHouse.2005.
7. Smith,B. BodyLanguage. Delhi:Rohan BookCompany. 2004

2nd SEMESTER

ANATOMY -II

Total - 120 HRS

COURSE DESCRIPTION

The major focus of this subject is an in-depth study and analysis of the structure and function of human movement concerned with head and neck.A comprehensive study of human anatomy with emphasis on the endocrine system, lymphatic system, digestive system, genitor urinary, integumentary system are incorporated. Dissection and identification of structures in the cadaver supplemented with the study of charts, models, prosected material and radiographs are utilized to identify anatomical landmarks and configurations of the head and neck and brain.

OBJECTIVES

Cognitive –

At the end of the training, the student should be able to –

1. Describe the gross anatomy of the human body and correlate the knowledge of structure and function of Head and neck.
2. Describe the cross section anatomy of the human body and correlate the knowledge of structure and function of Head and neck.
3. Interpret the anatomical basic of symptoms and signs of clinical conditions, diagnostic procedures and treatment modalities related to of Head and neck, endocrine system, lymphatic system, digestive system, genitor urinary, integumentary system
4. Describe the development aspects of human body and interpret the development basis of various congenital anomalies of Head and neck and Nervous system.

5. Describe the neuro anatomy in its entirety and interpret the neuro anatomical basis of various clinical conditions of Head and neck, Nervous system, endocrine system, lymphatic system, digestive system, genitor urinary, integumentary system.

Psychomotor

At the end of the training, the student should be able to –

1. Dissect and demonstrate various parts of head, neck, brain and spinal cord.
2. Demonstrate the anatomical significance of nerves and blood vessels of human body.
3. Prepare and deliver lectures on various topics of human anatomy using audio – visualadis.
4. Present paper / poster in conference emphasizing on the anatomy and clinical anatomy

Affective

At the end of training the student should be able to -

The student should be able to correlate the knowledge of anatomy and its application in the Occupational therapy profession during patient evaluation and treatment.

SYLLABUS

Sr. No.	Topics
1	**NEURO ANATOMY**
	• Define Neuron • Organization of Nervous system along with division central, peripheral autonomic. • Identify the anterior and posterior triangles of the neck • Name subdivisions & list contents. • Development of brain and spinal cord in embryonic level. **Spinal cord: -** Position, extent transectional view. Tracts of spinal cord and their extent Reflex levels at spinal cord. Blood supply Effects of injury & prognosis Rhombencephalon or hind brain Medulla Oblongata Pons Cerebellum Mention the parts of cerebellum

	Internal cerebellar structures The various afferent and efferent tracts and their respective terminations. Results of damage to cerebellum and prognosis gross components • **Reticular formation** • **Forebrain or cerebrum** Knowledge of gyri, sulci and cortical areas Association fibres, projection fibers and commisural fibers. Define and identify a. cerebral cortex b. fornix c. ancus d. insula Limbic lobe and factory pathways Meninges • Internal capsule, basal ganglia, thalamus, hypothalamus – Role and effects of injury Define pyramidal motor system and name its tracts. Define upper and lower motor neurons Name parts and tracts of extra pyramidal system and indicate the functions. Nature and basis of muscle tone Autonomic nervous system sympathetic, parasympathetic Cranial nerve Peripheral apparatus of special senses • Reflex levels of organization • Controlling levels of organization • Blood supply • Arteries of the brain. • Blood supply to the cerebrum/circle of willis • Blood brain barrier • Subdural hemorrhage, subarachnoid, extradural hemorrhage • Result of occlusion • CSF Formation, circulation and drainage Lumbar puncture andcisternal puncture.
2	**HEAD AND NECK**
	• Discussion about the musculoskeletal and neurovascular features. • Identify the anterior and posterior

	triangles of the neck with its substitutions. • Identify the large skull bones and their • parts • Identify and name the main muscles of the face. Mention their nerve supply andaction. • Tempero mandibular joint articulation muscles and movements possible. • Paralysis of facial muscles – causes of injury to facial nerve and sequel of injury • Divisions of trigeminal nerve on the face • General features of typical cervical vertebra, atlas, axis and seventh cervical vertebra. • Main muscles of the cervical region attachments, actions and nerve supply. • Identify the phrenic, accessory and vagus • Joints of the cervical region – mention the type, articular surfaces, ligaments, movements and muscles producing these movements. • **EYE:** o Structure of eye, subdivisions andchambers o Retina & Optic pathway o Light and accommodation reflex o Nerve supply & action ofextraocular muscles. • **NOSE:** o Bony components of nose o Parts and boundaries of nose andfeatures of nasal cavity. • **EAR**: o Basic structure of ear: hearing &equilibrium o Nerve endings for hearing andequilibrium
3.	**CRANIAL NERVES** Enumerate the cranial nerves in serial order Nucleus of origin and termination Mention the attachments to the brain and cranial exit Sensory and motor distribution Predict sequel of lesion & Prognosis
4	**ENDOCRINE SYSTEM**

	List the endocrine organs and mention their position Identify the functions of hormones produced by each endocrine organ.
5	**LYMPHATIC SYSTEM**
	Comprehend the general and regional arrangements of the lymphatic system Functions of Lymphatic system Structures of Lymph nodes, Lymph vessels.
6	**DIGESTIVE SYSTEM** Parts of digestive system Special features of mouth, teeth and muscles of the pharynx. Position, course & extent of the oesophagus Position & gross structure of stomach, nerve supply & chief functions. Subdivisions of the intestines and mention their surface anatomy Distinguish between the small and the large intestine Chief arterial branches of the abdominal aorta. Position and gross features of the liver &Biliary system Position of pancreas & spleen Hernias in stomach and intestinal levels. Treatments and prognosis.
7	**GENITO URINARY SYSTEM** Basic structure, functional anatomy of kidney Distinguish between right & left kidney – position, size & shape Structure of Nephron State the anatomy of bladder, Uterus, Urethra Basic innervation of bladder List and locate the parts of male reproductive system State the anatomy and functional considerations of the reproduction and external organs. List and locate the parts of female reproductive system State the anatomy and functional considerations of ovary, uterine tubes, uterus, vagina and female external genitalia. Anatomy of the uterus, causes for prolapse, factors responsible

	formaintenance of its position. Discuss course of external & internal iliacarteries.
8	**INTEGUMENTARY SYSTEM**
	Structure and layers of skin Blood circulation skin Sweat and sebaceous glands – location and function

PRACTICAL ANATOMY

- Head & Spinal cord and Neck and Brain including surface Anatomy cranial nerves, spinal nerves and important blood vessels.
- Points of palpation of nerves and arteries.

Practical procedure:

- Learning through charts models and specimens.
- Identification and location of systems in models and cadaver
- Location of anatomical parts in dissected cadaver
- Identification of specimens

Reference:

1. Clinical neuro anatomy for medical students – Snell 6th edition
2. Human anatomy – B.D. Chaurasia‘s
3. Clinical anatomy for medical students – Snell 6th edition
4. Text book of human neuroanatomy – Inderbir Singh
5. Gray‘s anatomy 37th edition edited by – Peter L. Williams, Mary Dyson
6. Text book of human anatomy by T.S. Ranganathan

Recommended Text books:

1. Gray‘s anatomy 37th edition edited by – Peter L. Williams, Mary Dyson
2. Text book of human anatomy by T.S. Ranganath
3. SNELL [Richard S], Clinical Anatomy for Medical students : Ed. 6. Little Brown and Company,Boston. 1995, p898,
4. B.D Chaurasia‘s Human Anatomy – Regional And Applied; Volume I, Volume Ii And Volume
5. MOORE [Kieth L], Clinically Oriented Anatomy. Ed.3., Williams and Wilkins, Baltimore,1992, p917
6. DATTA [A.K],Essentials of human Anatomy: Head and Neck Ed 2. Vol. II, Current Book International, Culcutta 1995, p363,
7. SINGH [Inderbir], Text book of Anatomy with colour atlas: Introduction, Osteology, UpperExtremity, Lower Extremity. Vol I. P Brothers, New Delhi 1996,
8. SINGH [Inderbir], Text book of Anatomy with colour Atlas: Head and Neck Central NervousSystem. Vol III. JP Brothers, New Delhi 1996.

Practicals

1. ROMANES [G J], Cunningham manual of practical anatomy : Head and Neck and Brain ed
2. 15 Vol II Oxford Medical Publication, Oxford 1996, P346

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

PRACTICALS /VIVA VOICE-50 Marks	**Maximum Marks**
Total	**50**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practicals) as per University pattern**

PHYSIOLOGY-II

Total – **120 hrs**

COURSE DESCRIPTION

The course is designed to study the function of the nervous system. The major emphasis is placed on special senses, reproductive system, digestive system, renal and endocrine system.

Learning Objectives

Cognitive

1) To understand the functional mechanisms of nervous system, reproductive system, digestive system, renal and endocrine system.
2) To understand interaction and integration of reproductive system, digestive system, renal and endocrine system.
3) To understand the functions and dysfunctions of reproductive system, digestive system, renal and endocrine system.

Psychomotor

1) To be able to perform general clinical examination.
2) To be able to perform specific clinical examination to assess sensation, motor system and cranial nerves.
3) To be efficient to handle the equipment related to these tests.
4) To be able to derive, analyze, interpret the test results.
5) To be able to present the facts in a precise manner regarding knowledge and Skill acquired.

Affective Domain

At the end of training the student should be able to -

The student should be able to correlate the knowledge of physiology and its application in the Occupational therapy profession.

SYLLABUS

S.No	Topic
1	**System**
	Introduction: Organization of CNS – central and peripheral nervous system. Functions of nervous system. Synapse: Functional anatomy, classification, Synaptic transmission. Properties. **Sensory Mechanism:** Sensory receptors: function, classification and properties. Sensory pathway: The ascending tracts – Posterior column tracts, lateral spinothalamic tract and the anterior spinothalamic tract – their origin, course, termination and functions. The

	trigeminal pathway.Sensory cortex. Somatic sensations: crude touch, fine touch, tactile localization,tactile discrimination, stereognosis, vibration sense, kinesthetic sensations. Pain sensation: mechanism of pain. Cutaneous pain – slow and fast pain, hyperalgesia.Deep pain, Visceralpain – referred pain.Gate control theory of pain.tabesdorsalis, sensory ataxia. **Motor Mechanism:** Motor Cortex, Motor pathway: The descending tracts – pyramidal tracts, extrapyramidal tracts – origin, course, termination and functions. Upper motor neuron and lower motor neuron.Paralysis, monoplegia, paraplegia, hemiplegia and quadriplegia. **Reflex Action:** components, Bell-Magendie law, classification and Properties. Monosynaptic and polysynaptic reflexes, superficial reflexes, deep reflexes.Stretch reflex– structure of muscle spindle, pathway, higher control and functions. Inverse stretch reflex.Muscle tone –definition, and properties hypotonia, atonia and hypertonia. UMNL and LMNL
	Spinal cord Lesions: Complete transection and Hemisection of the spinal cord. **Cerebellum:** Functions. Cerebellar ataxia. Posture and Equilibrium: Postural reflexes – spinal, medullary, midbrain and cerebral reflexes. **Thalamus and Hypothalamus:** Nuclei. Functions. Thalamic syndrome Reticular Formation and Limbic System: Components and Functions. **Basal Ganglia:** Structures included and functions. Parkinson‘s disease. **Cerebral Cortex:** Lobes. Brodmann‘s areas and their functions. Higher functions of cerebral cortex – learning, memory and speech. **EEG:** Waves and features. Sleep: REM and NREM sleep. **CSF**: Formation, composition, circulation and functions. Lumbar puncture and its significance.

	Blood brain barrier. Hydrocephalus. **ANS**: Features and actions of parasymapathetic and sympathetic nervous system.
2	**Special senses**
	Vision: Introduction: Functional anatomy of eyeball. Functions of cornea, iris, pupil, aqueous humor – glaucoma, lens – cataract, vitreous humor, rods and cones. Photopic vision. Scotopic vision. Visual Pathway and the effects of lesions. Refractive. **Errors**: myopia, hypermetropia, presbyopia and astigmatism. Visual Reflexes: Accommodation, Pupillary and Light. Visual acuity and Visual field. Light adaptation. Dark adaptation. Color vision – color blindness. Nyctalopia **Audition:** Physiological anatomy of the ear. Functions of external ear, middle ear and inner ear. Structure of Cochlea and organ of corti. Auditory pathway. Types of Deafness. Tests for hearing. Audiometry **Taste:** Taste buds. Primary tastes. Gustatory pathway **Smell:** Olfactory membrane. Olfactory pathway.Vestibular Apparatus: Crista ampullarisandmacula. Funcions. Disorders
3	**Reproductive System**
	Introduction: Physiological anatomy reproductive organs. Sex determination. Sex differentiation. Disorder **Male Reproductive System:** Functions of testes. Pubertal changes in males. Spermatogenesis. Testosterone: action. Regulation of secretion. Semen. **Female Reproductive System:** Functions of ovaries and uterus. Pubertal changes in females.Oogenesis. **Hormones:**oestrogen and progesterone-action. Regulation of secretion. **Mentrual Cycle:** Phases. Ovarian cycle. Uterine cycle. Hormonal basis.Menarche. Menopause. **Pregnancy:** Pregnancy tests. Physiological

	Changes during pregnancy. Functions of placenta. Lactation. Contraception methods
4	**Digestive System**
	Introduction: Physiological anatomy and nerve supply of alimentary canal. Enteric Nervous system **Salivary Secretion:** Saliva: Composition. Functions. Regulation. Mastication (in brief) **Swallowing:** Definition. Differentstages. Functions. **Stomach:** Functions. Gastric juice: Gland, composition, function, regulation. **Gastrin:** Production, function and regulation. Peptic ulcer. Gastric motility .Gastric emptying. Vomiting. **Pancreatic Secretion:** Composition, production, function. Regulation. **Liver:** Functions ofliver. **Bile secretion:** Composition, functions and regulation. **Gall bladder:** Functions. **Intestine**: Succusentericus: mComposition, Function and regulation of secretion. Intestinalmotility and its function and regulation. Mechanism of Defaecation.
5	**Renal System**
	Introduction: Physiological anatomy. Nephrons Cortical and juxtamedullary. Juxtaglomerularn apparatus. Glomerular membrane. Renal blood flow and its regulation. Functions of kidneys. **Mechanism of Urine Formation:** Glomerular **Filtration:** Mechanism of glomerular filtration. GFR – normal value and factors affecting. Renal clearance. Inulin clearance. Creatinine clearance. **Tubular Reabsorption:** Reabsorption of Na+glucose, HCO3 urea and water. Filteredload., Renal tubular transport maximum. **Glucose clearance:**TmG. Renal threshold for glucose. **Tubular Secretion**: Secretion of H+ and K+.PAH clearance. Mechanism of concentrating and diluting the Urine: Counter-current mechanism.

	Regulation, of water excretion. Diuresis. Diuretics. **Micturition:** Mechanism of micturition. Cystometrogram. Atonic bladder, automatic bladder. Acid-Base balance (very brief) **Artificial Kidney:** Principle of haemodialysis., Skin and temperature regulation.
6	**Endocrine System**
	Introduction: Major endocrine glands. Hormone: classification, mechanism of action. Functions of hormones **Pituitary Gland:** Anterior Pituitary and Posterior Pituitary hormones: Secretory cells, action on target cells, regulation of secretion of each hormone. Disorders: Gigantism, Acromegaly, Dwarfism, Diabetes insipidus. Physiology of growth and development: hormonal and other influences. Pituitary- Hypothalamic Relationship. **Thyroid Gland:** Thyroid hormone and calcitonin: secretory cells, synthesis, storage, action and regulation of secretion. Disorders: Myxoedema. Cretinism, Grave‘s disease Parathyroidhormnes: secretory cell, action, regulation of secretion. Disorders: Hypoparathyroidism. Hyperthyroidism. Calciummetabolism and its regulation. **Adrenal Gland:** Adrenal Cortex: Secretory cells, synthesis and action, regulation of secretion of Aldosterone, Cortisola and Androgens. **Disorders:**Addison‘s disease, Cushing‘s syndrome, Conn‘s syndrome, Adrenogenital syndrome.Adrenal Medulla: Secretory cells, action, regulation of secretion of adrenaline and noradrenalin. **Disorders:**Phoechromocytoma. Endocrine Pancreas: Secretory cells, action, regulation of secretion of insulin and glucagon. Glucose metabolism and its regulation. Disorder: Diabetes mellitus. Calcitrol, Thymus and Pineal gland (very brief). Local Hormones. (briefly).

Practical

I. Clinical Examination

1. Examination of Sensory system
2. Examination of Motor System
3. Examination of reflexes
4. Examination of cranial nerves
5. Examination of Cerebral and Cerebellar functions

RECOMMENDED TEXT BOOKS

1. Text book on Medical Physiology – Guyton
2. Textbook of Physiology – A K Jain
3. Text book of medical physiology- Sembulingam

RECOMMENDED REFERENCE BOOKS

1. Review of Medical Physiology – Ganong
2. Samson & Wright's Applied Physiology
3. Textbook of Medical Physiology – Bern and Levy

Sr.No	Topics
1	**History of Occupational Therapy**
	➢ Describe the history and development of Occupational Therapy internationally. ➢ Describe the present development of O.T in India, including organization and functions

BASIC PRINCIPLES OF OCCUPATIONAL THERAPY

Total hours – 150 hours

COURSE DESCRIPTION

This is an introductory course, briefly outlining the purpose and potential of Occupational therapy. The students are exposed to clinical situations to illustrate the classroom teaching, but have no responsibility for patient treatment.

COURSE OBJECTIVES

The objective of this course is that after **60** hours of lectures, seminars, demonstrations, practical work, the student will be able to demonstrate a basic understanding of the scope and aims of occupational therapy, and a practical knowledge of Occupations and Activities used in treatment.

SYLLABUS

	of All India Occupational Therapist's Association.
2	**An overview of Occupational Therapy**
	➢ Define Occupational Therapy. ➢ Discuss the scope of O.T in a major hospital for Pediatrics, Physical and Psychiatric Disorders. ➢ Discuss the scope of O.T in the community
3	**Occupational Therapy and the Rehabilitation team**
	➢ Describe Occupational Therapy's contribution as part of the total rehabilitation team. ➢ Briefly outline the roles of the different team members.
4	**Occupation: Philosophy and concepts**
	➢ The concept of Occupation in Occupational ➢ Therapy Importance of Occupation in people's life ➢ Occupation as a therapeutic medium ➢ Therapeutic qualities of Occupation: Purpose and meaning
5	**Occupation as Therapy**
	➢ Analysis of roles, occupations, tasks, activities & performance components ➢ Selection, Gradation and Adaptation•
6	**Activities of Daily Living (ADL) and Instrumental Activities of Daily Living (IADL)**
	➢ Purpose of evaluation ➢ Content of ADL and IADL evaluation ➢ Parameters of ADL and IADL evaluation ➢ ADL and IADL evaluation methods
7	**Therapeutic movements and exercises in OT.**
	➢ Principles of therapeutic exercises ➢ Types of muscle contractions (Isotonic, isometric muscle contractions) ➢ Types of therapeutics movements(Passive, Active, Active assisted and resistive movements) ➢ Briefly outline isometric, progressive

	resistive and regressive resistive• exercises
8	**Overview of Assessments**
	➢ Reflexes (superficial and deep tendon reflexes), ➢ Muscle tone ➢ Range of Motion ➢ Muscles strength ➢ Voluntary control ➢ Co-ordination ➢ Sensation (cutaneous and cortical) ➢ Cognitive - Perceptual functions ➢ Hand functions
9	**Framework for Professional practice**
	➢ Core values and attitudes of OT practice ➢ OT code of ethics ➢ The therapeutic relationship
	➢

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

PRACTICALS /VIVA VOICE-150 Marks	**Maximum Marks**
Total	**150**

INTERNAL ASSESSMENT: (50marks)

1. Internal assessment (Theory and Practicals) as per University pattern

B.PRACTICAL

ANALYSING OCCUPATIONS AND ACTIVITIES

COURSE OBJECTIVIES

The objectives of this course are that after demonstrations and practical the student will be able to demonstrate an understanding of:

- Approaches to analyze occupations and activities in OT
- Similarities and differences between Occupation and Activity analysis
- Analyzing activities in general and as experienced by the client
- Grading and adapting activities to meet the needs of clients
- Application of the activity appropriately for specific therapeutic purposes

SYLLABUS

Sr.No	Topics
1	**Self care**
	a. Personal care Eating • Dressing • Personal hygiene: Grooming, Bathing and oral care • Toileting b. Functional mobility Indoor mobility • Accessibility within the home Outdoor mobility • Accessibility outside the home environment c. Community Management Transportation • Shopping • Finances (money management)
2	**Productivity**
	a. Work Tailoring • Clerical including Basic computer applications • Teaching

	• Agriculture b. Home making Meal preparation – Gathering & transporting items, Cooking, service and clean up, dish washing Laundry – collecting & transporting, washing & folding, ironing, sewing Indoor household maintenance – bed making, dusting, floor care, bathrooms Outdoor household maintenance – Yard maintenance and gardening Child care – bathing, diapering, dressing, feeding, lifting and carrying, play and cradle c. School • Writing and using of instruments • Reading
3	**Leisure &Play**
	• Sports Games (Indoor & Outdoor) Picnic • Gardening • Craft activities (any five activities)
4	**Socialization**
	• Correspondence • Making phone calls

EVALUATION
Internal : Theory, Oral, Practical and Activities Analysis File
University : Theory, Oral and Practical

Recommended Book(s) for Reference:

1. Muscle Testing & Function by F.P. Kendall
2. Measurement of Joint motion : a Guide to Goniomentry by C.C. Norkin&D.J.White
3. Pedretti's Practice skills for physical dysfunction edited by Heidi McHugh Pendleton,Winifred Schultz Krohn
4. Occupational Therapy for Physical Dysfunction by Mary Vining Radomski, Catherine A Trombly
5. Occupational Therapy and Physical Dysfunction , Principles ,Skills and Practice by Ann Turner, Margaret Foster, Sybil E Johnson
6. Willard & Spackman's Occupational Therapy
7. Principle of Exercise Therapy by Dena Gardiner
8. Therapeutic Exercises by J. Basmajian & Wolf

ENVIRONMENTAL SCIENCE
(Non-credit)

Didactic- 30hrs

COURSE DESCRIPTION

The course gives an overview of multi disciplinary nature of environmental studies, natural recourses, and ecosystem. The course also deals with issues of environmental pollution, population and human rights.

