AIOTA's Minimum standards of Education 2024 Vol 2

"Competency-based Undergraduate Curriculum in Occupational Therapy"

Section 1- Practical Competencies for the Occupational Therapy Graduate

The Foundational Elements of Practice

1. Adheres strictly to the Code of Ethics established by the Academic Council of Occupational Therapy of AIOTA/National Council of Occupational Therapy in India, in addition to all relevant federal, state, and facility regulations.
2. Ensures compliance with safety regulations and accurately reports incidents.
3. Demonstrates a commitment to safety by proactively assessing risks and implementing preventive measures during Occupational Therapy intervention, ensuring the well-being of all individuals involved.

Core principles

4., Confidently, and accurately communicates the values, beliefs, and distinct perspective of the occupational therapy profession to clients and other relevant parties.
5. Expresses, in a clear, confident, and accurate manner, the importance of occupation as both an approach and desired outcome of occupational therapy to clients and other relevant parties.
6. Effectively communicates the responsibilities of occupational therapy practitioners to clients and other pertinent individuals with clarity, confidence, and precision.

Assessment and analysis

7. Adequately supports the evaluation process using a clear and logical rationale that considers client information, contexts, theories, frames of reference, and/or practice models.
8. Acquires adequate and essential information from pertinent sources during the assessment procedure.
9. Utilizes appropriate screening and assessment tools based on diverse factors.
10. The client's occupational profile and occupational performance are determined by conducting interviews and utilizing other appropriate evaluation methods.
11. Acknowledges that assessment involves evaluating and analyzing client factors and contexts that either facilitate or impede occupational performance.

12. The accurate and efficient administration of assessments and surveys, both standardized and non-standardized, is conducted to ensure the validity and reliability of the findings.

13. Modifies evaluation procedures based on client factors and contexts.

14. Analyzes & interprets the client's strengths and challenges in occupational performance.

15. Employs systematic methods to record the client's occupational performance for clear, accurate, and concise synthesis and documentation of the evaluation process and results

INTERVENTION

16. The therapist effectively presents a coherent and rational justification for the intervention process, drawing upon evaluation findings, contextual factors, theories, frames of reference, practice models, and evidence.

17. Formulates a client-centered plan that is accurate and appropriate based on the evaluation results, contexts, theories, frames of reference, and/or practice models.

18. Decisions regarding interventions are based on research, evidences and relevant resources

19. The individual chooses interventions that prioritize the client's needs and are based on their occupation, aiming to motivate and challenge them towards achieving predetermined goals that align with desired outcomes.

20. Executes intervention plans that are client-centered and emphasize the importance of occupation.

21. Selects and, when necessary, adjusts the intervention strategy in order to attain predetermined objectives that align with the desired outcomes.

22. Modifications are made to the task and/or environment in order to enhance the client's performance.

23. Modifies the intervention plan and a determination is made regarding the need to continue or discontinue services based on the client's status.

24. Documentation is used to illustrate the effectiveness of interventions by capturing the client's response to services.

Quality & patient safety

25. Ensure that information is recorded in accordance with the latest laws, rules, ordinances, and customs of the State of India.

26. Participate in systematic initiatives for quality assurance and improvement.

27. Contribute to and/or engage in research and development within registered areas of expertise.

28. Ensuring the safety of intervention recommendations and informing individuals about potential hazards, when necessary, is a crucial aspect of accountability.

29. Establishes a safe environment for individuals, their families, and others, while also ensuring the proper upkeep of equipment used in occupational therapy treatments.

30. Takes responsibility entails recognizing and documenting hazards and occurrences in healthcare and welfare settings, and subsequently undertaking actions to protect the safety and security of individuals.

MANAGEMENT OF OCCUPATIONAL THERAPY SERVICES

31. The individual exhibits the capacity to collaborate with others and delegate suitable tasks, while retaining overall responsibility for treatment, as evidenced by practical application or discussion.

32. Exhibits understanding of costs and funding systems associated with occupational therapy services, including federal, state, third party, and private payers, through practice or discussion.

33. The individual displays a strong understanding of the organization.

34. Meets the productivity standards or volume of work that occupational therapy students are expected to achieve.

35. Provide supervision for students participating in occupational therapy training.

36. Offer advisory support to official authorities, commercial enterprises, nonprofit organizations, and non-governmental entities.

COMMUNICATION AND PROFESSIONAL BEHAVIORS

37. Exhibits the ability to communicate clearly and effectively, using both verbal and nonverbal methods.

38. Guarantees the production of documentation that is both clear and precise.

39. Engages in collaboration with fieldwork educator(s) to optimize the learning experience.e.g how one can initiate communication, seek feedback on performance, and identify their own strengths and challenges.