Learning Objectives:

At the end of the course, the candidate will be able to:

Cognitive:

a. List down the natural recourses and ecosystem.

b. Define pollution and its impact on the society and various environmental issues.

c. List down the human rights concerned to health, women and child welfare.

Psychomotor

a. Perform community visits and carryout documentation of environmental asset

b. Visit sites of pollution and analyse its impact on society

Affective

In the view of ecosystem, the student should be able to understand and treat all animals

without harm and be a effective member of the ecosystem. The student should behave with respect to neighbors and work hand in hand with the society in controlling pollution of any form.

SYLLABUS

S. NO	TOPIC
1	**Unit 1 : Multidisciplinary nature of environmental studies**
	a) Definition, scope and importance b) Need for public awareness.
2	**Unit 2 : Natural Resources**
	Natural resources and associated problems. Forest resources: Use and over-exploitation, deforestation, case studies. Timber extraction, mining, dams and their effects on forest and tribal people. Water resources: Use and over-utilization of surface and ground water, floods, drought, conflicts over water, dams-benefits and problems. Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources, case studies. Food resources: World food problems, changes caused by agriculture and overgrazing, effects of modern agriculture, fertilizer- pesticide problems, water logging, salinity, case studies. Energy resources: Growing energy needs, renewable and non-renewable energy sources, use of alternate energy sources. Case studies. Land resources: Land as a resource, land degradation, man induced landslides, soil erosion and desertification. Role of an individual in conservation of natural resources. Equitable use of resources for sustainable lifestyles.
3	**Unit 3 : Ecosystems**

	• Concept of an ecosystem.
	• Structure and function of an ecosystem.
	• Producers, consumers and decomposers.
	• Energy flow in the ecosystem.
	• Ecological succession.
	• Food chains, food webs and ecological pyramids
	• Introduction, types, characteristic features, structure and function of the following ecosystem :-
	  • Forest ecosystem
	  • Grassland ecosystem
	  • Desert ecosystem
	  • Aquatic ecosystems (ponds, streams, lakes, rivers, oceans, estuaries)

4	**Unit 4 : Biodiversity and its conservation**
	• Introduction – Definition: genetic, species and ecosystemdiversity. • Biogeographical classification of India • Value of biodiversity consumptive use, productive use,social, ethical, aestheticand option values. • Biodiversity at global, National and local levels. • India as a mega-diversity nation • Hot-sports of biodiversity • Threats to biodiversity: habitat loss, poaching of wildlife,man-wildlife conflicts. • Endangered and endemic species of India • Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity.
5	**Unit 5 : Environmental Pollution**

	Definition
	Cause, effects and control measures of :-
	  • Air pollution
	  • Water pollution
	  • Soil pollution
	  • Marine pollution
	  • Noise pollution
	  • Thermal pollution
	  • Nuclear hazards
	Solid waste Management: Causes, effects and control measures of urban andindustrial wastes.
	Role of an individual in prevention of pollution.
	Pollution case studies.
	Disaster management: floods, earthquake, cyclone and landslides.

6	**Unit 6 :Environment Issues**
	• From Unsustainable to Sustainable development • Urban problems related to energy

	• Water conservation, rain water harvesting, watershed management • Resettlement and rehabilitation of people; its problems andconcerns. CaseStudies • Environmental ethics: Issues and possible solutions. • Climate change, global warming, acid rain, ozone layerdepletion, nuclearaccidents and holocaust. Case Studies • Wasteland reclamation. • Consumerism and waste products. • Environment Protection Act. • Air (Prevention and Control of Pollution) Act. • Water (Prevention and control of Pollution) Act • Wildlife Protection Act • Forest Conservation Act • Issues involved in enforcement of environmental legislation. • Public awareness.
7	**Unit 7 : Population and Human rights**
	• Population growth, variation among nations. • Population explosion – Family Welfare Programme VII • Environment and human health. • Human Rights. • Value Education. • HIV/AIDS. • Women and Child Welfare • Role of Information Technology in Environment andhuman health. • Case Studies.
8	**Unit 8 : Field work**
	• Visit to a local area to document environmentalassetsriver/ forest/ grassland/ hill/ mountain • Visit to a local polluted site-Urban/ Rural/ Industrial/ Agricultural • Study of common plants, insects, birds. • Study of simple ecosystems-pond, river, hill slopes, etc.

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- Townsend C., Harper J, and Michael Begon, Essentials of Ecology, Blackwell
- Science (TB)

3rd SEMESTER

GENERAL MEDICINE, GENERAL SURGERY AND PAEDITRICS

Total hours – 150 hrs

COURSE OBJECTIVE:

The objectives of this course is that after 90 hours of lectures & demonstrations, in addition to clinics the student will be able to demonstrate a general understanding of the diseases that therapists would encounter in their practice. They should have a brief idea of the aetiology and pathology, what the patient's symptoms and the resultant functional disability. This would help the candidates to understand the limitations imposed by the disease on any therapy that may be prescribed. Broad outline of goals of pharmacological and surgical therapy should be imparted in those Diseases in which physical will be an important component of overall treatment.

Course outcome:

1. This helps in study the of medicines encountered in the management of occupational Therapy.
2. This course gives basic idea of different diseases and infections
3. This provides brief knowledge on symptoms and pathology of diseases
4. This gives knowledge on analysing and interpretating imaging findings into the occupational Therapy diagnostic process
5. This provides the foundation of differential diagnosis
6. This provides a basic knowledge on physiological and pathological changes during old age
7. This provides information on normal and abnormal developmental disorders in paediatrics

SYLLABUS

Sr.No	Topics
1	**INFECTIONS:** Infectious agents Source and spread of infection Transmission of infection Micro –organism –host interactions Pathology of infections Thermo regulation Management of infections Prevention of infection Infection control

	Outline the mode of spread and appropriate prevention measures of the following Communicable diseases. Bacterial –Tetanus Viral – Herpes simplex, Zoster, varicella, Measles,German Measles, Hepatits B, AIDS. Protozoal- Filaria
2	**IMMUNOLGOCIAL FACTORS:** Immune deficiency, inflammatory response, Auto immune disease, allergy
3	**HAEMATOLOGY:** 1. Define and briefly describe clinical aspects of iron deficiency, B-12 and folic acid deficiency anaemias. 2. List types of bleeding diathesis. 3. Describe the clinical features of Haemophilia
4	**RESPIRATORY TRACT:** 1. Bronchitis- Define, list etiological factors and describe symptoms. 2. Pneumonia –list types of pneumonia (lobar, Broncho ,aspiration pneumonias) 3. List etiological agents and briefly outline symptoms and complications of pneumonia. 4. Asthma –Define, describe briefly the etiological factors and clinical features of acute exacerbation. 5. Chronic obstructive airway diseases- Define Emphysema and chronic bronchitis. Briefly describe the pathology, symptoms of diseases and clinical course. 6. Tuberculosis- Describe the etiology, pathology and clinical features of Pulmonary TB 7. Bronchiectasis- define and describe briefly the pathology, and clinical symptoms of bronchiectasis, bronchopulmonary segments and basis of Postural drainage. 8. Emphysema-Define and briefly describe etiological factors. 9. Chest wall deformities – Define funnel chest, Pigeon chest, barrel chest, kyphoscoliosis of thoracic spine. 10. Briefly describe functional disability of Occupational, lung diseases, list pneumoconiosis.
5	**CARDIO-VASCULAR SYSTEM:** 1. Cardiac failure- Define, list causes and symptoms 2. Rheumatic fever- Define and briefly describe etiology and gross pathology of Rheumatic heart disease. 3. Infective endocarditis- Define and outline etiology,

	symptoms and complications 4. Ischaemic heart disease- Outline pathology of IHD, define angina pectoris and Myocardial infarction. 5. Describe clinical features and broadly outline medical surgical therapy. 6. Hypertension- Define and outline the clinical features complications and goals of therapy. 7. Outline pathogenesis and clinical features of: Pulmonary embolism. Deep vein thrombosis, pulmonary infarct. 8. Congenital heart disease. List ASD,VSD, Fallot's Tetrology, and PDA,and briefly outline the pathologic anatomy
6	**BONE, JOINT AND CONNECTIVE TISSUE DISORDERS**: 1. Brief introduction to concept of autoimmune disease. 2. Define: systemic lupus erythmatous , Polymyositis, Dermatomyositis, polyartheritisNodusa, Scleroderma. 3. Rheumatoid Arthritis- Describe etiology, clinical features, and complications, Drug therapy and non pharmacological therapy. 4. Osteoarthritis- Describe etiology, clinical features and complications and review nonsteroidal anti-inflammatory drugs and steroids.
7	**RENAL DISEASES:** 1. Define and briefly outline acute and chronic renal failure. 2. Urinary tract infection. Pathogenesis. Outline common clinical conditions complicated by UTI
8	**METABOLIC DISEASES:** 1. Diabetes –define and outline etiology. List types of Diabetes and complications and briefly outline use of insulin, diet and oral hypoglycaemic agents in management of diabetes. 2. Obesity- Define, Outline management. 3. Hypothyroidism Hyperthyroidism. Cushing's syndrome, Hypo addrenalism or Addison's disease
9	**GERIATRICS:** List diseases commonly encountered in the elderly population and their role in causing disability: Hypertension, Ischaemic Heart disease, cerebrovascular accidents, Benign prostatic Hyperplasia, Cataracts and other causes of failing vision.

10	**ICU CARE:** Nosocomial infections, shock, Ventilatory management and poisonings
11	**GASTRO INTESTINAL DISEASE**: Gastrooesophageal reflux disease, Swallowing disorders Acute hepatitis, chronic liver disease

GENERAL SURGERY, PLASTIC SURGERY & BURNS

Sr.No	Topics
1	Describe the regions of abdomen and its surgical incisions.
2	Outline the post operative complications in a. Nephrectomy b. Appendicectomy c. Herniorraphy d. Mastectomy e. Thyroidectomy f. Colostomy g. Adrenalectomy h. Cystectomy i. Hysterectomy j. Prostatectomy k. Cholecystectomy l. Illeostomy
3	Structure and functions of skin. Classify burns by depth and surface area. Outline the causes, medical management and precautions in the acute stage. List the potential deformities due to burns, methods of prevention and precautions. Mention cosmetic and functional treatment measures.
4	Outline the plastic surgery procedures and management in rehabilitation of burns, including splinting methods for common deformities and prevention of burns contractures
5	Occupation therapy goal setting in General Surgery, Plastic Surgery & Burns

PAEDIATRICS

Sr.No	Topics
1	Describe growth and development of a child from birth to 12 years: including gross motor, fine motor, social and adaptive development.
2	List the maternal and neonatal factors contributing to high risk pregnancy : inherited diseases; maternal infections-viral and bacterial; maternal diseases

	incidental to pregnancy, such as gestational diabetes, pregnancy induced hypertension; chronic maternal diseases such as heart diseases, renal failure, tuberculosis, diabetes, epilepsy; bleeding in the mother at any trimeste
3	Briefly describe community programmes: International (WHO), national and local, for prevention of poliomyelitis, blindness, deafness, mental retardation and hypothyroidism. Outline the immunization schedule for children.
4	**Cerebral Palsy:** Define and briefly outline etiology-Prenatal, perinatal and postnatal causes; briefly mention pathogenesis, types of cerebral palsy (Classification), findings on examination: General examination, examination of C.N.S. Musculoskeletal system, respiratory system, G.I. tract & nutritional status. Briefly outline associated defects: Mental retardation, microcephaly, blindness, hearing and speech impairment, squint and convulsions. Briefly outline treatment. Outline prevention: Appropriate management of high risk pregnancies, prevention of neonatal and postnatal infections, metabolic problems.
5	**Muscular dystrophy:** Outline various forms, modes of inheritance and clinical manifestation; physical findings in relation to disabilities progression of various forms and prognosis. Describe treatment goals in forms which are and are not fatal.
6	**Spinabifida, meningomyelocele:** Outline development; clinical features-lower limbs, bladder and bowel control; complications-U.T.I. & hydrocephalus; medical treatment and surgical treatment.
7	**Juvenile idiopathic Arthritis:** Classification, pathology in brief, physical findings, course & prognosis. Outline treatment, prevention and correction of deformity.
8	**Acute C.N.S infections:** Classify (Bacterial and viral) and outline the acute illness, CNS sequelae leading to mental retardation, blindness, deafness, speech defect, neurological deficits, bladder and bowel problems seizure disorder and specific problems such as subdural effusion, hydrocephalus, pressure sores, feeding difficulties and Nutrition

9	**Acute Flaccid Paralysis:**Causes ,Clinical features and management
10	**Nutritional Requirement of the newborn and child**: List dietary calories, fat, protein, mineral and vitamin requirement in a normal child and in a child with malnutrition. Classify and outline etiology, findings and treatment of Rickets: Vitamin D deficiency and resistant rickets, Vitamin A deficiency and effects.

Text Books:

1. Davidson,A Text Book of Medicine, Churchill Livingston, 21 st Ed, 2010.

References:

1. K.D.Tripathi , Essentials of Medical Pharmacology, JayPee Brothers.1Ed, 2007
2. Harrison, Principles of Medicine, , Mc Graw hill , 17 th Ed, 2008.
3. OP Ghai, Essential Pediatrics, CBS Publishers, 7th Ed, 2010.
4. Kumar and Clarks , Clinical medicines, Jaypee Brothers, 3 rd Ed, 2013.
5. Multani, Principles of geriatrics Occupational therapy, Jaypee Brothers, 1 st Ed, 2008.

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**

Total	**100**

SCHEME OF UNIVERSITY EXAMINATION

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory) as per University pattern**

BIOMECHANICS

Total hours – 120 hrs

COURSE DESCRIPTION

This course supplements the knowledge of anatomy and enables the student to have a better understanding of the principles of biomechanics and their application in musclo- skeletal function and dysfunction.

COURSE OBJECTIVES

The objectives of this course is that after 100 hours of lectures, demonstrations and practical the student will be able to demonstrate an understanding of the principles of Biomechanics and Kinesiology and their application in health and disease. In addition, the student will be able to fulfill the following objectives of the course.

SYLLABUS

Sr.No	Topics
1	**MECHANICS** 1. Describes types of motion, planes of motion,

	direction of motion and quantity of motion. 2. Define forces, force vectors, components of forces. 3. Describe gravity, segmental centres of gravity, center of gravity and line of gravity of the human body, stability and center of gravity, relocation of the centre of gravity. 4. Describe reaction forces, Newton's Law of Reaction. 5. Describe equilibrium-Law of inertia and Establishing equilibrium of an object. 6. Describe objects in motion; Law of acceleration; Joint distraction in a linear force system and force of friction. 7. Describe concurrent Force systems, composition of forces. Muscles action lines, Total muscles force vector, Divergent muscle pulls, and Anatomic pulleys. 8. Describe parallel force system:- First class levers- second class levers - 87 Third class levers - Torque - Mechanical Advantage 9. Define moment arm: Moment Arm of a muscle force, Moment arm of gravity and Anatomic pulleys. 10. Describe equilibrium of a lever. **DESCRIBE THE FOLLOWING:** 1. Three types of motion. 2. The plane in which a given joint motion occurs, and the axis around which the motion occurs 3. The location of the centre of gravity of a solid object, the location of the centre of gravity of a segmental object, the location of the centre of gravity of the human body. 4. The action line of a single muscle. 5. The name, point of application, direction, and magnitude of any interforce, given its reaction force. 6. A linear force system, a concurrent force system, a parallel force system. 7. The relationship between torque, moment arm and rotatory force component. 8. The methods of determining torque for the same given set of forces. 9. How anatomic pulleys may change action line, moment arm, and torque of muscles passing through them.

	10. In general terms, the point in the joint range of motion at which muscle acting over the joint is biomechanically most efficient. 11. How external forces can be manipulated to maximize torque. 12. Friction, its relationship to contacting surfaces and to the applied forces. **DETERMINE THE FOLLOWING** 1. The identity (name) of diagrammed forces on an object. 2. The new centre of gravity of an object when segments are rearranged, given the original centres of gravity. 3. The resultant vector in a linear force system, a concurrent force system, and a parallel force system. 4. If a given object is in linear and rotational equilibrium. 5. The magnitude and direction of acceleration of an object not in equilibrium. 6. Which forces are joint distraction forces and which are joint compression forces. What is the equilibrium force for each? 7. The magnitude and direction of friction in a given problem. 8. The class of term in a given problem. **COMPARE THE FOLLOWING** 1. Mechanical advantage in a second and third class lever. 2. Work done by muscles in a second and third class lever. 3. Stability of an object in two given situations in which location of the centre of gravity and the base of support of the object. **DRAW THE FOLLOWING** 1. The action line of a muscle. 2. The rotatory force component, the translatory force component, and the moment arm for a given force on a lever.
2	**JOINT STRUCTURE AND FUNCTION** 1. Describe the basic principles of joint design and a human joint. 2. Describe the tissues present in human joints; including dense fibrous tissue, bone, cartilage and connective tissue.

	3. Classify Joint - synarthrosis, Amphiarthrosis, Diarthrosis, subclassification of synovial joints. 4. Describe joint function, kinematic chains, range of motion. 5. Describe the general effects of injury and disease. **RECALL THE FOLLOWING:** 1. The elementary principles of joint design. 2. The three main classifications of joints. 3. The five features common to all diarthrodial joints. 4. Types of materials used in human joint construction. 5. Properties of connective tissue. **IDENTIFY THE FOLLOWING:** 1. The axis of motion for any given motion at a specific joint (knee, hip, metacarpophalangeal). 2. The plane of motion for any given motion at a specific joint (shoulder, interphalangeal, wrist). 3. The degrees of freedom at any given joint. 4. The distinguishing features of a diarthrodial joint. 5. The structures that contribute to joint stability. **COMPARE THE FOLLOWING** 1. A synarthrosis with an amphiarthrosis on the basis of methods, materials, and function. 2. A synathrosis with a diarthrosis on the basis of methods, materials and function. 3. Closed kinematic chain with an open kinematic chain. 4. Dense fibrous tissue with bone. 5. Hyaline cartilage with fibrocartilage.
3	**MUSCLE STRUCTURE AND FUNCTION:** 1. Describe Mobility and stability functions of muscles. 2. Describes elements of muscles structure - Composition of a muscle fibre, the motor unit, types of muscle fibres, muscle fibre size, arrangement and number, Muscle tension, length - tension relationship. 3. Describe types of muscle contraction, speed and angular velocity, applied load, Voluntary control, Torque & Isokinetic exercise. 4. Summarize factors affecting muscle tension. 5. Classify muscles - spurt and shunt muscles, Tonic and phasic muscles. 6. Factors affecting muscle function: Type of joint and location of muscle attachment, number of

	joints, passive insufficiency, Sensory receptors **DESCRIBE THE FOLLOWING:** 1. Ordering of the myofibrils in a sarcomere. 2. An alpha motor neuron. 3. The connective tissue in a muscle. 4. How tension develops in a muscle. 5. Isokinetic exercise. **DEFINE THE FOLLOWING:** 1. Active and passive insufficiency. 2. Active and passive tension. 3. Concentric, eccentric and isometric contractions. 4. Reverse action 5. Agonists, antagonists and synergists. **RECALL THE FOLLOWING:** 1. Factors affecting muscle tension 2. Characteristics of different fibre types. 3. Characteristic of motor units. 4. Factors affecting angular velocity. **DIFFERENTIATE THE FOLLOWING:** 1. A spurt from a shunt muscle. 2. A phasic from a tonic muscle. 3. Agonist from an antagonist. 4. Active from passive insufficiency. 5. Concentric from eccentric contractions. **COMPARE THE FOLLOWING:** 1. Tension development in eccentric versus concentric contractions. 2. The angular velocity of isometric versus concentric and isokinetic contractions. 3. Isokinetic exercise with concentric exercise.
4	**THE VERTEBRAL COLUMN:** 1. Describe the general structure and function of the vertebral column including: Primary and secondary course. Articulations, Ligaments and muscles, typical vertebra, intervertebral disc. 2. Describe factors affecting stability and mobility. 3. Regional structure and function of cervical, dorsal, lumbar and sacral vertebrae. 4. Describe the muscles of the vertebral column - Flexors, Extensors, Rotators and Lateral flexors. 5. Describe the effects of injury and developmental deficits.

	DESCRIBE THE FOLLOWING: 1. The curves of the vertebral column using appropriate terminology. 2. The articulations of the vertebral column. 3. The major ligaments of the vertebral column. 4. The structural components of typical and atypical vertebrae. 5. The intervertebral disc. 6. Regional characteristic of vertebral structure. 7. Motions of the vertebral column. 8. Lumbar pelvic rhythm. 9. Rotation of the vertebrae in each region. 10. Movements of the ribs during rotation. **IDENTIFY THE FOLLOWING:** 1. Structure that provide stability for the column. 2. Muscles of the vertebral column and the specific functions of each. 3. Ligaments that limit specific motions (i.e. flexion, extension, lateral flexion, rotation). 4. Forces acting on the vertebral column during specific motions. **EXPLAIN THE FOLLOWING:** 1. The relationship between the intervertebral and facet joints during motions of the vertebral column. 2. The role of the intervertebral disc in stability and mobility. 3. The effects of forces acting on the structural components during motion and at rest. **ANALYSE THE FOLLOWING**: 1. The effects of disease process, injury, or other defects in the vertebrae. 2. The effects of an increased lumbosacral angle on the pelvis and lumbar vertebral column.
5	**THE SHOULDER COMPLEX:** 1. Describe the structural components of the shoulder complex including the articulating surfaces, capsular attachments and ligaments and movements of the following joints: i) Sternoclavicular ii) Acromioclavicular iii) Scapulothoracic iv) Glenohumeral 2. Describe the function of the shoulder complex

	including dynamic stability of the glenohumeral joint, musculohumeral rhythm. Scapulothoracic and glenohumeral contributions. 3. Describe the muscles of elevation:(Deltoid, Supraspinatus, Infraspinatus, Teres minor, Subscapularis, Upper trapezius, Lower trapezius, Serratus anterior, Middle trapezius and Rhomboids). 4. Describe the muscles of depression(Latissimus dorsi, Pectoralis, Teres major, Rhomboids). **DESCRIBE THE FOLLOWING:** 1. The articular surfaces of the joints of the complex 2. The function of the ligaments of each joint. 3. Accessory joint structures and the function of each. 4. Motions and ranges available at each joint and movement of articular surfaces within the joint. 5. The normal mechanism of dynamic stability of the glenohumeral joint, utilizing principles of biomechanics. 6. The normal mechanism of glenohumeral stability in the dependent arm. 7. Scapulohumeral rhythm. Including contributions of each joints. 8. The extent of dependent or independent function of each joint in scapulohumeral rhythm. 9. How restriction in the range of elevation of the arm may occur. 10. One muscular force couple at a given joint and its function. 11. The effect of given muscular deficit may have on shoulder complex function. **COMPARE THE FOLLOWING;** 1. The advantages and disadvantages of coracoacromial arch. 2. The structural stability of the three joints, including the tendency toward degenerative changes and derangement. Draw the action lines of muscles of the shoulder complex and the moment arm for each, and resolve each into components.

6	**THE ELBOW COMPLEX:** 1. Describe the structure of the Humeroulnar and Humeroradial joints including articulating surfaces, joint capsule, Ligaments & Muscles. 2. Describe the function of the Humeroulnar and Humeroradial joints including the Axis of motion, Range of motion, Muscle action. 3. Describe the structure of the superior and inferior radioulnar joints. 4. Describe the function of the superior and inferior radioulnar joints. 5. Describe the mobility and stability of the Elbow complex and its relationship to Hand and Wrist. 6. Describe the effects of injury and the resistance to longitudinal compression forces, to distraction forces & to Medial lateral forces. **DESCRIBE THE FOLLOWING:** 1. All of the articulating surfaces associated with each of the following jointshumero-ulnar, humeroradial superior and inferior radioulnar. 2. The ligaments associated with all the joints of the elbow complex. **IDENTIFY THE FOLLOWING:** 1. Axes of motion for supination and pronation and flexion and extension. 2. The degrees of freedom associated with each of the joints of the elbow complex. 3. Factors limiting the range of motion in flexion and extension. 4. Factors that create the carrying angle 5. Factors limiting motion in supination and pronation. **COMPARE THE FOLLOWING:** 1. The translatory and rotatory components of the brachioradialis and brachialis at all points in the range of motion. 2. The moment arms of the flexors at any point in the range of motion. 3. Muscle activity of the extensors in a closed kinematic chain with activity in an open kinematic chain. 4. The role of pronator teres with the role of pronator quadratus. 5. The role of biceps with that of brachialis. 6. The resistances of elbow joint to longitudinal tensile forces with its resistance to compressive

	forces. 7. The features of a classic tennis elbow with the features of cubital tunnel syndrome. 8. The role of and structure of the annular ligament with the role and structure of the articular disc.
1	THE WRIST AND HAND COMPLEX: 1. Describe the wrist complex including Radiocarpal joint Midcarpal joint and the Ligaments of the wrist complex. 2. Describe the function of the radiocarpal and midcarpal joints including the movements and muscles involved. 3. Describe the Hand complex including: Structure of fingers (Carpometacarpal, Metacarpophalangeal and interphalangeal joints of fingers, ligaments, Range of motion). 4. Describe the finger musculature including Extrinsic & MCP, PIP and DIP joint function, and intrinsic finger muscles. 5. Describe the structure of the Carpometacarpal, MCP and IP joints of thumb. 6. Describe the Thumb Musculature including the Extrinsic & Intrinsic thumb muscles. 7. Describe Prehension, Power, Cylindrical, Spherical & Hook grips. 8. Describe Precision handling, Pad to Pad, Tip to Tip and Pad to side prehension 9. Functional position of wrist and hand. DESCRIBE THE FOLLOWING: 1. The articular surfaces of the joints of the wrist and hand complexes. 2. The ligaments of the joints of the wrist and hand, including the function of each. 3. Accessory joint structures found in the wrist and hand complex, including the function of each. 4. Types of movements and types of motion of the radiocarpal joints, the midcarpal joint, and the total wrist complex.

	5. The sequence of joint activity occurring from full wrist flexion to extension including the role of the scaphoid, the sequence of joint activity in radial and ulnar deviation from neural. 6. The role of the wrist musculature in producing wrist motion. 7. Motions and ranges available to joints of the hand complex. 8. The gliding mechanisms of the extrinsic finger flexors. 9. The structure of the extensor mechanism, including the muscles and ligaments that compose it. 10. How M.C.P. extension occurs, including the muscles that produce and control it. 11. How flexion and extension of the PIP joint occur. Including the muscular and ligamentous forces that produce and control these motions. 12. How flexion and extension of DIP joints occur, including the muscular and ligamentous forces that produce and control these motions. 13. The role of the wrist in optimizing length - tension in the extrinsic hand muscles. 14. The activity of reposition, including the muscles that perform it. 15. The functional position of the wrist and hand. DIFFERENTIATE BETWEEN: 1. The role of the interossei and lumbrical muscles at the MCP and IP joints. 2. The muscles used in cylindrical grip to those active in spherical grip, hook grip, and lateral prehension. 3. The muscles that are active in pad - to - pad, tip-to-tip, and pad to side prehension. COMPARE 1. The activity of muscles of the thumb (in opposition of the thumb to the index finger) with the activity of those active in opposition to the little finger. 2. The characteristics of power grip with those of precision handling. The most easily disrupted form of precision handling that may be used by someone without any active hand musculature; what are the prerequisites: for each?

2	THE HIP COMPLEX: 1. Describe the general features of the hip joint including the articulating surfaces of the pelvis & the femur; Angulations; Angle of inclination, Angle of Torsion; Internal architecture of femur and pelvis ; joint capsule. Ligaments & Muscles (Flexors, Extensors - one joint extensors, two joint extensors, Adductors, Medial Rotators and Lateral Rotators). 2. Describe the function of hip - Rotation between pelvis, lumbar spine and hip; Pelvic motion - Anterior posterior pelvic tilting, Lumbar pelvic rhythm, Lateral Pelvic tilting, Pelvic rotation. 3. Summarize the pelvic motions in the static erect posture. 4. Describe femoral motion. 5. Describe Hip Stability in Erect Bilateral stance, sagital plane equilibrium and unilateral stance. 6. Describe reduction of Forces with weight shifting and using a cane and deviations from normal in muscular weakness & Bony abnormalities. DESCRIBE THE FOLLOWING 1. The articulating surfaces of the pelvis and femur. 2. The structure and function of the trabecular systems of the pelvis and femur. 3. The structure and function of the ligaments of the hip joint. 4. The angle of inclination and the angle of torsion. 5. The planes and axes of the following: pelvic motions and the accompanying motions at the lumbar spine and hip joints, pelvic rotation, and anterior, posterior and lateral tilting at the pelvis. 6. The muscle activity that produces tilting and rotation of the pelvis. 7. Motions of the femur on the pelvis including planes and axes of motion. 8. The structure and function of all the muscles associated with the hip joints. 9. The forces that act on the head of femur. 10. The position of greatest stability at the hip. EXPLAIN THE FOLLOWING: 1. How sagittal and frontal plane equilibrium are maintained in erect bilateral stance. 2. How frontal plane equilibrium is achieved in unilateral stance. 3. How force acting on the femoral head may be

	reduced. 4. How the function of the two joint muscle at the hip are affected by changes in the position of the knee and hip. 5. The functional and structural relationship among the hip, knee, pelvis and lumbar spine. COMPARE THE FOLLOWING: 1. Forces acting on the femoral head in erect bilateral stance with the forces acting on the head in erect unilateral stance. 2. Coxa valga with coxa vara on the basis of hip stability and mobility. 3. The motions that occur at the hip, pelvis and lumbar spine during forward trunk bending with the motions that occur during anterior and posterior tilting of the pelvis in the erect standing position. 4. Antroversion with retroversion on the basis of hip stability and mobility. 5. The structure and function of the following muscles: Flexors and extensors, abductors and adductors, lateral and medial rotators.
3	THE KNEE COMPLEX: 1. Describe the structure of the Tibiofemoral joint: Articulating surfaces of femur and tibia, the menisci, Joint capsule and bursae, Ligaments and other supporting structures. Anterior - posterior and Medial - Lateral stability; Muscle Structure; Knee flexors & extensors; Axes of knee complex; Mechanical axis, Anatomic axis and axis of motion. 2. Describe the function of the Tibiofemoral joint: Range of motion. Flexion and extension, Rotation, Abduction and Adduction, locking and unlocking; Function of Menisci and Muscle function. 3. Describe the structure of the patellofemoral joint. 4. Describe the function of the patellofemoral joint. 5. Describe the effects of injury and disease in the Tibio-femoral and patellofemoral joints. DESCRIBE THE FOLLOWING: 1. The articulating surfaces of tibiofemoral and patellofemoral joints. 2. The joint capsule. 3. The anatomic and mechanical axes of knee. 4. Motion at the femoral condyles during flexion and extension in a closed kinematic chain. 5. Motion of the tibia in flexion & extension in an

	open kinematic chain. DRAW 1. The Q angle when given an illustration of the lower extremity 2. Moment arm of quadriceps at the following degree of knee flexion: 90 deg., 130 deg., 30 deg., 10 deg. 3. The action lines of vastus lateralis and the vastus medialis oblique. LOCATE: 1. The origins and insertions of all the muscles at the knee. 2. The bursae surrounding the knee. 3. The attachments of the ligaments of the medial and lateral compartments. IDENTIFY: 1. Structures that contribute to the medial stability of the knee including dynamic and static stabilizers. 2. Structures that contribute to the lateral stability of the knee including dynamic and static stabilizers. 3. Structures that contribute to the posterior stability of the knee including dynamic and static stabilizers. 4. Structures that contribute to the anterior stability of the knee including dynamic and static stabilizers. 5. Structures that contribute to the rotatory stability of knee. 6. The normal forces that are acting on the knee. COMPARE: 1. The knee and the elbow joint on the basis of similarities / dissimilarities in structure and function. 2. The lateral with the medial meniscus on the basis of structure and function. 3. The forces on the patellofemoral joint in full flexion with full extension. 4. The action of quadriceps in an open kinematic chain with that in a closed kinematic chain. 5. The effectiveness of the hamstrings as knee flexors in each of the following hip positions: - hyperextension, ten degrees of flexion and full flexion (open kinematic chain). 6. The effectiveness of the rectus femoris as a knee extensor at sixty degrees of knee flexion with its effectiveness at ten degrees of knee flexion.

	EXPLAIN 1. The function of the menisci. 2. How a tear of the medial collateral ligament may affect joint function. 3. The functions of the suprapatellar, gastrocnemius, infrapatellar and prepatellor bursae. 4. Why the semiflexed position of the knee is the least painful position. Why the knee may be more susceptible to injury than the hip joint.
4	THE ANKLE - FOOT COMPLEX: 1. Describe the structure, ligaments, axis and function of the following: ankle joint, tibiofibular joints, subtalar joints, Talocalcaneonavicular joints, Transverse Tarsal joint, Plantar arches, Metatarsophalangeal joints, Interphalangeal joints. Define the terminology unique to the ankle foot complex including inversion - eversion, pronation - supination, dorsiflexion - plantar flexion, flexion-extension and adduction and abduction. 2. Describe the compound articulators of the ankle, subtalar, talo-calcaneonavicular, transverse tarsal and tarsometatarsal joints. 3. The role of the tibiofibular joints and supporting ligaments. 4. The degree of freedom and range of motion available at the joint of the ankle and the foot. 5. The significant ligaments that support the ankle, subtalar and transverse tarsal joints. 6. The triplanar nature of ankle joint motion. 7. The articular movements that occur in the weight-bearing subtalar joint during inversion-eversion. 8. The relationship between tibial rotation and subtalar / talocalcaneonavicular inversion-eversion. 9. The relationship between hind foot inversion - eversion and mobility-stability of the transverse tarsal joint. 10. The function of the tarsometatarsal joints, including when motion at these joints is called upon. 11. Supination - pronation of the forefoot at the tarsometatarsal joints. 12. Distribution of weight within the foot. 13. The structure and function of the plantar arches

	including the primary supporting structure. 14. When muscles supplement arch support, including those muscles that specifically contribute. 15. The effects of toe extension on the plantar arches. 16. The general function of the extrinsic muscles of ankle & foot. 3. The general function of the intrinsic muscles of foot.
5	POSTURE: 1. Describe the effects of gravity and indicate the location of the gravity line in the sagital plane in optimal posture. 2. Analyse posture with respect to the optimal alignment of joints in the antero-posterior and lateral views. DESCRIBE: 1. The position of hip, knee and ankle joints in optimal erect posture. 2. The position of body's gravity line in optimal erect posture, using appropriate points of reference. 3. The effects of gravitational moments on body segments in optimal erect posture. 4. The gravitational moments acting around the vertebral column, pelvis, hip, knee and ankle in optimal erect posture. 5. Muscles and ligamentous structures that counter balance gravitational moments in optimal erect posture. 6. The following postural deviations: pesplanus, halluxvalgus, pes cavus, idiopathic scoliosis, kyphosis and lordosis. 7. The effects of the above postural deviations on body structures i.e. ligaments, joints and muscles. DETERMINE: 1. How changes in the location of the body's gravity line will affect gravitational moments acting around specified joints axes. 2. How changes in the alignment of body segments will affect either the magnitude or the deviation of the gravitational moments.

	How changes in alignment will affect supporting structures such as ligaments, joint capsules, muscles, and joints surfaces
6	GAIT: DEFINE 1. The stance, swing and double support phases of gait. 2. The subdivisions of the stance and swing phases of gait. 3. The time and distance parameters of gait. DESCRIBE 1. Joint motion at the hip, knee and ankle for one extremity during a gait cycle. 2. The location of line of gravity in relation to the hip, knee, and ankle during the stance phases of gait. 3. The gravitational moments of force acting at the hip, knee and ankle during the stance phase. EXPLAIN 1. Muscle activity at the hip, knee and ankle throughout the gait cycle, including why and when a particular muscle is active and the type of contraction required. 2. The role of each of the determinants of gait. 3. The muscle activity that occurs in the upper extremity and trunk. COMPARE: 1. Motion of upper extremities and trunk with motion of pelvis and lower extremities. 2. The traditional gait terminology with the new terminology. 3. Normal gait with a gait in which there is a weakness of the hip extensors and abductors. 5. Normal gait with a gait in which there is unequal leg lengths.

PRACTICALS /VIVA VOICE-50 Marks	Maximum Marks
Total	**50**

Text Book:

1. Cynthia C Norkins, Joint Structure and Function – a Comprehensive Analysis , Jaypee Brothers, 5Ed, 2010.

References:

1. Gary l Soderberg, Kinesiology – Application to Pathological Motion – (especially for patho biomechanics) Williams & Wilkins,2nd Ed, 2007
2. I.A.Kapandji, Physiology of joint structure- Churchill Livingston pub, 6th Ed, 2010.

THEORY	Marks
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

SCHEME OF UNIVERSITY EXAMINATION

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practical) as per University pattern**

FUNDAMENTALS FOR OCCUPATIONAL THERAPY PRACTICE

Total hours – 150 hrs

COURSE DESCRIPTION:

This course consists of theory classes and practical sessions and will introduce the students to the concepts of Model, Frame of References, and Approaches. It includes specific models, frames of references and approaches used in intervention for Physical, Paediatric and Psychiatric conditions. It also includes theory and practical sessions on Assessment methods in Occupational Therapy for Physical,Paediatric and Psychiatric conditions.

COURSE OBJECTIVES:

The objectives of this course are that after 90 hours of lectures, demonstrations and practical, the students will gain knowledge and skill in the Models, Approaches, Frames of reference and Assessments used in Occupational Therapy .The students will also gain knowledge and practical skills in Assessing patients with Physical, Psychiatric and Pediatric conditions.

SYLLABUS

Sr.No	Topics
1	Model, Frame of Reference and Approaches: An overview of Model, Frame of Reference and Approaches Model of Human Occupation • Canadian Model of Occupational Performance • Ecological Model in Occupational Therapy
2	Approaches used in Occupational Therapy: • Biomechanical approach

	• Neuro Developmental Treatment (NDT) approach (Adults &Paediatrics) • Roods approach (Adults&Paediatrics) • Brunnstrom approach • Proprioceptive Neuromuscular Facilitation (PNF) approach • Affolter's approach • Motor Relearning Programme • Task Oriented Approach • Sensory Integrative Therapy (Paediatrics&Psychiatry) Behavioural frame of reference • Peto's Conductive Education Rehabilitative approach • Cognitive Behavioural approach. • Psychoanalytical- Include expressive media used in OT • Occupational Behaviour and Model of Human Occupation • Developmental groups and developmental approach • Cognitive Disability FOR • Acquisitional FOR

3	Assessments in Occupational Therapy: **Paediatric:** • Gross motor • Fine motor • Cognition • Perception including Visuo-motor skills • Oromotor evaluation • Play **Physical:** • Functional Ability • Hand functions • Cognition and Perception • Basic ADL and IADL • Cranial Nerves • Cerebellar functions **Evaluation Procedures including:** • Reflexes (superficial and deep tendon reflexes), Muscle tone • Range of Motion • Muscles strength • Voluntary control • Co-ordination • Sensation (cutaneous and cortical) • Cognitive - Perceptual functions • Hand functions **Psychiatric:** • History • Sensory Perceptual Task skills • Intra and Inter personal skills • Social and group skills • Group level • Roles and Routines

Recommended book(s) for Reference:

1. Pedretti's Practice skills for physical dysfunction edited by Heidi McHugh Pendleton, Winifred Schultz Krohn
2. Occupational Therapy for Physical Dysfunction by Mary Vining Radomski, Catherine A Trombly
3. Occupational Therapy and Physical Dysfunction, Principles, Skills and Practice by Ann Turner, Margaret Foster, Sybil E Johnson
4. Introduction to Occupational Therapy by Hussey Subonis ,Chafea O Brien
5. Occupational Therapy and Mental Health edited by Jennifer Creek, Lesley Lougher

6. Mental Health Concepts and Techniques for the Occupational Therapy Assistant by Mary Beth Early
7. Frames of Reference in Psychosocial Occupational Therapy by Mary Ann Bruce, Barbara Borg
8. Willard & Spackman's Occupational Therapy
9. Occupational Therapy for children by Jane Case Smith
10. Frames of Reference for Pediatric Occupational Therapy by Paula Kramer , Jim Hinojosa

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

PRACTICALS /VIVA VOICE-150 Marks	**Maximum Marks**
Total	**150**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practicals) as per University pattern**

ENT, Opthalmology and Pharmacology

Total hours- 60 hrs

OPHTHALMOLOGY

Sr.No	Topics
1	Eye lesions in leprosy, including causes, treatment and complications of lagophthalmus.
2	Field defects arising from lesions in the visual pathway, their clinical symptoms and methods of testing.
3	Effects of paralysis of the occular muscles and treatment.
4	Causes,clinical features and treatment of disorders of

	Occular movement occurring in diseases such as myasthenia gravis, progressive supranuclear palsy and lower motor neuron diseases.
5	Causes, clinical features ,treatment and prognosis in visual failure arising from cataract, inflammatory disorders, vitamin A deficiency, Glaucoma and Trachoma: emphasis on preventable causes and prophylactic measures.
6	Definition of Blindness, and visual disability evaluation, investigative procedures used for testing visual failure, including basic screening procedures for visual acuity suitable for community health surveys.
	E.N.T
1	Outline the Anatomy and physiology of hearing and the use of audiometry in assessment of hearing.
2	Briefly classify causes of hearing loss. Outline conservative and surgical intervention, including types and availability of hearing aids.
3	Briefly outline the functions of the vestibular apparatus
4	Briefly outline common ENT infections and diseases, which affect hearing, breathing and speech; and their management.