40. The professional takes responsibility for developing professional competence by actively pursuing learning opportunities and collaborating with fieldwork educators and other professionals.

41. Demonstrates the ability to promptly and constructively address feedback received.

42. Demonstrates consistent adherence to acceptable work behaviors.

43. Showcases proficient time management skills.

44. Manages relationships effectively through therapeutic use of self and adjusts approach to meet the needs of clients and others.

45. Demonstrates respect for diversity factors of others. Examples: culture, socioeconomic status, beliefs, identity

Digital competence

46. Utilize digital platforms to conduct research, communicate, and engage professionally.

47. Modify activities in accordance with the changes brought about by digitization in society.

48. Highlight the opportunities and risks associated with digitalization for individual, group, and community engagement.

49. Engage in the progression of digital systems, tools, and services that are significant to the profession.

Sustainable Development

50. Ensure the sustainable utilization of the existing resources in regards to the economy, society, and environment.

Disasters & crisis

51. Engages in the activities conducted by specialized organizations established in response to significant accidents and disasters.

52. Adapt their activities to the unique circumstances that arise during crises and catastrophic situations.

53. Conducts risk assessments to identify potential crises and disasters that may affect vulnerable individuals, and implement measures to minimize the impact on their ability to engage in activities and participate.

Section 2- Subject-wise outcome (table of topic and outcome)

Section 2 contains subject-wise outcomes so called “sub-competencies” that must be achieved at the end of instruction in that subject. These are organised intables and have two parts. The core subject outcomes are in the first part. The second part in the same document (titled Integration) contains outcomes/competencies in other subjects which have been identified by experts in those subjects as requiring

alignment or integration with the core subject.

Outcomes (competencies) in each subject are grouped according to topics number-wise. It is important to review the individual outcomes (competencies) in the light of the topic outcomes as a whole. For each competency outlined - the learning domains (Knowledge, Skill, Attitude, Communication) are identified.The expected level of achievement in that subject is identified as – [knows (K), knows how (KH), shows how (SH), perform (P)]. As a rule, 'perform' indicates independent performance without supervision and is required rarely in the pre-internship period. The outcome is a core (Y - must achieve) or a non-core (N - desirable) outcome. Suggested learning and assessment methods (these are suggestions) and explanation of the terms used are given under the section "definitions used in this document". The suggested number of times a skill must be performed independently for certification in the learner's logbook is also given. Last two columns indicate subjects within the same phase and other phases with which the topic can be taught - together - aligned (temporal coordination), shared, correlated or nested.

The number of topics and competencies in each subject are given below.

Topics & Outcomes of I BOT subjects

Sr. No.	Subjects	Codes	Number of topics	Number of Outcomes
1	Human Anatomy I	AN I	13	94
2	Human Physiology I	PI I	06	49
3	Biochemistry	BC	06	52
4	Fundamentals of OT I	FOT I	07	54
5	Communication Skills	CS	03	15
6	Human Anatomy II	AN II	12	112
7	Human Physiology II	PI II	05	55

8	Fundamentals of OT II	FOT II	09	36
9	Environmental Sciences	EVS	03	20

Topics & Outcomes of II BOT subjects

Sr. No.	Subjects	Codes	Number of topics	Number of Outcomes
1	Pathology & Microbiology	PM	41	194
2	Psychology I	PSY I	06	21
3	Biomechanics & Kinesiology I	BMK I	06	29
4	OT Diagnostics & Practice I	OTDP I	09	61
5	Computer Sciences	COMP	04	10
6	Pharmacology	PH	03	27
7	Psychology II	PSY II	05	28
8	Biomechanics & Kinesiology II	BMK II	07	27
9	OT Diagnostics & Practice II	OTDP II	09	39
10	First Aid & Emergency	FAE	05	44

Topics & Outcomes of III BOT subjects

Sr. No.	Subjects	Codes	Number of topics	Number of Outcomes
1	Medicine & Cardiovascular Medicine	MCV	03	21
2	Neurology & Paediatrics	NP	20	42

3	Occupational Therapy in Medical Conditions	OTMC	09	46
4	Work Physiology	WP	06	20
5	Surgery & Orthopaedics	SO	17	83
6	Psychiatry	PS	08	29
7	Occupational Therapy in Surgical Condition	OTSC	10	73
8	Ergonomics	ERG	08	34
9	Research Methodology & Biostatistics	RMB	21	31