Evaluation Unit tests, term examinations and assignments are conducted to evaluate the student.

Text Books:

1. Davidson,A Text Book of Medicine, Churchill Livingston, 21 st Ed, 2010.
2. S.D.Seth , Text Book of Pharmacology, Churchill Livingstone, 8 Ed, 2012

References:

1. K.D.Tripathi , Essentials of Medical Pharmacology, JayPee Brothers.1Ed, 2007
2. Harrison, Principles of Medicine, , Mc Graw hill , 17 th Ed, 2008.
3. OP Ghai, Essential Pediatrics, CBS Publishers, 7th Ed, 2010.
4. Kumar and Clarks , Clinical medicines, Jaypee Brothers, 3 rd Ed, 2013.
5. Multani, Principles of geriatrics Occupational therapy, Jaypee Brothers, 1 st Ed, 2008.
6. Tripathi, Essentials of medical pharmacology, Jaypee Brothers, 7th Ed, 2013.

PHARMACOLOGY

Sr.No	Topics

1	Introduction to Pharmacology – Terminology – Agonist – Antagonist Pharmacokinetics, Pharmacodynamics, Pharmacotherapeutics, Toxicology Drug – Receptor interaction – Association – Dissociation constants, Routes of administration – Absorption – Distribution – Termination of action
2	Autonomic Pharmacology – neurotransmitters, Acetylcholine, sites of action – epinephrine, Norepinephrine – Cholinergic blockers of muscarinic and nicotinic function – Belladonna alkaloids, synthetic substitutes, adrenergic blockers, both alpha and beta blockers and blockade.
3	Cardiovascular Pharmacology – Congestive Cardiac failure – glycosides – Angina And Antianginal Agents – Antihypertensives – Diuretics – beta blockers, calcium channel blockers, ACE – inhibitors, - Peripheral vascular diseases and vasodilators
4	Blood disorders – cyanocobalamine – Shock – plasma substitutes, plasma expanders, vasoconstrictors – coagulants and anticoagulanyts – heparin and coumarins
5	Neuropharmacology – Sedatives and Hypnotics, barbiturates and their antagonists – Narcotics and narnotic analgesics – Opioids – Dangers of addition – prevention Role of superficial and Topical remedies in induction of analgesia
6	Behaviroal Pharmacology and Psychopharmacology – Anxiety states, Anti anxiety drugs – Benzodiazepines – Diazepam congeners – Mood disorders and depressed states – antidepressants Lithium – Psychodysletics and their dangers in misuse among student population
7	Movement Disorders – Parkinsonism –Characteristic of disease (in detail), tremor, rigidity – chemotherapy, Epilepsies – types – drug management of disease – Spastic disease – drug treatment of acute muscle spasms
8	Inflammatory diseases – anti-inflammatory agents – Analgesics – Nonsteroidal anti-inflammatory agents – Aspirin, paracetamol, indomethacin, diclofenac, piroxicam, mefenamoic acid, Steroidal agents, Clucocorticoids, Prednisolone, dexamethasone, betamethasone, baclomethasone
9	General introduction- Chemotherapy -Penicillin – groups - Fluoroquinolones -- Anti Tuberculosis / anti leprosy/ anti malaria

10	General Introduction – Anti Cancer and side effects Brief overview of radio-active drugs
11	Respiratory pharmacology / short introduction Gastro intestinal drugs commonly used

References:

1. K.D.Tripathi , Essentials of Medical Pharmacology, JayPee Brothers.1Ed, 2007
2. Tripathi, Essentials of medical pharmacology, Jaypee Brothers, 7th Ed, 2013.
3. S.D.Seth , Text Book of Pharmacology, Churchill Livingstone, 8 Ed, 2012

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory) as per University pattern**

INTRODUCTION TO FILM MAKING
(Non-credit)

Didactic 30hrs + Practical 15hrs = 45hrs

Course Contents:

UNIT-I

1.IntroductiontoFilms/Cinema

History

offilmsTypesoffilmsPr

ocessoffilmmaking

VariousdepartmentsinfilmsPr

e-production

Production

Post-Production

FilmLanguage(Shot,Scene,CameraMovements)

2.Basicthought,Story, Screenplay, ShootingScript-

Revisualization(ShotDivision,StoryBoarding)Pro

jectDesigning&Planning

Scheduling(Creatinggrid,arrangingscenes,characters&crewneeded,Budgeting.

UNIT-II

1. Direction-Introduction-
workofdirector
Types ofdirectors &duties
ofeachBreakdowns

2. Camera-PhotographyandCinematography -

Typesofcameras,Introtocameras&theirfunctions
Types of

lensesLightingforf

ilms

Basiclightingtechniques&equipmentsTy

pesoflights

Lightaccessories

Interior&Exteriorlighting,creativecinematographyCharact

erizationthroughCamera

UNIT-III

1. Sound/Audio-Introduction-
WorkofSoundrecordist&boomoperator
Recordingequipments,typesofmicrophones&headphones,theirqualities,mictechniquesTerminologies&aspects ofaudiography
Soundrecording/Dubbing&voiceovertechniques

2. Editing-Introduction-
Editingbasics,Equipments,creatingroughcut,Finecutting,Applying transitions, synchronization of scenes, color correction,titlingDigitalIntegration,CreatingFinaloutputForCinemaTheatres &TV.

3. ArtDirection-Introduction-
Productiondesigning
Basicconcept&techniques
DressingaSet&arrangingpropertyLocationalternating

UNIT-IV

1. Acting-Introduction-
Basic concepts, Navrasas, Acting for films, serials andtheatre,Practicals,mime,skit, Streetplays, OneActPlaysProduction,
TVanchoring,Videojockey,RadioJockeyetc.

2. Basics of Make-up & Costume for films -
make up & Costume accessories and productscharacterizationthroughmakeup&Costume

UNIT-V

Shootingoffilms
FinalProjects

1.Advertisment2.Documentary
3. ShortFilms4.VideoSong5.News

FilmAppreciationsessions-Screeningofshort,documentary&featurefilmsforanalysis.

ReferenceBooksfor Filmmaking:

1. TheFilmmakersHandbook -ByStevevascher
2. ShotByShot-ByStevenKatz
3. Making Movies -BySudneyLumet.
4. OnDirectingFilm-ByDavid Mamet
5. Rebelwithout aCrew-ByRobertRodriguez
6. TheTelevisionHandbook-PatriciaHolland
7. StudioTelevisionProduction–ByAndrewUtterback

PUBLIC SPEAKING(Non-credit)

Total hours – 45 hrs

Introduction

This course is an introduction to speech communication which emphasizes the practical skill of public speaking, including techniques to lessen speaker anxiety, and the use of visual aids to enhance speaker presentations.

Aims & Objectives

- To ease students' anxieties about using English as a mode of oral communication.
- To develop an understanding that communication is a two-way process in which the listener evaluates the effectiveness of the speaker.
- To improve skills in listening, organizing, adapting to audiences, and orally presenting messages.

- Establish rapport with your audience
- Understanding Public Speaking strengths as a presenter and how to appeal to different types of people
- Recognize how visual aids can create impact and attention in Public Speaking
- Develop Public Speaking techniques to create a professional presence
  Prepare, practice, and deliver a short presentation

Units

I. Introduction to Public Speaking
II. Introduction to different types of speech
    - Introduction Speech
    - Informative Speech
    - Persuasive Speech
    - Sensory Aid Speech
    - Special Occasion Speech
III. Things to keep in mind during public speaking
IV. Why public speaking is important for an occupational therapist

Textbooks

1. The Quick and Easy Way to Effective Speaking Book by Dale Carnegie
2. The Art of Public Speaking Book by Stephen E. Lucas

4th SEMESTER

CLINICAL NEUROLOGY

TOTAL HOURS – 60 HRS

COURSE OBJECTIVES:

The objective of this course is that after 90 hours of lectures & demonstrations, in addition to clinics, the student will be able to demonstrate an understanding of neurological conditions causing disability and their management.

COURSE OUTCOME:

The following were the outcome measures of this course

1. Identify, Analyse and apply the Neuro anatomical basis of brain for various clinical neurological conditions.

2. Becomes familiar with neuro physiological basis of neurological conditions which drives the students to evaluate the patients with certain disorders
3. Learns about the medical and surgical management of the congenital and childhood disorders and able to differentiate the clinical features between those conditions
4. Become beware of the causes, signs, symptoms, clinical management of the Cerebro vascular accidents, head and spinal cord injury
5. Students can evaluate themselves about the congenital and acquired diseases of the spinal cord
6. Would be able to characterize the Demyelinating and the degenerative disease of the brain
7. Recognizes the progression of the diseases like Myopathies, infections and peripheral neuropathy
8. Can able to assess the neurological functions of the brain and spinal cord.
9. They will come to know about the evaluation of the higher mental status posture and gait abnormalities.

SYLLABUS

Sr.No	Topics
1	**NEUROANATOMY** Review the basic anatomy of the brain and spinal cord including: Blood supply of the brain and spinal cord, anatomy of the visual pathway, Connections of the cerebellum, and extrapyramidal system, relationship of the spinal nerves to the spinal cord segments, Long tracts of the spinal cord, the brachial and lumbar plexuses, and cranial nerves.
2	**NEUROPHYSIOLOGY** Review in brief the Neurophysiologic basis of: tone and disorders of tone and posture, bladder control, muscle contractions and movement and pain.

	Functions of the lobes of the brain
3	**CLINICAL FEATURES & MANAGEMENT** Briefly outline the clinical features and management of the following Neurological Disorders, Congenital and childhood disorders,Cerebral Palsy, Hydrocephalus, Spinal Bifida. 1. Cerebrovasular accidents. General classification: thrombotic, embolic, hemorrhagic &"vasculitis/ arteritis - infectious and inflammatory strokes. Gross localization and sequelae.Detailed rehabilitative programme. 2. Trauma-broad localization, first aid and management of sequelae of head injury and spinal cord injury 3. Diseases of the spinal cord.Craniovertebral junction anomalies Syringomyelia Cervical and lumbar disc disease. Tumours, Spinal arachnoiditis. 4. Demyelinating diseases (central and peripheral)Guillain - Barre syndrome. Acute disseminated encephalomyelitis. Transverse myelitis. Multiple sclerosis. 5. Degenerative disorders.Parkinson's disease. Dementia. 6. Infections a. Pyogenic Meningitis sequelae. b. Tuberculous infection of central nervous system. c. Poliomyelitis. d. Brain abscess 7. Diseases of the muscle including Myopathies: Classification, signs, symptoms, progression and management. a. Myopathies b. Muscular dystrophy c. Spinal muscular atrophy 8. Peripheral nerve disorders. a. Peripheral nerve injuries, localisation and management. b. Entrapment neuropathies. c. Peripheral neuropathies including diabetic neuropathy 9. Miscellaneous. Epilepsy: Definition, classification and management. Myasthenia Gravis: Definition, course and management. Intracranialtumours: Broad classification, signs and symptoms. Motor neuron disease
4	Clinical assessment of neurological function to be

	taught through, bedside or demonstration clinics spread out over at least 5 sessions. 1. Basic history taking to determine whether the brain spinal cord or peripheral nerve is involved. 2. Assessment of higher cortical functions such as orientation, Memory, attention, speech and language, agnosia, apraxia etc 3. Assessment of Cranial Nerves. 4. Assessment of Motor Power. 5. Assessment of sensory function, touch, pain and position. 6. Assessment of tone- spasticity, rigidity, hypotonia 7. Assessment of cerebellar function. 8. Assessment of gait abnormalities.
5	**RADIODIAGNOSIS FOR NEUROLOGY** Outline the basic views used in radiography, list the different types of radiodiagnostic methods using X-ray, CT Scan, Ultrasonogram. Outline the guidelines for interpretation Outline the value of C.T. Scan of Brain and Spinal cord in diagnosis; recognize some of the normal and abnormal features. Outline the value of MRI of Brain and spinal cord in diagnosis, recognize some of the normal and abnormal feature

Text books:

1. Kenneth W Lindsay, Neurology and Neurosurgery – illustrated, Churchil Livingston, 5Ed, 2010

References:

1. Sir Ruger Bannister, Brain and Bannister's Clinical Neurology, Oxford,7th Edition, 1992
2. Hokmes Bullock, Introduction to nervous System, WH Freeman and company,3rd Edition,2002
3. Carpenter, Mental Health & Learning disability, Eurett Pub, 2nd Edition, 1998
4. Ropper, principles of Neurology, JP, 10th Edition, 2014
5. Raymond D. Adams, Principles of Neurology

THEORY	**Marks**

*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

SCHEME OF UNIVERSITY EXAMINATION

PRACTICALS /VIVA VOICE-150 Marks	Maximum Marks
Total	**150**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practical) as per University pattern**

CLINICAL ORTHOPEDICS & TRAUMATOLOGY

TOTAL HOURS – 60 HRS

COURSE OBJECTIVES:

The objectives of this course is that after 90 hours of lectures & demonstrations, in addition to clinics, the student will be able to demonstrate an understanding of orthopaedic conditions causing disability and their management.

COURSE OUTCOME:

1. Knowledge about fractures of various bones. Types, mechanism, clinical features, complications and management of fractures gained.
2. Dislocation of major joints and prevention are understood.
3. Knowledge about major surgical procedures in orthopaedics including amputations gained.

4. Knowledge about bone and joint infectious diseases gained.
5. Knowledge about tumors in bones and joints gained.
6. Knowledge about arthritis and other degenerative disorders of bones and joints gained.
7. Knowledge about various musculo-skeletal problems its clinical diagnosis and management gained.
8. Knowledge about congenital and postural deformities gained.
9. Sports injury mechanism, treatment and prevention are understood.
10. Knowledge about peripheral nerve injuries and deformities gained.
11. Will be able to read & interpret a] salient features of the X-ray of the spine & Extremities
12. Will be able to correlate the radiological findings with the clinical findings

SYLLABUS

Sr.No	Topics
1	**INTRODUCTION TO ORTHOPAEDICS** Introduction to orthopaedic terminology, types of pathology commonly dealt with, clinical examination, common investigations and outline of nonoperative& operative management.
2	**PRINCIPLES OF OPERATIVE TREATMENT** List indications, contraindications and briefly outline principles of Arthrodesis, Athroplasty, osteotomy, bone grafting ,Tendon-Transfers, limb lengthening procedures, Principles of internal and external fixation of bone injuries
3	**SPRAINS AND MUSCLE STRAINS** List common sites of sprains and muscle strains and describe the clinical manifestations and treatment.
4	**FRACTURES & DISLOCATIONS:** General principles Outline the following: 1. Types of Fractures including patterns, open and closed fractures and fracturedislocations. 2. Differences between dislocation & subluxation. 3. General & Local signs & symptoms of fractures & dislocations 4. Principles of management of fractures & dislocations.

	5. Prevention & Treatment of complications including: Fracture-disease, Volkman'sischaemic contracture, Sudek's Atrophy, Carpal Tunnel Syndrome, Myositis ossificans, and Shoulder-hand syndrome. 6. Fracture healing
5	**UPPER LIMB FRACTURES & DISLOCATIONS** 1. Enumerate major long-bone fractures and joint injuries. 2. Briefly describe their clinical features, principles of management and complications
6	**LOWER LIMB FRACTURES & DISLOCATIONS** 1. Enumerate major long bone fractures and joint injuries. Briefly describe their clinical features, principles of management and complications.
7	**SPINAL FRACTURES AND DISLOCATIONS** Outline the mechanism, clinical features, principles of management and complications of spinal injuries.
8	**RECURRENT DISLOCATIONS** Outline the mechanism, clinical features, principles of management and complications of recurrent dislocations of the shoulder and patella.
9	**AMPUTATIONS** 1. Classify amputations, list indications for surgery. 2. Outline pre-operative, operative and prosthetic management. 3. Outline prevention and treatment of complications.
10	**BONE & JOINT INFECTIONS** Outline the etiology, clinical features, management and complications of: septic arthritis, Osteomyelitis, Tuberculosis (including spinal T.B.)
11	**BONE & JOINT TUMORS** Classify and outline the clinical features, management and complications of common (benign/malignant) bone and joint tumours
12	**CHRONIC ARTHRITIS** Outline the pathology, clinical features, mechanism of deformities, management and complications of: Rheumatoid arthritis, Osteoarthritis of major joints and spine, Ankylosing spondylitis.
13	**LOWBACK ACHE, PAINFUL ARC SYNDROME, TENDONITIS & FASCITIS** Outline the above including clinical features and management.

14	**SPINAL DEFORMITIES** Classify spinal deformities and outline the salient clinical features, management and complications.
15	**POLIOMYELITIS** Describe the pathology, microbiology, prevention, management and complications of polio. Outline the treatment of residual paralysis including use of orthoses and muscle transfers.
16	**CONGENITAL DEFORMITIES** Outline the clinical features and management of CTEV, flat foot, vertical talus, limb deficiency (Radial club hand and femoral, tibial and fibular deficiencies) meningeomyelocoele and Arthrogryphosis multiplex congenita.
17	**PERIPHERAL NERVE INJURIES** Outline the clinical features and management, including reconstructive surgery of: 1. Radial, median and ulnar nerve lesions. 2. Sciatic and lateral popliteal lesions. 3. Brachial Plexus injuries including Erbs, Klumpke's& Crutch Palsy
18	**HAND INJURIES** Outline of clinical features, management and complications of: Skin and soft tissue injury, Tendon injury, Bone and joint injury.
19	**LEPROSY** Outline of clinical features, management and complications of neuritis, muscle paralysis, trophic ulceration and hand & feet deformities.

20	**RADIODIAGNOSIS FOR ORHTOPEDICS** Outline the basic views used in radiography, list the different types of radiodiagnostic methods using X-ray, CT Scan, Ultrasonogram. Outline the guidelines for interpretation. Demonstrate X-rays showing different anomalies of the "spine" in comparison with a normal X-ray. Outline the value of C.T. Scan of Spinal cord in diagnosis; recognize some of the normal and abnormal features. Outline the value of MRI of spinal cord in diagnosis; recognize some of the normal and abnormal features. Identify on X-rays; Fractures and dislocations of extremities and spine, different disorders of bone, Eg.: Osteomyelitis, osteoporosis, rickets, tumours, etc

Text Books

1. MayilvahananNatarajan, Text book of orthopaedics and trumatology, Lippincott, 7th Ed, 2011.

2. Jayant Joshi, Essentials of Orthopaedics and applied Occupational therapy, Elsevier, 2nd Ed, 2011.

3. Jhon Ebenezer, Text book of orthopaedics, Jaypee pub, 3rd ed-2006.

References:

1. John Crawford Adams , Outline of Orthopaedics,Churchill Livingstone,2007

2. Turek'sorthopaedics , Mosby, 4Ed, 2004

3. John Crawford Adams, Outline of orthopaedics, Churchill Livingston, 13th Edition, 2001.

4. William A Mc Ardle, Exercise physiology, Lippincott, 7thed, 2010.

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**

Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

PRACTICALS /VIVA VOICE-150 Marks	Maximum Marks
Total	**150**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practical) as per University pattern**

PATHOLOGY & MICROBIOLOGY

TOTAL HOURS – 90 HRS

At the end of the course, the candidate will-

1. Acquire the knowledge of concepts of cell injury & changes produced thereby in different tissues & organs - capacity of the body in healing process.
2. Recall the Etio – pathogenesis, the pathological effects & the clinico – pathological correlation of common infections &non-infectious diseases.
3. Acquire the knowledge of concepts of Neoplasia with reference to the Etiology, gross & microscopic features, diagnosis & prognosis in different tissues & organs of the body.
4. Correlate normal & altered morphology of different organ systems in different diseases needed for understanding disease process & their clinical significance (with special emphasis to NeuroMusculo-skeletal & cardio-respiratory systems).
5. Acquire knowledge of common Immunological disorders & their resultant effects on the human body.
6. Understand in brief, about the Hematological diseases & investigations necessary to diagnose them & determine their prognosis.
7. At the end of the Microbiology course, the candidate will have sound knowledge of the agents responsible for causing human infections, pertaining to C.N.S., C.V.S., Musculoskeletal and Respiratory system.

SYLLABUS

(A) PATHOLOGY

(B)

Sr.No	Topics
1	**Cell injury** -Causes, mechanism & toxic injuries with special reference to Physical, Chemical & Reversible injury (degeneration) ionizing radiation. -Types -morphology, swelling, hyaline, fatty Intra-cellular accumulation changes. -hyaline mucin & pigment disorders. Irreversible cell injury -types of necrosis -apoptosis Extra -cellular accumulation - amyloidosis, calcification - – metastasis, &dystrophic – Pathogenesis, morphology
2	**Inflammation & Acute inflammation** Repair – features, causes, vascular & cellular events, Inflammatory cells

	Morphologic variations, & Chronic inflammation:- causes, types, non mediators, - specific & granulomatous – with Wound healing by primary examples &secondary union factors promoting & delaying Healing at various sites healing process. - including -bones, nerve & muscle Regeneration & repair
3	**Immuno – pathology – (basic concepts)** Immune system: -organization -cells - antibodies - regulation of immune responses, Hyper -sensitivity, Secondary immuno -deficiency including HIV, Organ transplantation
4	**Edema –pathogenesis** Circulatory disturbances -types -transudates / exudates, Chronic venous congestion -lung, liver, spleen, Thrombosis – Mechanism and Morphology Embolism – types -clinical effects, Infarction – types – common sites Gangrenes – types – etiopathogenesis Shock – Pathogenesis, types, morphologic changes
5	**Growth Disturbance** Neoplasia classification, histogenesis, biologic Atrophy-malformation, agenesis, dysplasia, behavior, difference between 3 - 47 benign & Malignant neoplasms –grades malignant tumour - stages -local & distal spread Precancerous lesions & ca Tumorin situ & host interactions – systemic effects - metastatic or direct spread of tumors affecting bones, spinal cord, leading to paraplegia, etc
6	**Cardiovascular system** Atherosclerosis-Ischemic heart diseases – myocardial infarction – Pathogenesis / Pathology Congestive Cardiac Failure, Pericarditis, Hypertension Cardiomyopathy Peripheral vascular diseases Rheumatic Heart Disease, Infective endocarditis
7	**Respiratory system** Lung collapse – atelectasis Pleuritis, complications, T.B. Primary, secondary – morphologic types, Pneumonia (lobar, broncho, viral), COPD.
8	**Neuropathology** Reaction of nervous tissue to injury – infection &ischemiaCerebrovascular disease, atherosclerosis, Pyogenic meningitis, TBM, Viral Thrombosis, embolism, aneurysm, hypoxia, infarction & hemorrhage. Poliomyelitis, Leprosy, Demyelinating

	diseases, Coma Effects of Hypotension on CNS Parkinsonism, Cerebral palsy, metachromatic leucodystrophy, Dementia, Hemiplegia, paraplegia, Wilson's disease Space Occupying Lesions (SOL) - (in brief) Peripheral nerve injury
9	**Diseases of muscle** Muscular dystrophy, hypertrophy, Pseudo, hypertrophy, atrophy, Myositis ossificans, necrosis, regeneration, Myotonia, Muscle biopsy.
10	**Neuromuscular junction** Myasthenia gravis, Myasthenic syndrome, Nerve biopsy.
11	**Bone & Joints:** Fracture healing, Osteomyelitis, rickets, Osteomalacia, Bone Tumors, Osteoporosis, Spondylosis, Prolapse Interverbral Disc, Scoliosis, Haemarthrosis, Gout, T.B., Arthritis –degenerative, inflammatory, RA, Ankylosing spondylitis, Tenosynovitis
12	**Clinical pathology** – (including Demonstrations) Lab investigation in liver & renal failure
13	**Haematology** T.C./D.C./PBS, Eosinophilia, E.S.R., Anaemia Bleeding and coagulation disorders Disorders of haemoglobin structure and synthesis Lymphoid and myeloid neoplasmas
14	**Desirable to Know: -** Growth Disturbance - Carcinogenesis – environmental carcinogens Endocrine – Hyperthyroidism – Diabetes Hepatic diseases - Cirrhosis – emphasis to systemic effects of portal Hypertension.
15	**Nice to Know: -** Deficiency disorders – Vitamins A, B, C, D. Growth Disturbance - Chemical, Occupational, heredity, viral. Medical Genetics – (In Brief) Urinary – commonly encountered in paralytic bladder, common urinary tract infections (brief)- urinary calculi. G.I. system- -Gastric/duodenal ulcer, enteric fever, TB, enteritis, Gastritis(Related to consumption of NSAID) Skin - Melanin pigment disorders, Vitiligo, Teniaversicolor, Psoriasis, Bacterial / fungal infections, cutaneous TB, Scleroderma, SLE, Leprosy, Alopecia, Skin Biopsy.

B) MICROBIOLOGY

Sr.No	Topics
1	**General Microbiology - Introduction & scope**
	Classification of Micro - organisms & morphology of Bacteria a)Bacterial cell, its organelles Gram and Ziehl - Neelson and itsImportance in lab diagnosis.
2	**Sterilization & disinfection [basic concepts] Must know** - Definition of Sterilization, Disinfection, Enumeration of 3 49 physical methods of sterilization including principles and their applications, commonly used Disinfectants. Desirable to know: - Central sterile department (CSSD) concept only. Hospital Acquired Infection Must know – Definition, factor influencing infection, mode of transmission & prevention of MAI. Desirable to know: - Infection control committee. Universal safety precautions Must know : - Universal safety precautions, definition of waste classification, segregation Transport & disposal.
3	**Immunology Must know: -** Definition. Types of Immunity active & passive, local Immunity vaccines. Antigen antibody reaction – Definition of Antigen & antibody, Types and property & application for diagnosis. Immune response – Must Know – Type of cells involved Ag processing & presentation Primary &secondary immune response. CMI – Definition, role of T. cells and macrophages. Desirable to know – Principles & uses of monoclonal Abs. Hypersensitivity & auto-immunity - Must know – Definition, Classification Anaphylaxis – mechanism, manifestations & tests for Anaphylaxis, definitions of autoimmunity, Classification& Mechanism.
4	**Laboratory diagnosis of Infection Host parasite relationship & bacterial infections.** **Must know** – Different sources and modes of transmission of infection, microbial factors leading to establishment of infection. Methods of identification of bacteria - Must know – Principle of laboratory diagnosis of infectious diseases, General procedure for collection. Diagnosis of infectious diseases. Must know – Transport and processing of specimen for microbial diagnosis.

5	**Bacteriology Infection caused by GM + ve& GM – Vecocci Must know** – Morphology, pathogenicity & lab diagnosis of Staphylococci, Streptococci & Neisseria. Desirable to know – Role of Staphylococci in hospital infection. Infection caused by GM + ve bacillus – Must know – Morphology, pathogenicity & lab diagnosis of Coryne bacterium diphtheria, Clostridium Perfringens&clostridiumtetani. Infection caused by Gram –ve bacilli – Must know – Morphology, pathogenicity & lab diagnosis of E. coli, Klebsiella, Pseudomonas, Shigella, Salmonella, V. Cholera. Desirable to know – Role of Pseudomonas in HAI. Infection caused by Mycobacteria – Must know - Morphology, pathogenicity & lab diagnosis of M. tuberculosis, M leprae& atypical Mycobacteria. Spirochaetes – Must know - Morphology, pathogenicity & lab diagnosis of TreponemaPallidum (VDRL test & TPHA) Desirable to know – LeptospiraBorrelia
6	**Viruses Introduction & General properties of viruses – Must know** – Size, shape, symmetry, Structure of viruses, classification, cultivation of Viruses& methods for diagnosis of viral infections HIV. Must know – Morphology transmission clinical syndromes, Laboratory diagnosis & Prevention. Hepatitis –Must know – List of viruses causing Hepatitis, pathogenicity, Laboratory diagnosis & Prevention. Polio, measles, congenital, Viral infection, Rubella, CMV, Herpes - Must know – Clinical syndrome & Laboratory diagnosis
7	**Mycology Must know –** Morphological classification & general lab Diagnosis, Definition, causative Agents & lab Diagnosis of mycetoma, Pathogenicity & lab diagnosis of Aspergillosis& Candidiasis
8	**Parasites affecting CNS Must know** – List of parasites affecting CNS, on short about lab diagnosis of malaria, Filarial, Toxoplasma, Cysticercosis, echinococcus.
9	**Applied Microbiology Diseases affecting bones, joints & muscles - Must know** – Osteomyelities – etiology, lab diagnosis, Arthritis. Disease involving brain & nerves - Must know – Meningitis, brain abscess is Infective neuritis, etiology & clinical manifestations & lab diagnosis. Diseases involving

	cardiopulmonary system, skin & burns - Must know – Infective Carditis PUO, URTL, LRTI, Skin & burn Infections etiology Laboratory diagnosis.

Text Books

Sr.No.	Title
1	Text book of Pathology -by Harsh Mohan
2	Pathologic basis of disease by Cotran, Kumar, Robbins
3	A Hand book of medical laboratory technology – V. H. Talib
4	General Pathology – by Bhende
5	Textbooks of Microbiology – by R. Ananthnarayan& C. K. JayramPanikar

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory) as per University pattern**

INTRODUCTION TO QUALITY AND PATIENT SAFETY

Total Hours: 30 hrs

COURSE OBJECTIVES

1. Qualityassuranceandmanagement-
   TheobjectiveofthecourseistohelpstudentsunderstandthebasicconceptsofqualityinhealthCarean ddevelopskillstoimplementsustainablequalityassuranceprograminthehealthsystem.
   a. ConceptsofQualityofCare
   b. QualityImprovementApproaches
   c. StandardsandNorms
   d. QualityImprovementTools
   e. IntroductiontoNABHguidelines
2. Basicsofemergencycareandlifesupportskills-Basiclifesupport(BLS)isthefoundationfor saving lives following cardiac arrest. Fundamental aspects of BLS include immediate recognitionof sudden cardiacarrest (SCA) and activation of the emergencyresponsesystem, earlycardiopulmonary resuscitation (CPR), and rapid defibrillation with an automated externaldefibrillator(AED).Initialrecognitionandresponsetoheartattackandstrokearealsoconsid ered part of BLS. The student is also expected to learn about basic emergency careincludingfirstaidandtriage.

Topicstobecoveredunderthesubjectareasfollows:

a. Vitalsignsandprimaryassessment
b. Basicemergencycare –firstaidandtriage
c. Ventilationsincludinguseofbag-valve-masks(BVMs)
d. Choking,rescuebreathingmethods
e. One-andTwo-rescuerCPR
f. UsinganAED(Automatedexternaldefibrillator).
g. Managinganemergencyincludingmovingapatient

At the end of this topic, focus should be to teach the students to perform the maneuvers insimulation lab and to test their skills with focus on airways management and chest compressions.Attheendofthefoundationcourse,eachstudentshouldbeabletoperformandexecute/ope rateontheabove-mentionedmodalities.

3. Biomedicalwastemanagementandenvironmentsafety-
   Theaimofthissectionwillbetohelpprevent harm to workers, property, the environment and the general public.

Topics to becoveredunderthesubjectareasfollows:

a. DefinitionofBiomedicalWaste
b. Wasteminimization
c. BMW – Segregation, collection, transportation, treatment and disposal (including colorcoding)
d. LiquidBMW,Radioactivewaste,Metals/Chemicals/Drugwaste
e. BMWManagement&methodsofdisinfection
f. ModerntechnologyforhandlingBMW
g. UseofPersonalprotectiveequipment(PPE)
h. Monitoring&controllingofcrossinfection(Protectivedevices)

4. Infection prevention and control - The objective of this section will be to provide a broadunderstanding of the core subject areas of infection prevention and control and to equip AHPswiththefundamentalskillsrequiredtoreducetheincidenceofhospitalacquiredinfectionsandimprovehealthoutcomes.Conceptstaughtshouldinclude–
   a. Evidence-basedinfectioncontrolprinciplesandpractices[suchassterilization,disinfection, effectivehandhygieneanduseofPersonalprotectiveequipment(PPE)],
   b. Prevention&controlofcommonhealthcareassociatedinfections,
   c. Componentsofaneffectiveinfectioncontrolprogram,and
   d. Guidelines(NABHandJCI)forHospitalInfectionControl
5. AntibioticResistance-
   a. HistoryofAntibiotics
   b. HowResistanceHappensandSpreads
   c. Typesofresistance-Intrinsic,Acquired,Passive
   d. TrendsinDrugResistance
   e. ActionstoFightResistance
   f. Bacterialpersistence
   g. Antibioticsensitivity
   h. Consequencesofantibioticresistance
   i. AntimicrobialStewardship-Barriersandopportunities,Toolsandmodelsinhospitals
6. Disaster preparedness and management- The objective of this section will be to provideknowledge on the principles of on-site disaster management. Concepts to be taught shouldinclude-
   a. Fundamentalsofemergencymanagement,
   b. Psychologicalimpactmanagement,
   c. Resourcemanagement,
   d. Preparednessandriskreduction,
   e. Key response functions (including public health, logistics and governance, recovery,

rehabilitation and reconstruction), information management, incident command andinstitutionalmechanisms.

Course Outcome

CO 1 - Thestudent will become proficient in the basicconceptsofqualityinhealthCare

CO 2 - Thestudent will become efficientanddevelopskillstoimplementsustainablequality assuranceand patient safety

CO3 - The student will be able to understand basics in emergency care, methods of infection prevention , practice of risk reduction and ethics in treatment

CO 4 - The student will be able to relate the importance nd compare the team members in maintaining quality and patient safety

CO 5 – the student will be able to identify and explore the current trends and research in the quality and patient safey in relation to health care and Occupational Therapy

Evaluation

Internal assessment

External : theory exams - university

Reference:

1. Pedretti's Practice skills for physical dysfunction edited by Heidi McHugh Pendleton, Winifred Schultz Krohn

2. Willard & Spackman's Occupational Therapy

5th SEMESTER

COMMUNITY MEDICINE

DURATION – 60 HOURS

COURSE OBJECTIVE:

The objective of the course is that after 100 hours of lectures, demonstrations, practical and clinics, the student will be able to demonstrate and understanding of the influence of social and environmental factors of individual and society.

COURSE OUTCOME:

1. Epidemiological implications of impairment and handicap and disability, health statistics
2. National health schemes and its benefits.
3. Immunization programmes – malnutrition and early detection of disabling conditions and Intervention.
4. Categorizes various rehabilitations and describes its advantages and disadvantages.
5. Explains about communicable and non communicable diseases and its implications.
6. Influence of nutritional factors on disability.
7. Role of community leaders and health professionals in health education.

SYLLABUS

S.No	Topics
1	Outline the natural history of diseases and the influence of social, economic and cultural aspects of health and diseases.
2	Outline the various measures of prevention and methods of intervention especially for diseases with disability.
3	Outline the national care delivery system and the public health administration system and the central and state level, local trends and resource.
4	Outline selected national health programmes including current programmes (Eg.SSA Sarva Siksha Abhiyan)
5	Define occupational health and list methods of prevention of occupational diseases and hazards

6	Outline the Employees State Insurance scheme and its various benefits.
7	Describe the social security measures for protection from occupational hazards, accidents, diseases, and the workman's compensation act.
8	Outline the objectives and strategies of the national Family Welfare Programme.
9	Define community based and institution based rehabilitation. Describe the advantage and disadvantages of institution and community based rehabilitation.
10	Describe the following communicable diseases with reference to reservoir, mode of transmission, route of entry and levels of prevention. a. Poliomyelitis, b. Meningitis, c. Encephalitis, d. Tuberculosis, e. Filariasis, f. Leprosy, g. Tetanus & h. Measles.
11	Describe the epidemiology of rheumatic heart disease, cancer, Chronic degenerative disease and cerebrovascular accidents.
12	Outline the influence of nutritional factors such as protein Energy Malnutrition, Anemia, Vitamin deficiency and minerals on disability.
13	List the principles of health education, methods of communication and role of health education in rehabilitation services.
14	Define the role of community leaders and health professionals in health education.
15	Outline the role of international health agencies in rehabilitation of the disabled.
16	Role of Occupational Therapy in meeting the health care needs of India

TEXT BOOKS:

1. Park's Text Book of preventive and Social Medicine – K Park, 24TH ED, BDB Publishers,2017. 2. Prabhakar, Short text book of preventive and social medicine, , Jaypee, 2nd Ed 2012,

REFERENCE:

1. Retan, Handbook of preventive and social medicine, 9 th ed, 2007

THEORY	**Marks**

*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

SCHEME OF UNIVERSITY EXAMINATION

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory) as per University pattern**

HEALTH PSYCHOLOGY, CLINICAL PSYCHOLOGY AND CLINICAL PSYCHIATRY

Total hours – 90 hrs

CLINICAL PSYCHOLOGY

DURATION – 30 HOURS

COURSE DESCRIPTION:

This field of psychology covers the application of psychological principles in the etiology, pathology, assessment and management of abnormal conditions of all age groups. This course runs concurrently with Psychiatry for Occupational Therapy students. The basic foundation of general psychology would have been covered in 1st year.

COURSE OBJECTIVES:

The objective of this course is that after 30 hours of lectures, demonstrations, seminars and clinics the students will be able to demonstrate ability to apply their knowledge of psychology in clinical situations for assessing, understanding, and treating their patients. They will learn to understand themselves, their feelings, attitudes and behavior. In addition, the student will be able to fulfill the following objectives of the course:

A. To evaluate attention, concentration, perception and briefly mention the related abnormalities.

B. To understand and explain behavioral aspects of learning, maturation, and appropriately use behavioral techniques in therapy

C. To evaluate memory, thinking & intelligence and briefly mention the related disorders.

D. To evaluate motivation, emotion and personality and assess their pathological manifestations.

E. With the concepts of conscious and unconscious mind to explain frustration and conflicts, and to study the role of defense mechanisms in normal and abnormal conditions

SYLLABUS

Sr.No	Topics
1	**Definition of Clinical Psychology:** General and historical introduction to Abnormal Psychology, Psychology in relation to medicine, different schools. **Methods of Clinical Psychology:** Case History method, Interview Techniques, Clinical observation, Situational tests, Questionnaires.

2	**Concepts of normality and abnormality:** Causes of abnormality, Criteria for abnormality. Broad classification of Current model of abnormal behavior - Medical model, Psychodynamic model, Behaviouristic model & Humanistic model ,and Cognitive mode
3	**Functional units of mind:** Id, ego and super ego - their functions and interactions. Role of Defense mechanisms in normal and abnormal behaviour.
4	Evaluation of attention and concentration, perception, memory, thinking etc
5	**Intelligence and Mental Retardation:** Intelligence test - .Measurement of intelligence - children & adults (demonstrations)
6	Mental Retardation and it's psychosocial management
7	**Personality Assessment**: Questionnaires, inventories, projective techniques
8	**Behaviour techniques in Therapy** –application of learning principles to modify behaviour
9	**Counselling:** Definition, Aim, Difference between counselling and guidance, principles in counselling, personality qualities of counselors
10	**Psychotherapy**: Basic Principles .Different types of Psychotherapy: Psychodynamic (including Brief psychotherapy) ,Humanistic (client-centered) and Cognitive Behavioural Therapy

HEALTH PSYCHOLOGY

DURATION – 30 HOURS

S.No	Topics
1	**PSYCHOLOGICAL REACTIONS OF A PATIENT:** Psychological reactions of a patient during admission and treatment: anxiety, shock, denial, suspicion, questioning, loneliness, regression, shame, guilt, rejection, fear, withdrawal, depression, egocentricity, concern about small matters, narrowed interests, emotional over reactions, perceptual changes, confusion, disorientation , hallucinations, delusions, illusions, anger, hostility, loss of hope.

2	**REACTION TO LOSS:** Reaction to loss, death and bereavement: shock and disbelief, development of awareness, restitution, resolution. Stages of acceptance as proposed by Kubler Ross.
3	**STRESS:** Physiological and psychological changes, relation to health and sickness: Psychosomatics, professional stress, burn out.
4	**COMMUNICATIONS:** Types: verbal, non-verbal, elements in communication, barriers to good communication, developing effective communication, specific communication techniques.
5	**COMPLIANCE:** Nature, factors contributing to non-compliance, methods of improving compliance.
6	**EMOTIONAL NEEDS:** Emotional needs and psychological factors in relation to unconscious patients, handicapped patients, bed-ridden patients, chronic pain, spinal cord injury, paralysis, cerebral palsy, burns, amputations, disfigurement, head injury, degenerative disorders, Parkinsonism, Leprosy, incontinence and mental illness.
7	**GERIATRIC PSYCHOLOGY:** Specific psychological reactions and needs of geriatric patients.
8	**PAEDIATRIC PSYCHOLOGY:** Specific psychological reactions and needs of pediatric patients.
9	**SUBSTANCE ABUSE:** Psychological aspects of substance abuse: smoking, alcoholism, and drug addiction.
10	**PERSONALITY STYLES:** Different personality styles of patients

CLINICAL PSYCHIATRY

DURATION – 30 HOURS

COURSE DESCRIPTION:

In this course students will study abnormality of behaviour and its effect on functioning. It

parallels the study of Health Psychology and Clinical Psychology. Course of mental illness, preventive measures, and all clinical syndromes are covered. All treatment theories, approaches, and pharmacological aspects will be considered, with particular emphasis on current use. This will be done through 30 hours of lectures and seminars and clinical experience in case studies and discussion.

COURSE OBJECTIVE:

The objective of this course is that after 35 hours of lectures, demonstrations and clinics the student will be able to demonstrate an understanding of mental illness, methods of assessment and approaches used in therapy. In addition, the student will be able to fulfill the objectives of the course:

1. Explain the causes and describe preventive measures for mental illness.
2. Describe possible symptoms in relation to clinical syndromes.
3. Discuss methods of treatment and explain the main treatment approaches.
4. Appreciate legal aspects of psychiatric illness and psychiatric management.

SYLLABUS

Sr.No	Topics
1	**Introduction:** A brief history of psychiatry History taking in psychiatry including mental examination and assessment.
2	**Causes of mental disturbances:** a. Hereditary factors. b. Embryonic development factors. c. Birth injury. d. Endocrine disease. e. Systemic diseases / accidents. f. Cerebral diseases. g. Emotional factors. h. Stresses related to cultural factors
3	**Preventive measures:** In relation to consanguineous marriages, adequate ante-natal care, obstetric care, mother and child services, psychological services (e.g. child guidance, counseling services)
4	**Symptoms of mental illness:** 1. Disturbances of consciousness. 2. Disturbances of reasoning and judgment. 3. Disturbances of memory. 4. Disturbances of thought and perception. 5. Disturbances of volition.

	6. Disturbances of motor behaviour. 7. Disturbances of speech. 8. Disturbances of affect.
5	**Methods of treatment:** 1. Individual and group psychotherapy 2. Physical Methods: ECT and related side effects, Psychosurgery. 3. Psychopharmacology and related side effects,
6	Criteria for classification and definition of psychiatric illness.
7	Description of the various clinical syndromes including etiology, clinical features, course, treatment, and prognosis. To include: Schizophrenic and other Psychotic disorders Mood disorders Anxiety disorder including Phobias Somatoform disorders Dissociative disorders Factitious disorders Eating and sleep disorders Psychosomatic illness Personality disorders Substance related disorders Sexual dysfunction and gender identity disorders Organic Brain Syndrome Psychiatric disorders of childhood Psychiatric disorders of adolescence Psychiatric disorders of old age
8	Legal aspects related to psychiatric patients. 1. Civil responsibility. 2. Criminal responsibility. 3. Testamentary capacity.
9	Clinical teaching, case studies and discussion. To be posted in psychiatry to attend the outpatient clinics

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**

Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory) as per University pattern**

OCCUPATIONAL THERAPY IN PSYCHIATRY

DURATION – 120 HOURS

COURSE DESCRIPTION:

This course parallels the study of clinical psychology and psychiatry. It covers the practical application of occupational therapy in psychiatric treatment, including a variety of assessment and treatment approaches.

COURSE OBJECTIVES:

The objectives of this course is that after at least 210 hours of lectures, demonstrations, Practicals and clinics the student will be able to demonstrate an understanding of evaluation and therapy techniques used in Occupational Therapy for psychiatric conditions.

Sr.No	Topics
1	Describe the history of Psychiatric Occupational Therapy, and its development up to the present day.
2	Define OT in relation to psychiatry, and the role of an Occupational Therapist in the psychiatric team.
3	Discuss the treatment media used in Psychiatry including the role of activities. Analyze activities with reference to Psychiatry
4	**Frames of Reference in the treatment of psychiatric conditions:** a) Cognitive Behavioural. b) Behavioural. c) Psychoanalytical- Include expressive media used in Occupational Therapy d) Occupational Behaviour and Model of Human Occupation e) Developmental groups and Developmental approach. f) Sensory Integrative approach. g) Cognitive Disability Frame of Reference h) Acquisitional Frame of Reference
5	List and describe the various attitudes applied by the therapist in different conditions.
6	**Describe in detail the assessment of a client including specific methods used in the following:** 1. Observation 2. Structured, semi structured and unstructured interviews 3. Specific assessments used in Occupational Therapy
7	Help students to identify their client's psychiatric

	problems in relation to the practical situations observed in OT
8	**Discuss OT assessment, treatment aims, plan and methods of treatment for the following conditions**: **Schizophrenic and other Psychotic disorders** • Mood disorders • Obsessive Compulsive Disorder, Anxiety Phobic disorder Somatoform disorders •Dissociative&Factitious disorders Eating and sleep disorders • Psychosomatic illness • Personality disorders • Substance related disorders • Seizure disorders • Organic Brain Syndrome • Autism Spectrum Disorder • Specific Learning Disorder • Intellectual Disability • Social Communication Disorder • Attention-Deficit/Hyperactivity Disorder • Conduct Disorder • Gender Dysphoria
9	Outline the types of therapeutic groups and briefly discuss the value of group therapy in psychiatry
10	Explain precautions to be observed by the therapist in a psychiatric unit, with reference to each condition; including handling of tools & materials and grouping of patients.
11	**Outline the following psychiatric setups and the role of OT in each.** a) Therapeutic community b) Half Way Homes c) Geriatric units d) Sheltered workshops e) Day care centers f) Government mental hospitals and psychiatric institutions g) Family therapy units h) Psychiatric rehabilitation

RECOMMENDED BOOK(S) FOR REFERENCE:

1. Occupational Therapy and Mental Health edited by Jennifer Creek , Lesley Lougher

2. Frames of Reference in Psychosocial Occupational Therapy by Mary Ann Bruce, Barbara Borg
3. Occupational Therapy in short Term Psychiatry by MoyaWillson
4. Occupational therapy in Long Term Psychiatry by MoyaWillson
5. Willard & Spackman's Occupational Therapy
6. Mental Health Concepts and Techniques for the Occupational Therapy Assistant by Mary Beth Early
7.

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

PRACTICALS /VIVA VOICE-150 Marks	**Maximum Marks**
Total	**150**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practicals) as per University pattern**

BASIC NURSING AND FIRST AID

DURATION – 60 HOURS

A. **INTRODUCTORY CLASS** What is nursing? Nursing principles. Inter personal relationship

B. **NURSING POSITION** Environment safety; bed making, prone, lateral, dorsal, dorsal recumbent, fowler's positions, comfort measures, aids to rest and sleep.

C. **LIFTING AND TRANSPORTING PATIENTS** Lifting patients up in the bed; transferring from bed to wheel chair' transferring from bed to stretcher.

D. **PROVIDING FOR PATIENTS ELIMINATION** Giving and taking bed pan, urinal, observation of stools, urine observation of sputum,. Understand use and care of catheters enema giving.

E. **METHODS OF GIVING NOURISHMENT** Feeding, tube feeding, drips, transfusions

F. Vital Signs

G. **SURGICAL DRESSING**

H. **INFECTION CONTROL**

RECOMMENDED BOOKS FOR REFERENCE INCLUDE:

1. A New Text book for Nurses in India, volume II , BNESIB NL, CMAI

FIRST AID AND EMERGENCY CARE

COURSE DESCRIPTION:

This course enables students to have a better understanding of and develop skill in giving first aid treatment in emergencies in either the hospital or the community.

COURSE OBJECTIVES:

The objective of this course is that after 30 hours of lectures, demonstration, practicals and clinicals, the student shall be able to demonstrate and understand the principles of first aid and demonstrate skill in giving first aid treatment in emergencies that may be met in the community and in his/her practice as therapist.

COURSE OUTCOME:

1. Students should have understood the importance of first aid how it can be attempted during various emergency needs,what are the common positions which can be attempted while giving first aid & should know the indications and contraindications while giving first aid for different emergency needs.

2. Students should have understood the common musculoskeletal and respiratory and wounds how to manage those injuries during the golden period of the injury, know the different treatment method for each musculoskeletal and respiratory and wound management.

3. Students should know how the spinal cord or brain injuries will be handled during the emergency situations & will also understand different ways of wound care and hemorrhage management.

4. Students should have understood about the internal structure damage in person encounter during shock & should know how to perform a differential evaluation for diagnosing a shock.

5. Student should have understood how the natural disasters can affect the persons living environment.& should know the different ways to be followed during disaster in order to rescue the people from the emergency needs. They should be aware of emergency resources available through which they can save the life of the people.

6. Student should understood what is Occupational therapy, know what are fields in which the role of Occupational therapy is important, should have understood the basic bedside manners which have to be followed in their daily clinical routine

SYLLABUS

Sr.No	Topics
1	**INTRODUCTION:** Definition of first aid, importance of first aid, Golden rules of first aid, scope and concept of emergency.
2	**FIRST AID EMERGENCIES:** 1. Burns & scalds: Causes, Degrees of burns, first aid treatment, general treatment. 2. Poisoning: Classification (irritants, acid alkali,

	narcotics) Signs and symptoms, first aid treatment, general treatment. 3. Trauma due to foreign body insertion: Eye, ear, nose, throat, stomach and lung. 4. Bites: First aid, signs, symptoms and treatment. a. Dog bites: Rabies b. Snake bite: neurotoxin, bleeding diathesis.
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.
4	**RESPIRATORY EMERGENCIES:** 1. Asphyxia: Etiology, signs and symptoms, rules of treatment. 2. Drowning: Definition and management. 3. Artificial respiration: types and techniques.
5	**WOUNDS AND HAEMORRHAGE:** 1. Review of Anatomy and Physiology of the circulatory system. 2. Wounds: Classification, management. 3. Haemorrhages: Classification, signs and symptoms, rules for treatment of haemorrhage. 4. Treatment of haemorrhage from special areas (scalp, mouth, nose, ear, palm and various veins.) 5. Internal haemorrhages: Visible and concealed.
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.
7	**TRANSPORTATION OF THE INJURED:** 1. Methods of transportation: Single helper, hand seat, stretcher, wheeled transport (ambulance) 2. Precautions taken: Blanket lift, air and sea travel.
8	**COMMUNITY EMERGENCIES:** Role of first aider (immediate and later) in fires, explosions, floods, earth quakes, famine.
9	**COMMUNITY RESOURCES:** Police Assistance, voluntary agencies (local, national, international), Ambulance services (functions)
10	**BANDAGES:** Bandaging, basic turns, bandaging extremities; triangular bandages and their application

TEXT BOOKS:

1. HoonR.S, First aid to the injured, St.John Ambulance Association,10th Ed, 2014.

2. Gardner Ward & Peter J. Roylance, New Advanced First Aid, London Butter Worths, 3rd edition, 2001.

REFERENCES:

1. Raine Hardhins and Hunt Vaheirs,Urgencies and emergencies for Nurses, English Universities Press Ltd, 1965.

2. First Aid, American Red Cross, The Balckiston company, Philadephia, 1945.

3. GolqallaAsoi, A handbook of emergencies ,Bombaysam and company,1986

YOGA FOR OCCUPATIONAL THERAPY

DURATION – 60 HOURS

COURSE OBJECTIVE:

The objective of this course is that after 30 hours of lectures & demonstrations, the student will be able to understand the basic concepts about Asanas and its effects, therapeutics effects of Yoga

COURSE OUTCOME:

1. Demonstrate the introduction and principles of yoga.
2. Knowledge of history of yoga and yoga in modern India.
3. Outline of yoga background and importance of yoga in modern world.

4. Learning the types and forms of Asanas and description of physiological effect of yoga.
5. Understanding the role of yoga in Occupational Therapy

UNIT I Introduction to Yoga

1. Introduction to Yoga
2. Principles of Yoga

UNIT II Patanjali

1. History of Yoga
2. Yoga in Ancient and Modern India

UNIT III Folds of Yoga

1. Types & Forms of Yoga
2. Asanas & its physiological effects

UNIT IV Yogic Science

1. Scientific background of Yoga
2. Yoga in modern world

UNIT V Advantages of Yoga

1. Physiological Effects of Yoga
2. Therapeutic Uses of Yoga

TEXTBOOK:

1. BKS Iyengar, Light of Yoga, JP, 1st Ed, 2012.

REFERENCE:

PayalGidwaniTiwari, Body Gaurders, CBS, 2nd Ed, 2009

BASIC LIFE SUPPORT TRAINING
(Non- Credit)

Total hours – 45 hrs

This course is designed to provide you with the knowledge about what constitutes basic life support, and when it is to be administered. The learner will know the steps in basic life support, how to identify symptoms of a patient and how to administer Cardiopulmonary Resuscitation (CPR).

Course Outline

1.Cardiopulmonary Resuscitation

•

2.Chain of Survival

- 3.BLS for Adults
- 4.AED Device
- 5.Pediatric BLS
- 6.Choking
- 7.Opioid Induced Cardiac Arrest

WEB DESIGNING
(Non - credit)

Total hours – 45 hrs

A. COURSE DESCRIPTION

This course helps the student to understand the basis of elements of web designing

with special emphasis on upgrading professionals by implementation in therapy. With this comes increasing competition within the industry; Occupational therapist is necessary to achieve a strong online presence and increase your client list.

B. COURSE OBJECTIVES

The objective of this course is that after 100 hours of lectures, demonstrations Lab practical's the student will be able to demonstrate an understanding elements of web designing.

C. CONTENTS

1. Introduction to Web Technologies

Introduction to Web Technologies, Careers in Web Technologies and Job Roles, How the Website Works? –explain, Client and Server Scripting Languages, Domains and Hosting.

2. Adobe Photoshop and Adobe Flash

Introduction to Adobe Photoshop and stock photography, Types of Image graphics, tools used in Adobe Photoshop, Introduction to Animation, Introduction to Adobe Flash and Tools in Adobe Flash.

3. Web hosting

Web Hosting Basics, Types of Hosting Packages, Registering domains, Defining Name Servers,

4. HTML and XHTML

What is Markup Language? Explain, Basic Structure of HTML, Difference between HTML and XHTML, different types of tags, creating a Live Website Form,Introduction to HTML5, and features of HTML5. HTML5 Doc type

5. Java Script

Introduction to Java Script, JavaScript Types, Variables in JS, Operators in JS, Conditions Statements, Java Script Loops, JS Events o JS Arrays, JS Objects

RECOMMENDED BOOKS

1. Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics 5th Edition - by Jennifer Robbins (Author)
2. Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5 (Learning PHP, MYSQL, Javascript, CSS & HTML5) 5th Edition- by Robin Nixon
3. The Principles of Beautiful Web Design: Designing Great Web Sites is Not Rocket Science! Paperback – July 8, 2014- by Jason Beaird (Author), James George

6th SEMESTER

OCCUPATIONAL THERAPY IN PAEDIATRICS

DURATION – 150 HOURS

COURSE DESCRIPTION:

This course covers the application of the principles of occupational therapy to physical, mental and emotional disorders of childhood. It is the first of five courses in the application of Occupational Therapy.

COURSE OBJECTIVES:

The objectives of this course is that after at least 210 hours of lectures, demonstrations, Practicals and clinics the student will be able to demonstrate an understanding of:

- Areas of abnormal and delayed development in children from birth to 5 years.
- Psychological reactions of children to hospitalization and to disability.
- Appropriate therapeutic approaches and techniques for the physical, mental and emotional disorders of childhood and related reactions.
- Treatment plans appropriate to a child's condition and stage of development

Sr.No	Topics
1	**NORMAL DEVELOPMENT FROM BIRTH TO FIVE YEARS:** 1. Physical development- Gross and Fine motor. 2. Reflex development + Practicals. 3. Perceptual, Cognitive, Social, emotional, Language and Selfcare and Play development 4. Practicals (eg. perceptual testing).
2	**PSYCHOLOGICAL ASPECTS:** 1. Psychological reactions to disability in childhood and OT role. 2. Psychological aspects of hospitalization, and OT role.
3	**TREATMENT MEDIA:** 1. Play Therapy. 2. Creative activities.
4	**FRAMES OF REFERENCES AND TREATMENT APPORACHES:** 1. Bobath NDT. 2. Rood's neuromuscular facilitation. 3. Ayre's Sensory Integration. 4. Biomechanical frame of reference 5. Behaviour modification 6. Acquisitional frame of reference 7. Motor skills frame of reference 8. Peto's - conductive Education. 9. Special Education principles of education for perceptual and cognitive training.
5	**OCCUPATIONAL THERAPY APPLICATION** (including review of each condition) 1. Cardio respiratory conditions of childhood. 2. Cerebral palsy

	3. Visuo perceptual and Visuo motor dysfunction 4. Muscular dystrophy 5. Erb's palsy 6. Poliomyelitis / Post Polio Residual Paralysis 7. Spina bifida and hydrocephalus. 8. Arthrogryphsis and other congenital orthopaedic disorders. 9. Stills disease. 10. Early intervention for congenital neurological disorders (High risk infants) 11. Nutritional disorders. 12. Mental retardation and Down's syndrome. 13. Congenital Syndromes and Chromosomal abnormalities 14. Specific learning disabilities 15. Pervasive Developmental Disorder 16. Attention Deficit Hyperactivity Disorder 17. Behaviour disorders. 18. Visual / auditory loss. 19. Speech and communication disorders. 20. Acquired ImmunoDefficiency Syndrome. 21. Seizure disorders 22. Haemophillia 23. Oncology and Palliative care
6	**Oromotor dysfunction:** Evaluation of Oral structures, Oromotor development and eating skills, sucking and drinking, swallowing, coordination of suck swallow and breathing, biting and chewing, Self feeding, Contextual factors Intervention: Postural alignment, Handling techniques, Intervention for Sucking, swallowing, biting and chewing, self feeding, oral structural problems and nutrition
7	Pre writing and writing skills
8	Psychosocial dysfunction
9	**School based intervention:** Types of schools where OT's provide services Categories of disability OT Evaluation: level of participation. Assessment of performance: motor, sensory, perceptual Cognitive Psychosocial School Environment Teacher curriculum expectation Individualized Education Programme: Developing and components Intervention: education academic and Functional goals Integrated therapy Consultation
10	**PAEDIATRIC SPLINTING AND ADAPTIVE**

	DEVICES: Including, seating devices, Adaptations for feeding, Mobility and Ambulatory devices, Indication and use of splint for correction of CDH

RECOMMENDED BOOK(S) FOR REFERENCE:

1. Occupational Therapy for children by Jane Case Smith
2. Frames of Reference for Pediatric Occupational Therapy by Paula Kramer , Jim Hinojosa
3.Willard& Spackman's Occupational Therapy

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

PRACTICALS /VIVA VOICE-150 Marks	**Maximum Marks**
Total	**150**

INTERNAL ASSESSMENT: (50marks)

1. Internal assessment (Theory and Practicals) as per University pattern

OCCUPATIONAL THERAPY IN ORTHOPAEDICS & NEUROLOGY

DURATION – 150 HOURS

COURSE DESCRIPTION:

This course follows the study of application of Occupational Therapy approaches & techniques to Neurological and Orthopaedic condition

COURSE OBJECTIVE:

The objective of this course is that after at least **330** hours of lectures, demonstrations, clinical placements and case presentations, the student will be able to demonstrate an understanding of evaluation and therapy techniques used in occupational therapy for neurological and orthopaedic conditions. In addition, the student will be able to fulfill the following objectives of the course:

1. Practically apply basic principles of Kinesiology and functional anatomy to the evaluation and treatment of orthopaedic and neurological conditions.
2. Demonstrate appropriate evaluation procedures for patients with conditions commonly referred from orthopaedics and neurology.
3. Application of occupations & activities appropriately for clients' with neurological and orthopaedic conditions
4. Outline the principles and goals in design, indications, and fitting of hand splints, prostheses, calipers and mobility aids.

SYLLABUS

Sr.No	Topics
1	**Application of the occupation & activity, selection criteria and grading methods appropriately for the following performance components:** ROM • Muscles strength • Muscle tone • Co-ordination Control of movement Sensation (cutaneous and cortical), • Cognitive Perceptual functions • Hand functions • Activities of daily living (ADL) • Functional abilities
2	**Application of following approaches to the neurological and orthopaedic problems:** Biomechanical, Roods, NDT (for adults), Brunnstrom Approach, Proprioceptive Neuro muscular Facilitation, Motor Relearning Program and Rehabilitative approach, Affolter's approach and Task oriented approach.
3	**Application of Approaches and Occupational Therapy principles and techniques in evaluation**

	and treatment of the neurological and orthopaedic conditions based on the following; • Identification of dysfunction • Potential for function and improvement • Planning of long term and short term treatment goals • Selection and implementation of appropriate treatment techniques
4	**Orthopaedic& Neurological conditions include:** **Injuries to upper limb and hand:** • Peripheral nerve injuries • Median nerve injury • Ulnar nerve injury • Radial nerve injury i) Tendinitis/Tendinosis - Tennis elbow, Golfer's elbow, DeQuervain's syndrome, Intersection syndrome, EPL tendinitis, ECU tendinitis, FCR tendinitis, FCU tendinitis, trigger finger. ii) Stiff hand iii) Flexor tendon injury, Extensor tendon injury, Collateral ligament injury iv) Complex Regional Pain Syndrome (CRPS)
5	**Brachial plexus injury**
6	**Fractures, with emphasis on upper limb and complications** 1. Shoulder &Humerus fractures • Clavicle Fractures • Scapula Fractures • Shoulder Dislocations (Glenohumeral Joint) • Humerus Fractures 2. Elbow & forearm fractures: Supra condylar fracture and Volkman's ischemic contracture • Radius fractures • Ulna fractures • Fractures of radius and ulna 3. Wrist and hand fractures Colle's& Smith's fracture Carpal fractures and phalangeal fractures
7	**Hansen's disease:** Clinical features and deformities, early treatment, prevention of deformity, treatment of neuritis reaction, rehabilitation measures for chronic disabilities. Reconstructive surgery and muscle re-education and Sensory compensation.
8	**Amputations -** Upper limb and lower limb pre prosthetic and prosthetic training

9	**Low Back Pain**
10	**Poliomyelitis:**Post polio residual paralysis and post polio syndromes
11	Spondylitis, Spondylosis, spondylolisthesis
12	Total Hip and Knee replacements
13	Arthritic conditions - Rheumatiod arthritis, osteoarthritis
14	Work related Musculo Skeletal Disorders
15	Burns
16	Muscular dystrophy
17	Parkinson's disease
18	Motor Neuron disease
19	Multiple sclerosis
20	Cerebellar ataxia
21	Cerebro Vascular Accident (CVA) and it's complications such as Shoulder hand syndrome and shoulder subluxation.
22	Intra cranial tumours.
23	Brain injuries including Traumatic (TBI) and hypoxic ischemic encephalopathy (HIE).
24	GuillainBarre Syndrome.
25	Spinal Cord Injuries.
26	Diabetic Neuropathy
27	Myasthenia gravis
28	**Hand Splinting:** Describe goals of splinting. Explain classification of hand splint and their application to treatment. Identify splint types and materials used. Demonstrate and apply the principles of hand splinting process forpreparing splints. Practical Work: • Pattern and measurement taking. • Four splints to be made by student (Resting, Dynamic-flexor /extensor, short opponens, finger splint) • Low temperature mould splints. • High temperature splints (demonstration) • POP casting. (Demonstration) • Carry out check out of splint. Assignment on

	relevant chapters in books on hand splinting. • File preparation (for hand splints only) – splints and files will be marked.
29	**Spinal Orthosis:** Principles, goals, classification, specification in application, indications and contraindications. Demonstration of methods of training in the use of spinal orthoses.
30	**Lower extremity orthosis** • Hip, knee, ankle, foot orthosis (HKAFO) • Knee, ankle, foot orthosis (KAFO) • Ankle, foot orthosis (AFO) • Floor reaction orthosis (FRO) • Foot drop splint - static and dynamic

RECOMMENDED BOOK(S) FOR REFERENCE:

1. Pedretti's Practice skills for physical dysfunction edited by Heidi McHugh Pendleton,Winifred Schultz Krohn
2. Occupational Therapy for Physical Dysfunction by Mary Vining Radomski, Catherine A Trombly
3. Occupational Therapy and Physical Dysfunction, Principles ,Skills and Practice by Ann Turner, Margaret Foster, Sybil E Johnson
4. Willard& Spackman's Occupational Therapy

SCHEME OF UNIVERSITY EXAMINATION

THEORY	Marks
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

PRACTICALS /VIVA VOICE-150 Marks	Maximum Marks
Total	**150**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practicals) as per University pattern**

RESEARCH METHODOLOGY AND BIOSTATISTICS

DURATION –60 HOURS

COURSE OBJECTIVES:

After 30 hours of lectures on Research Methodology and Biostatistics the student should acquire knowledge of principles of scientific methods of enquiry and basic statistical methods of enquiry and basic statistical concepts, be initiated to skills of information searching, identification, retrieval and evaluation, principles of measurement and experimental design. The students should be able to use the above knowledge to carry out a study.

COURSE DESCRIPTION:

The inclusion of this subject is to provide a basic knowledge and skill to the undergraduate Occupational Therapy students of the following:

1. Critical review of literature
2. To be able to plan and carry out a simple study using basic statistical concepts

COURSE CONTENT:

Research Methodology:-

1. Stages of research process
2. Developing ideas and defining a research question
3. Literature review
4. Errors in measurement and their control,
5. Reliability and validity
6. Epidemiological measures of disease frequency

Research design:

1. Quantitative (epidemiological)

1. Experiment (clinical, field, community)
2. Observational
    i) Cohort
    ii) Case control
    iii) Cross sectional
    iv) Ecological study

2. Qualitative Research Method (Sociological)

Developing Instruments (Delphi technique):

1. Focus groups
2. In-depth interview
3. Key informant interview
4. Ethical issues
5. Critical Appraisal of a research report

Biostatistics:

1. Data Collection, basic statistics and graphs

2. Probability and Probability distribution (Binominal and normal)
3. Sampling and sampling techniques.
4. Confidence interval
5. Tests of significance (for large sample and small sample)
    a. T Test
    b. Z Test
6. **Chi square test**
    1. Non-parametric tests (where to use, sign test and Mann –Whitney U test)
7. Correlation and Regress

DIAGNOSTIC IMAGING
FOR
OCCUPATIONAL THERAPIST

Instruction Hours : 30 Hours

SUBJECT DESCRIPTION-

This course covers the study of common diagnostic and therapeutic imaging tests. At the end of the course students will be aware of the indications and implications of commonly used diagnostic imaging tests as they pertain to patient's management. The course will cover that how

X-Ray, CT, MRI, Ultrasound and Other Medical Images are created and how they help the health professionals to save lives.

1. IMAGEINTERPRETATION

a. History

b. A New Kind of Ray

c. How a Medical Image Helps

d. What Imaging Studies Reveal

e. Radiography (x-rays)

f. Fluoroscopy

g. Computed Tomography (CT)

h. Magnetic Resonance Imaging(MRI)

i. Ultrasound

j. Endoscopy.

2. RADIOGRAPHYANDMAMMOGRAPHY

a. Equipment components

b. Procedures for Radiography & Mammography

c. Benefits versus Risks and Costs

d. Indications and contraindications.

3. FLUOROSCOPY

a. What is Fluoroscopy?

b. Equipment used for fluoroscopy

c. Indications and Contraindications

d. How it helps in diagnosis

e. The Findings in Fluoroscopy

f. Benefits versus Risks and Costs.

4. COMPUTEDTOMOGRAPHY(CT)

a. What is Computed Tomography?

b. Equipment used for Computed Tomography

c. Indications and Contraindications

d. How it helps in diagnosis

e. The Findings in Computed Tomography

f. Benefits versus Risks and Costs.

5. MAGNETICRESONANCEIMAGING(MRI)

a. What is MRI?

b. Equipment used for MRI

c. Indications and Contraindications

d. How it helps in diagnosis

e. The Findings in MRI

f. Benefits versus Risks and Costs

g. Functional MRI.

6. ULTRASOUND

a. What is Ultrasound?

b. Equipment used for Ultrasound

c. Indications and Contraindications

d. How it helps in diagnosis

e. The Findings in Ultrasound

f. Benefits versus Risks and Costs.

7. ENDOSCOPY

a. What is Endoscopy?

b. Equipment used for Endoscopy

c. Indications and Contraindications

d. How it helps in diagnosis

e. The findings in Endoscopy

f .Benefits versus Risks and Costs.

8. NUCLEARMEDICINE

a. What is Nuclear Medicine?

b. Equipment used for Nuclear Medicine

c. Indications and Contraindications

d. How it helps in diagnosis.

e. Benefits versus Risks and Costs.

COURSE OUTCOME

CO 1 - The students will be aware of the indications of commonly used diagnostic imaging tests as they pertain to patient's management.

CO 2 - The students will be able to understand the basic principles of various diagnostic tools in practice

CO 3 - The student will be able to define and connect the need of diagnostic tests in the clinical practice of Occupational Therapy

CO 4 - The student will be able to compare the role of different members in the field of diagnostics and their contribution to the health industry

CO 5 - The student will be able to value the current trends and advances in diagnostic testing and its basic research **i**n relation to Occupational Therapy

Evaluation

Internal assessment

External : theory exams - university

Reference

1. Diagnostic Imaging for Physical Therapists 1st Edition, Kindle Edition, by James Swain (Author), Kenneth W. Bush (Author), Juliette Brosing (Author)
2. Diagnostic Imaging for Physical Therapists - Text and E-Book Package 1st Edition, by James Swain MPT (Author), Kenneth W. Bush MPT Phd (Author), Juliette Brosing PhD (Author)
3. Occupational Therapy for Children, M Kaplan

Diagnostic Imaging: Brain E-Book, MD Jhaveri – 2020

7th SEMESTER

REHABILITATION MEDICINE

DURATION – 60 HOURS

COURSE DESCRIPTION:

Following the basic sciences and clinical science courses this course will enable the students to understand their role in the management of disability within the rehabilitation team.

COURSE OBJECTIVES:

The objectives of this course are that after 60 hours of lectures and seminars and clinics the student will be able to:

A. Understand the concept of team approach in rehabilitation through practical demonstrations, with contributions from all members of the team.

B. Develop skills in identification of diagnostic features in various clinical conditions leading to disability.

C. Understand the role of medical and surgical aspects in a rehabilitation programme

D. Understand role of each member of the Rehabilitation team in maximizing the residual potential of persons with disability.

E. Formulation of appropriate goals (long &short term) in treatment and rehabilitation of individuals with disability.

SYLLABUS

Sr.No	Topics
1	**INTRODUCTION:** Define the term rehabilitation. Explain its aims and principles
2	**PRINCIPELS AND MANGEMENT OF THE FOLLOWING CONDITIONS:** Demonstrate methods of evaluation for physical, cognitive and behavioral dysfunction & management of disabilities with particular reference to: Spinal Cord Injury (paraplegia and tetraplegia), Poliomyelitis, Brain Injury (including stroke , traumatic brain injury and cerebral palsy), Arthritic conditions, Amputation, Neuro muscular disorders, Hansen's diseases, Peripheral nerve lesions, Fracture disease & chronic cardio – respiratory dysfunction.
3	**THERAPEUTIC TECHNIQUES:** Explain the theory and mechanisms of therapeutic techniques, and relevant precautions, for the following: 1. Joint mobilization. 2. Reducing spasm and management of spasticity 3. Assisting weak muscles. 4. Increasing endurance. 5. Muscle re-education following muscle transfer surgery. 6. Strengthening muscles. 7. Increasing co-ordination. 8. Improving balance. 9. Gait training.
4	**ELECTRO THERAPY MODALITIES:** Brief introduction, indications and contra Indications
5	**COMMUNICATION PROBLEMS:** Identify communication problems, classify these and outline principles of treatment / training.
6	**BEHAVIOURAL PROBLEMS:** Identify behavioral problems in the disabled and

	outline the principles of management.
7	**PAIN:** Describe the theories of pain and discuss therapeutic management of pain using various modalities. Describe the common myo-facial pain syndromes and outline their management.
8	**ORTHOTIC DEVICES:** Explain the principles involved in prescribing orthotic devices for different parts of the body. Outline the purpose of each type and list major indications & contraindications and demonstrate methods of training in their use. Brief over view of the following: • Upper and lower extremity Orthoses • Spinal Orthoses • Hand orthoses
9	**PROSTHETIC DEVICES:** Describe types, prescription, fitting and checking of Upper Extremity and Lower Extremity Prostheses. Demonstrate methods of training in their use. . Prescription and designing foot wear modifications.
10	**MOBILITY AIDS:** Demonstrate knowledge of the indications for different types of mobility aids, and their functions, eg. wheel chairs, walkers, crutches.
11	**PRE-VOCATIONAL EVALUATION:** Discuss methods and team involvement in pre-vocational evaluation and training.
12	**ARCHITECTURAL BARRIERS:** Describe architectural barriers and possible modifications, with reference to Rheumatoid arthritis, Cerebrovascular accident, spinal cord injury, and other disabling conditions.
13	**DISABILITY EVALUATION:** Outline the principles of disability evaluation and discuss its use.
14	**INTERNATIONAL CLASIFICATION OF FUCNTIONING**
15	**LEGAL ASPECTS:** Outline legal aspects of disability in terms of compensation for disability andbenefits available to the disabled.
16	**SOCIAL IMPLICATIONS:** Outline the social implications of disability for the individual and for the community.
17	**COMMUNITY BASED REHABILITATION**

	MODULE: Describe a CBR module and compare this with an Institutional based rehabilitation system.
18	**BIOENGINEERING :** Define and describe role of bioengineering in rehabilitation.

SCHEME OF UNIVERSITY EXAMINATION

INTERNAL ASSESSMENT: (50marks)

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

1. **Internal assessment (Theory) as per University pattern**

CLINICAL CARDIO RESPIRATORY AND WORK PHYSIOLOGY

DURATION – 120 HOURS

COURSE DESCRIPTION:

Following the basic science and clinical science courses this course introduces the student to the cardio-thoracic conditions which commonly cause disability. Particular effort is made in this course to avoid burdening the student with any detail pertaining to diagnosis which will not contribute to their understanding of the limitation imposed by cardio-thoracic pathology on the functioning of the individual.

COURSE OBJECTIVES:

The objective of this course is that after 45 hours of lectures, clinics and seminars, the student will be able to demonstrate an understanding of cardiothoracic conditions causing disability and their management. In addition, the student will be able to fulfill the following objectives of the course.

SYLLABUS

Sr.No	Topics

1	**ANATOMY AND PHYSIOLOGY:** 1. Describe in detail the anatomy of the lungs, bronchi and bronchopulmonary segments. 2. List the relationship of the bony thorax and lungs to each other and to the abdominal contents. 3. Briefly describe the variations in the bony cage in the following conditions: a. Cervical ribs b. Rickets – rickety rosary c. Pigeon chest d. Funnel chest e. Scoliosis f. Kyphosis 4. Describe the movements of the thorax: Bucket handle, pump handle. 5. List the muscles of respirations involved in inspirations and expirations (including accessory muscles that are involved). 6. Describe in brief the anatomy of the heart and its blood supply and briefly outline the electrical activity of the myocardium and normal ECG. 7. Describe the physiological control of respiration and highlight the function of the medullary and pontine respiratory centres and peripheral chemoreceptors. 8. Describe the mechanisms for maintenance of blood pressure. 9. Describe in detail the cough reflex. 10. List the mechanical factors involved in breathing. Describe briefly factors affecting lung compliance and airway resistance 11. List the factors affecting diffusion of oxygen and carbon dioxide in the lungs. Explain ventilation, perfusion and their inter relationship. 12. Outline the energy expenditure of various common activity of daily living 13. Pulmonary function assessment: Briefly describe the pulmonary function tests and their use; briefly outline the basis and value of blood gas analysis. 14. Briefly outline the principles of cardio vascular stress testing.
2	**CARDIAC SURGERY:** List the cardiac conditions requiring closed heart

	surgery and briefly describe the following: 1. Acquired heart diseases (Mitral stenosis and Aortic stenosis), Congenital heart diseases (patent ductusarteriosus, coarctation of aorta.) 2. List the cardiac conditions requiring open heart surgery and briefly describe the following: Congenital (Atrial septal defect, ventricular septal defect, pulmonary stenosis, Tetralogy of Fallot.Transposition of great vessels and A.V. malformation), Acquired (Mitral stenosis, Mitral regurgitation, aortic stenosis, & regurgitation, coronary artery disease).
3	**THORACIC SURGERY:** 1. Describe very briefly the clinical features and management of the following: Fracture ribs, Flail chest, Stove-in chest, Pneumothorax, Haemothorax, Haemopneumothorx, Lung contusion & laceration, Injury to Heart, Great vessels & Bronchus. 2. 2. List the causes of empyema and its treatment. Describe briefly: Intercostal drainage, Rip resection, Decortication and window operation. 3. Outline briefly the clinical features and management of the following suppurative lesions of the lung; Bronchiectasis, Lung abscess, Bronchopneumonia &Aspergillosis. 4. Outline briefly the clinical features and management of carcinoma lung. 5. Outline the extent, use and complications of the following surgical incisions: Anterolateral thoracotomy, Posterolateral thoracotomy and Median sternotomy. 6. Describe the post operative management of patients with: Segementectomy, Lobectomy, Bilobectomy, Pneumonectomy, Pleuropneumonectomy& Tracheostomy. 7. Outline briefly the principles of various ventilators and their use. 8. Describe in detail the preoperative assessment and management of a patient posted for thoracotomy. 9. Describe in detail the following post operative procedures; management of endotracheal / endonasal tubes, tracheal suction, weaning the patient from the ventilator extubation technique & post

	extubation care. 10. 10. Describe the principles of Cardio-pulmonary resuscitation; Cardiac massage, artificial respiration, defibrillators and their use.
4	**MISCELLANEOUS :** 1. Systemic Hypertension, Pulmonary Hypertension, Syncope and their management. 2. Briefly outline the management of a patient with chronic obstructive airway disease. 3. Ischemic Heart Disease and risk factors and its management. 4. Heart failure, Cardiomyopathies

WORK PHYSIOLOGY

COURSE OBJECTIVES:

The objective of this course is that after 50 hours of lectures and seminars, the student will be able to demonstrate an understanding of the following learning objectives:

SYLLABUS

Sr.No	Topics
1	**Physiology of exercise:** Define exercise -Recognise the two types of muscle contraction – (a) Isotonic (b) Isometric -Define and give examples of (a)Aerobic/Endurance exercise and (b)Anaerobic/Strengthening/Glycolytic/Resistance exercise -Differentiate between Aerobic/Endurance exercise and Anaerobic/Resistance exercise -State the formula for computing the maximal heart rate of an individual -Define metabolic equivalents or METs. Explain the relationship between METs, oxygen consumption and energy expenditure -Express the level of exercise/physical activity in terms of % of Maximal heart rate, % of VO2 max, power output and energy expenditure in METs

	-Recognise the classification of physical activity/exercise based on intensity of exercise (example: light, moderate, heavy etc. exercise) -Describe the benefits of exercise
2	**Acute effects of exercise on different systems:** **Specific learning objectives:** **Cardiovascular system :** • Describe the acute changes in heart rate, cardiac output, systolic and diastolic blood pressures with different levels of exercise • Describe the changes in the distribution of blood (muscle, renal, gut, brain, heart circulations etc.) with exercise • Recognise the difference in the effects of upper limb alone, lower limb alone and whole body exercise on the cardiovascular system • Recognise the difference in the effects of aerobic and anaerobic exercise on the cardiovascular system • Recognise the limitations to exercise in patients with cardiac failure and myocardial infarction
3	**Respiratory system:** Describe the acute changes in respiratory rate, pulmonary ventilation, and pulmonary blood flow with exercise
4	**Neuro-muscular system:** Recognise the immediate effect of exercise on neural circuits and muscle strength
5	**Metabolism :** -List the sources of energy for different intensities and duration of exercise -Describe oxygen consumption during exercise and during recovery -Define oxygen deficit and oxygen debt -Explain what is meant by maximal oxygen consumption/VO2 max /maximal aerobic capacity and discuss its importance
6	**Long term effect of exercise on different systems:** Circulatory adaptations to exercise training -Describe the effects of exercise training on heart rate, stroke volume, cardiac output, blood pressure, microcirculation of skeletal muscle and cardiac muscle -Differentiate between the training effects of aerobic and anaerobic exercise on the cardiovascular system
7	**Biochemical adaptations to exercise training:** List the skeletal muscle metabolic adaptations with aerobic and anaerobic exercise training

8	**Morphological adaptations to exercise training:** -Describe the adaptations in skeletal muscle structure, fiber type and blood supply -List the adaptations in tendons and ligaments, bones, cardiac muscle and body composition -Differentiate between adaptations due to aerobic training and anaerobic training

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

SCHEME OF UNIVERSITY EXAMINATION

PRACTICALS /VIVA VOICE-50 Marks	**Maximum Marks**
Total	**50**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practical) as per University pattern**

ORGANIZATION, ADMINISTRATION & WORK STUDY IN OCCUPATIONAL THERAPY

DURATION – 60 HOURS

COURSE OBJECTIVES:

The objective of this course is that after 60 hours of lectures, demonstrations, Practicals and clinics, the student will be able to demonstrate an understanding of the principles and methods of organization, administration and work study as appropriate to the OT healthcare delivery system, patient treatment and training. In addition, the student will be able to fulfill the following objectives of the course.

Sr.No	Topics
1	**Define-** Organization, Administration and Management. Outline Principles of administration Describe four major functions of management: Planning, Organizing and staffing, Directing and Controlling Outline the purpose of organization, administration and management in relation to OT.
2	**Referrals:** Purpose and types of referral.
3	**Documentation:** Documentation: -Purposes for documentation, fundamental elements in documentation -Documentation of Initiation of OT Services: initial evaluation, reevaluation, records, reports, intervention plans; short term and long term
4	Purchase Ordering
5	**Maintenance:** of equipment's, materials, furniture and buildings
6	**Correspondence and Filing:** a) Types of correspondence b) Methods of filing.
7	**Financial Management** – including types of Budgets, Petty cash accounting, Costing of splints / aids / equipment / articles made in OT.

8	**Annual Reports and Statistics**. Method of calculating monthly and annual statistics. Outline method of writing OT
9	Considerations for construction of a new department, and modification of an old department including: a) Space required b) Allotment of space, e.g. Suitability for access, plumbing requirements, & circulation of air.
10	**Safety precautions in OT Discuss considerations relating to the following:** 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 equipment's. Fire Safety
11	Infection control, Incidents and Emergencies: Universal Precautions, Standard Precautions, Transmission based Precautions, Effective hand washingtechniques, Isolation Cardio Pulmonary Resuscitation, Falls, Burns,
12	**Legal aspects related to rehabilitation:** Legal aspects related to rehabilitation: Mental health act, Medico legal cases, Workmen's Compensation Act & Insurance facilities and other financial benefits available for the disabled
13	**Staff Management, Supervision and Development** **Supervision:** Methods and Types of

WORK STUDY

Sr.No	Topics

1	**WORK:** Define work. Explain the purpose and need to work and identify its relationship to culture. Describe the importance of work to a handicapped person. Distinguish categories of work. Outline the importance of work study to an Occupational therapist.
2	**JOB ANALYSIS:** Explain the purpose of job analysis. Identify aspects to be analyzed-using sample form. Gain experience in analyzing different types of job. Carry out individual assignments.
3	**PRODUCTIVITY:** Define productivity. Mention factors which influence productivity and causes for decreases in productivity.
4	**WORK STUDY PRINCIPLES**: Work Study: Definition and Components (Method Study and Work Measurements) Method Study: Definition, Objectives Steps in method study Recording information and recording techniques: Flow Process Chart-including symbols used in a process chart, Flow Diagram, String Diagram Work measurement: Definition, Brief outline of techniques of Work measurements: Time study and Work Sampling
5	**WORKING CONDITIONS:** Specify importance of good working conditions and their relationship to productivity. List different aspects of working conditions-lighting, ventilation, sanitary facilities, safety precautions, etc.
6	**ERGONOMICS:** Define ergonomics. Describe scope of ergonomics in Occupational Therapy. -Objectives of Ergonomics -Work simplification and energy saving techniques. -Joint protection techniques -Application of Ergonomics to various aspects of functional performance a. Self-care b. Home-making c. School d. Occupation including work station, seating and tools e. Recreation.
7	Application of ergonomics principles to various physical conditions with the following. a. Limited range of motion b. Muscle weakness

	c. Limited endurance d. In-co-ordination e. Pain f. Visual Impairment g. Cardiac Conditions h. Degenerative Disorders
8	**Practicals :** -Participate in problem solving-practical activity. Eg. 1) Coffee making using string diagram. 2) Serving of meals in a ward using flow diagram or process chart. -Conduct a practical work study and job analysis of one occupation. This includes a 4 hour observation and interview of worker at his/her job. Each student may choose a different occupation. A written report may be submitted for the same -Make a visit of observation to a local industry to identify the following:- a. Physical Environment i. Access ii. Lighting iii. Ventilation iv. Temperature v. Noise b. Organizational environment i. work flow ii. work routine/rest breaks iii. work hours/overtime iv. work pressure v. training vi. line of responsibility c. Individual factors i. Worker interaction ii. Psychological factors d. Individual workstation/task/job i. tasks ii. equipment used iii. Tools used iv. Work posture & movements v. Maximum task time Assignment to be submitted with recommendations.

RECOMMENDED BOOK(S) FOR REFERENCE:

1. Willard & Spackman's Occupational Therapy
2. Occupational Therapy and Mental Health –Jennifer Creek
3. Occupational Therapy for Physical Dysfunction by C.A. Trombly
4. Occupational Therapy and Physical Dysfunction Principles Skills and Practice by Ann Turner, Margaret Foster, Sybil. E Johnson
5. O.T. Practice skills for Physical Dysfunction by L.W. Pedretti

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**

Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

SCHEME OF UNIVERSITY EXAMINATION

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory) as per University pattern**

8th SEMESTER

GROUP PROCESS IN OCCUPATIONAL THERAPY

DURATION – 150 HOURS

COURSE OBJECTIVES:

This course applies general group theory to Occupational Therapy practice and aims to help the therapist function more effectively in groups. The students should gain practical experience in conducting various types of groups in the clinical setting.

SYLLABUS

S.No	Topics
1	i) Groups in Occupational Therapy ii) Groups in society iii) Groups in therapy iv) Different approaches to group work
2	**Group Dynamics:** i) Group process ii) Roles iii) Interaction - verbal & non verbal iv) Intra-group relationships v) Stages of a group vi) Norms vii) Group cohesion
3	**Managing groups:** i) Planning aims & goals ii) Choosing an activity iii) The environment iv) Motivating group members
4	i) Leadership roles & styles ii) Developing group leader skills
5	**Managing problems within a group.**
6	**Evaluating groups.**
7	**Demonstrate ability to plan and organize the following groups:** 1. Task oriented groups. 2. Stress management groups. 3. Care givers Support Groups 4. Self-help groups. 5. Anger management groups. 6. Assertiveness training group. 7. Drama therapy groups. 8. Social skills training groups. 9. Sensory Integration Groups

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**

Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory) as per University pattern**

OCCUPATIONAL THERAPY IN REHABILITATION

DURATION –180 HOURS

COURSE DESCRIPTION:

This course covers rehabilitation methods in detail and the application of O.T. to physical conditions and specific dysfunctions not covered in Occupational Therapy in Neurology and Orthopedics' and including medical, surgical and chronic deforming conditions, visual, hearing deficits. It runs parallel to Rehabilitation Medicine, which is studied together with Occupational therapy students. The examination covers both subjects.

COURSE OBJECTIVES:

The objective of this course is that after at least 210 hours of lectures, demonstrations, Practicals and clinics the student will be able to demonstrate an understanding of the Occupational Therapy role in medical and surgical conditions, and rehabilitation methods for people with residual disability.

Sr.No	Topics
1	Explain the role of Occupational Therapy in rehabilitation of Neurology, Orthopedic and Psychiatric conditions, and habilitation of Pediatric conditions. Describe in detail ADL and functional assessment, training and planning methods of mobility.
2	Explain in detail the O.T. objectives and principles and appropriate treatment media for the following. 1.. Cardiac and Pulmonary disease and rehabilitation 2. Cancer 3. Geriatric conditions, including social implications. 4. Haemophillia (adults) 5. Terminal illness and Hospice care- Adults and Children 6. Visually and Hearing Impaired – Adults
3	**Occupational Therapy Management for pain:** -Application of superficial and mechanical modalities as preparatory measures to manage pain and improve occupational performance. -Underlying principles, Indications and contraindications, Precautions. -Monitoring, Re assessment and discharge in

	collaboration with patient and care givers
4	**Swallowing Disorders and Management:** Normal swallowing and Disorders in swallowing, indicators of eating and swallowing dysfunction, Dysphagia assessment, Dysphagia intervention including non-oral feeding, positioning, oral hygiene, progression, swallowing therapy and caregiver training
	Functional Ambulation - Basics of Ambulation, mobility devices, Ambulatory techniques, Safety aspects -Wheel Chair: Prescriptions, Wheelchair components, Wheel chair measurements -Wheel chair adaptations, Wheel chair safety -Wheel chair skill Training: basic and advanced -Public Transportation; Private Transportation -Transfer Techniques with walking aids and wheelchair • Indoor: Bed Chair, Toilet, Floor • Outdoor: Car, Bus Auto Tricycle -Community Access: Recommendations and Training in techniques to enhance community mobility -Driver Rehabilitation Evaluation: Assessment of performance skills and client factors in comprehensive driver evaluation. Knowledge of primary and secondary controls. Suggest appropriate modification. Regulations for drivers with disability in India.
5	**Work Evaluations and Work Programmes:** Functional Capacity evaluation, Vocational Evaluation (General or Prevocational and Specific),Job Analysis, Work Hardening ,Work Conditioning, Sheltered Work shops -Home based Programmes, Transitional and supported employment
6	**Evidence Based Practice:** • Models and approaches to Evidence and inquiry based practice. • Step in Evidence Based Practice. • Systematic Occupational Therapy Practice Model (SOTP): brief overview
7	**Client Centered Therapy**
8	**Physical Agent Modalities:** • Superficial thermal agents: • Treatment planning, primary effects, Selection, Clinical use of thermotherapy

	• Treatment planning, primary effects, Selection, Clinical use of thermotherapy • Whirl pool baths and hydrotherapy fluidotherapy, hot packs paraffin • Cryotherapy: purpose, effects, indication, precautions • Therapeutic ultra sound: • Physical principles clinical use phosphoresis, precautions **Electrotherapy:** • Principles of Electrotherapy • Physiology of nerve and muscle Education. propagation of electrically stimulated nerve • Treatment planning specific to electro therapy : parameter of electrical stimulation devices, electrodes, Electrode site , Electrode placement • Clinical use of electro therapy :Electrical stimulation, Neuro muscular Electrical stimulation, Functional Electrical Stimulation, Transcutaneous Electrical Nerve Stimulation • Basic Principles in application of Functional Electrical Stimulation as adjuncts to therapy, Clinical uses
10	**Biofeedback:** Basic Principles in application of Biofeedback and as adjuncts to therapy Surface Electro myographic Bio feedback. Clinical uses including muscle re-education.
11	**Assistive Technology:** Design, fit and train in assistive technology and devices required for seating, positioning, daily living which would enhance occupational performance, self-maintenance and self-advancement roles. Also including Environmental Control units , Augmentative and Alternative Communication devices communication devices ,Mobile arm supports and slings ,reachers, mouse and keyboard adaptations, writing, feeding and toilet aids.
12	**Fabrication of Hand splints:** Plan appropriate hand splint design. Prepare and fit

	four different hand splints, and explain their use. Including Thumb Spica, Resting hand, Gutter splints, anti-claw, Ulnar drift
13	**Disability evaluation for physical conditions:** Mention the legal aspects relating to compensation and insurance. 1. Disability evaluation of upper & lower extremity 2. Disability percentages in the following conditions: 3. Amputation • Intellectual impairment • Altered sensorium • Monoparesis, monoplegia, paraparesis, paraplegia, hemiparesis, • Hemiplegia, quadriparesis, quadriplegia
14	**Introduction to International classification of functioning, disability and health (ICF)** • International classifications: ICD, ICIDH & ICF • Components: Functioning and Disability and contextual factors • Functioning and Disability: Body structures & functions, Activity & Participation • Contextual factors: Personal & environmental factors • Qualifiers
15	**Community Based Rehabilitation:** Definition and Models. Discuss steps involved in starting a Community Based Rehabilitation -Outline the role and value of O.T. in Community based Rehabilitation (CBR) with emphasis on rehabilitation of disabled children. Identify occupational hazards in the community and discuss possible safety precautions. Discuss community reintegration
16	**Architectural barriers:** Discuss the removal of architectural barriers and use

	of appropriate adaptive devices. Explain purposes and methodology in home situation evaluation.
17	**Home and work site modifications** For persons with disability which includes appropriate working levels, accessibility, types of stoves, storage levels. Hygiene and safety measures at home.
18	**Special Assessments and intervention for** 1. Activities of Daily living 2. Hand Function- Adults and Paediatrics 3. Cognitive Perceptual Functions 4. Home Evaluation and Modification 5. Home Making skills and Child care 6. Leisure **7.** Play
19	**Plan Assessment forms:** Egprevocation, ADL, Hand Function and Higher functions for initial evaluation and progress recording
20	**Selecting and Critiquing Assessments:** Theoretical Context, Clinical Utility, Test Construction, Standardized Tests, Reliability, Validity, Cultural Relevance
21	**Psychological reactions in patients:** Observe and interpret psychological reactions in patients with physical disabilities and their relatives, and plan therapeutic approaches and methods for treating such reactions. Understandthe principlesand use techniques of group dynamics in both psychiatric and physical treatment areas as agents of change in behaviour.
22	**TELE REHABILITATION-** Definition, terminologies used and types of telerehabilitation. Technologies used in telerehabilitation Uses of telerehabilitation, Telerehabilitation for evaluation, intervention, consultation, and telemonitoring. Benefits and barriers in telerehabilitation
23	**VIRTUAL REALITY**- Defining Virtual Reality, History of VR, Key Elements of Virtual Reality Experience, Virtual Reality System, Interface to the Virtual World-Input & output- Visual, Aural & Haptic Displays,

	Applications of Virtual Reality. Key terminologies in Virtual reality, Types of virtual reality, Virtual reality for physical and motor rehabilitation, Virtual reality for cognitive rehabilitation, Structure and working of HTC Vive, Google Cardboard, Samsung gear VR, Oculus Quest, Samsung Odyssey+, Oculus Rift. Benefits and Barriers in virtual reality
24	**ARTIFICIAL INTELLIGENCE-** Definitions Artificial Intelligence, describe Intelligent behavior, Understanding AI, Hard or Strong AI, Soft or Weak AI, Cognitive Science. Goals of AI, General AI, Goal Science-based and AI Goal. AI Approaches Cognitive science, Laws of thought, rational agent. AI Techniques, Techniques that make system to behave as Intelligent, Describe and match, Genetic Algorithms, Reinforcement learning. Branches of AI, Logical AI, Search in AI, Pattern Recognition and Knowledge Representation. Speech Recognition, Understanding Natural Language, Computer Vision and Expert Systems. Knowledge Representation Introduction – Knowledge Progression, KR model, category, KR Using Rules & terminology. Reasoning

RECOMMENDED BOOK(S) FOR REFERENCE:

1. Willard& Spackman's Occupational Therapy
2. Occupational Therapy for Physical Dysfunction by C.A. Trombly
3. Occupational Therapy and Physical Dysfunction Principles Skills and Practice by Ann Turner, Margaret Foster, Sybil. E Johnson
4. O.T. Practice skills for Physical Dysfunction by L.V. Pedretti

SCHEME OF UNIVERSITY EXAMINATION

THEORY	**Marks**
*The question paper will give appropriate weightage to all the topics in the syllabus	**100**
Essay Q1-Essay-15 Marks Q2-Essay-15 Marks Essay Should give break up of 15 marks-e.g. [3+5+7]	**30**
Short Notes Answer all the questions10x5=50 10 questions- 5 marks each	**50**
Short Answer questions Answer all the questions10x2=20 10 questions- 2 marks each	**20**
Total	**100**

PRACTICALS /VIVA VOICE-150 Marks	**Maximum Marks**
Total	**150**

INTERNAL ASSESSMENT: (50marks)

1. **Internal assessment (Theory and Practicals) as per University pattern**

DRAMATICS AND MUSIC

Total hours – 45 hrs

INTRODUCTION

This course is an introduction to dramatics and music which emphasizes the practical skill of using drama and music as a therapeutic medium in the course of rehabilitation. This also helps in briefing the students with concrete knowledge about the main concepts of dramatics and music through theory and practical techniques.

AIMS & OBJECTIVES

- To develop an understanding about dramatics and music.
- To learn the basic principles
- To understand how it serves as a therapeutic medium.

SYLLABUS :-

Drama

1. What is dramatics
2. Introduction to drama therapy
3. History of drama therapy
4. Techniques of drama therapy
5. Use of drama therapy in rehabilitation

Music

1. Music as an art
2. Music as a therapeutic medium
3. History of music therapy
4. Techniques of music therapy
5. Use of music therapy in rehabilitation

REFERENCES :-

- Drama as Therapy: Theory, Practice, and Research - Book by Phil Jones
- The Drama Therapy Decision Tree: Connecting Drama Therapy Interventions to Treatment- Book by Paige Dickinson and Sally Bailey
- The use of drama and puppetry in occupational therapy during the 1920s and 1930s. - April 199
- Music therapy research: A review of references in the medical literature- David Aldridge
- Music Therapy with Families: Therapeutic Approaches and Theoretical Perspectives- Jessica Kingsley
- Music as Medicine- The History of Music Therapy Since Antiquity- Peregrine Horden

PROJECT

Total hours: 180

The special study is a major project undertaken by student. It is a subject in its own right and must be satisfactorily completed in order for the student to graduate. As an alternative to this the student can present a record of cases.

The special study requires the student: to identify a problem area of relevance to the theory and / or practice of physiotherapy or occupational therapy to carry out an investigation of one aspect of that problem are: and to present a clear report on the process and results of the project.

Students are encouraged to identify problems of special interest to them that tall within the interest areas of physiotherapy or occupational therapy services. Students are encourages to aim towards knowledge on the topic in the specified problem area.

COURSE OBJECTIVES:

The objective of this course is that at the end of the special study the student will have

1. Developed skills in critical thinking research methods (including review of literature formulation of a problem for study, selection of a research strategy to investigate the problem, implementation of that strategy and the formal presentation of information related to the theory and or practice of physiotherapy and occupational therapy.

2. Gained an interest in research, writing, and publishing material which contributes to the ongoing development of professional therapy both as a science and an art.
In addition the student will be able to fulfil the following objectives of the course
1. Identify problems of relevance to the theory and or practice of therapy in rehabilitation.
2. Undertake enquiry in to a specific problem area.

3. Formally document the stages of such a study, including description of the problem the process of investigation, the findings and their implications for therapy education practice and research.

EVALUATION:

Internal : 50 marks will be awarded by internal assessment, which will include the guide.

University: 50 marks will be awarded by external examiner during viva.

CLINICAL PRACTICE

Course Objective: the student will be able to demonstrate an understanding of the basic requirements of occupational therapy in each O.T section.

1ST YEAR CLINICAL POSTING - 90 Hours

GOAL:

To orient students to different clinical areas

OBJECTIVES:

The student will be able to fulfill the following objectives.

1. The students will be oriented to the various departments & wards of the Hospital .

2. Orientation to the PMR department including(Physiotherapy, Prosthetic& orthotic department & speech therapy)

3. At Occupational therapy, orientation to all kinds of patients, sections, equipments, assessment & treatment services provided.

4. Clinical observation of patients - Identify the common physical / mental / emotional problems

5. Identify media used by therapists during treatment.

6. Developing rapport with patients.

7. Muscle testing and goniometry

8. Surface Anatomy.

EVALUATION:

Files - To record media & equipment used in Occupational Therapy

II YEAR CLINICAL POSTING - 300 hrs

GOAL:

The student will be able to take detailed history & evaluate relevant performance components.

OBJECTIVES:

1. The student will be posted on rotation in the inpatient and outpatient sections of Orthopedics, Neurology, Neurosurgery, Psychiatry and Pediatrics Unit.

2. The student will take detailed history through interview; obtain details of investigations & medical treatment from case records.

3. To evaluate performance components relevant to client's diagnosis i.e tone R.O.M, muscle power, voluntary control, sensation, coordination, DTR, superficial reflexes, TCD, cranial nerve testing.

4. To Identify problems to be addressed in Occupational Therapy.

EVALUATION:

Files: Case submission - 2 cases per posting. Case presentation - 1 case per posting
156

The student will be able to take detailed history & evaluate relevant performance components.

III YEAR CLINICAL POSTING – 390 hrs

GOAL:

The students will master history taking & learn the skills of Occupational Therapy assessment in respective clinical areas & problem identification & goal setting and intervention The students will be posted on rotation in Occupational Therapy inpatient and outpatient units, in the areas of Psychiatry, Paediatics.,Ortopaedics and Neurology.

OBJECTIVE:

Students will be able to fulfill the following objective:

1. Be proficient in history taking.

2. Learn occupational therapy assessment skills such as observation, palpation, clinical testing & examination.

3. They will learn to do mental status examination, assess relevant performance components & detailed functional assessment.

4. The students will learn to identify patient's problems to be addressed Occupational therapy.

5. The students will learn to prioritize short term & long term goals for the patient.

6. The students will learn to choose and apply treatment approaches and implement Occupational Therapy intervention with supervision.

7. The students will have hands on practice on wheelchair & crutch transfers, one handed techniques and mat activities.

8. The students will learn to plan for prescribing splints, adaptive & assistive devices.

EVALUTION:

Files:
1. Normal development of child file - 1year - 5 years of age

2. Hand splint file - 5 hand splints, paper pattern & fabrication description.

3. Case submission - 2 cases per posting

4. Case presentation - 1 per posting

IV YEAR CLINICAL POSTING- 390 hours

GOAL:

The student should be proficient in Rehabilitation of all clients relevant to occupational therapy. Emphasis is on assessment, treatment plan and involvement in patient care.

OBJECTIVES:

1. The student will have placements to include the following: Clinical Cardio Respiratory, Neurology, Orthopedics & Rheumatology, Plastic surgery, Burns and Geriatric conditions, Hand therapy, Prosthetic & Orthotics, Speech therapy & Physiotherapy units, Community based rehabilitation.

2. Student should be able to do specialized assessments on specific performance components.

3. Demonstrate competency in assessment, clinical reasoning & treatment planning.

4. The student should be able to conduct groups in Occupational Therapy.

5. Take responsibility for at least one administrative or organizational duty in the treatment area eg. Care of equipment / materials, billing & record maintenance.

6. Students will learn to conduct a job site and job analysis of workers in industrial setups. 7. In CBR student will learn to conduct survey, identify disability, plan home based therapy and low cost aids and adaptations.

EVALUATION:

1. Files case submission - 2 cases / posting
2. Case presentation - 1 per student in all specialized performance components.
3. Report writing on work study & job analysis after industrial visit.

INTERNSHIP TRAINING – 1248 hours

A student after having successfully completed the final year University Examination is qualified to commence the compulsory rotatory internship. Completion of Internship is mandatory to enable a student to obtain the degree of Bachelor of Occupational Therapy.

AIMS:

The Internship program is designed to facilitate the transition from student- hood to becoming a competent professional. It is meant to instill in the students clinical practice skills which would encompass the following qualities.

• Time management and Punctuality

• Work behaviours, roles & routines

• Communication and interaction skills with patients, colleagues, supervisors & other professionals of multi disciplinary team.

• Plan & cooperate with other members of the treatment team for achieving objectives of treatment.

• Take responsibility for at least one administrative or organizational duty in the treatment area e.g. care of equipment, therapy sessions & patient care.

• Ability to write concise, relevant evaluation and progress notes on patients treated in consultation with therapist.

• Ability to present their patients to the treatment team at clinical rounds conferences etc, - clearly demonstrating progress made and present treatment objectives.

DURATION & DESCRIPTION:

The internship program is of the six months duration. A student doing internship has to work under supervision of experienced staff in the following areas.

1. Paediatrics - One month
2. Orthopaedics and Hand, Burns & Plastic surgery - One month
3. Community based Rehabilitation - One month
4. Neurology - One month
5. Psychiatry - One month
6. Physical Medicine & Rehabilitation - One month
(Rheumatology, Cardio Respiratory and Prosthetic & Orthotics unit)

All the above mentioned postings and durations are compulsory

1. The intern will be eligible for 1 day casual leave in each month and can carry over the leave to next months, but he cannot avail the next month leave in advance.

2. The intern should conduct themselves in a manner befitting the profession.

3. The intern should dress appropriately in the clinical areas.

4. It is mandatory for the intern to wear the white apron with nametag when in the clinical area/ wards.

5. The intern can avail medical leave on producing a medical certificate, but will have to compensate for the number of days of absence from internship

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