Topics & Outcomes of IV BOT subjects

Sr. No.	Subjects	Codes	Number of topics	Number of Outcomes
1	Occupational Therapy in Musculoskeletal Condition	OTMSK	10	40
2	Occupational Therapy Services And Management	OTSM	08	26
3	Community Medicine, Public Health & Sociology	CMS	13	36
4	Occupational Therapy in Neurological Condition	OTNC	15	50
5	Community Occupational Therapy and Rehabilitation	COTR	16	60
6	Occupational Therapy Practices in Psychiatry	OTPSY	08	31
7	Occupational Therapy in Peadiatric Condition	OTPC	10	65

Section 3- understanding the competency table

A	B	C	D	E	F	G	H	I	J
No.	**Competencies**	**Domain**	**K/KH/SH/P**	**Core**	**Suggested Teaching Learning Method**	**Suggested Assessment method**	**No. required tocertify (P)**	**Vertical Integration**	**Horizontal Integration**
Physiology									
Summary **Name of Topic: General PhysiologyNumber of Competencies: (08)**									
PY1.1	Describe the structure andfunctions of a	K	KH	Y	Lectures, Small group discussion	Written/Viva			Biochemistry
IM25.4	Elict *document* and present a medical history that helps delineate the	S	SH	Y	Bed Side clinic, DOAP	Skill assessment		Community Medicine	

Unique number of the competency.

First two alphabets represent the subject (see list); number following alphabet reflects topic number, following period is a running number.

Description of competency

Identifies the domain

Identifies if the competency is core or desirable. Y indicates Core; N- non-core

or domains addressed K - Knowledge
S - Skill
A - Attitude
C - Communication

no of times a skill needs to be done

Identifies the level of competency requiredbased on the Miller's

Subject (s) in the same phase with which the

illustrative purposes only and should not be compared with the same in curriculum documents

pyramid
K - Knows
KH - Knows HowS - Skill
SH - Show How P - Perform independently es the suggested learningmethod.
DOAP - Demonstrate (byStudent) Observe,

Section 3: Definitions used	
Lecture	Any instructional large group method including traditional lecture and interactive lecture
Small group discussion	Any instructional method involving small groups of students in an appropriate learning context
DOAP (Demonstration- Observation - Assistance - Performance)	A practical session that allows the student to observe a demonstration, assist the performer, perform in a simulated environment, perform under supervision or perform independently
Skill Assessment	A session that assesses the skill of the student including those in the practical laboratory, skills lab, skills station that uses mannequins/ paper case/simulated patients/real patients as the context demand
Core(Y)	A competency that is necessary in order to complete the requirements of the subject (traditional must know)
Non -core(N)	A competency that is optional in order to complete the requirements of the subject (traditional nice (good) to know/ desirable to know)
National Guidelines	Health programs as relevant to the competency that are part of the National Health Program

LEVELS OF COMPETENCIES

K	Knowledge
S	Skill
A	Attitude
C	Communication

Domains of Learning

K	Knows	A knowledge attribute - Usually enumerates or describes
KH	Knows how	A higher level of knowledge - is able to discuss or analyze
S	Shows	A skill attribute: is able to identify or demonstrate the steps
SH	Shows how	A skill attribute: is able to interpret/ demonstrate a complex procedure requiring thought, knowledge and behavior
P	Performs (under supervision or independently)	Mastery for the level of competence - When done independently under supervision a pre-specified number of times - certification or capacity to perform independently results Mastery for the level of competence - When done independently under supervision a pre-specified number of times - certification or capacity to perform independently results

Section 4: Scheme of Examination:

1. Setting Question Paper will be done as per the subjects in semester pattern & as per Section A and Section B (where ever applicable) in the Syllabus of annual pattern.
2. The examination of NUE Subjects will be at the college level and the students needs to pass the college level examination with minimum 50% scoring before appearing for the University Examination . The marks of NUE subject will not be added with University Marks but will be reflected in the Marks Sheet given by the University
3. Regular periodic examinations shall be conducted throughout the course. There shall be no less than two internal assessment examinations in semester pattern & not less than 4 in annual pattern. Day to day records, attendance and log book should be given importance in internal assessment.
4. Learners must secure at least 50% marks of the total marks (combined in theory and practical ((practical = practical/clinical + viva) :not less than 40 % marks in theory and practical separately) for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject

Internal Assessment:

The final internal marks shall be an average of all internal exams as below:

Semester pattern

For 50 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory and practical of 50 marks each

Annual pattern

For 100 marks-

2 periodicals of 20 marks each and 1 midterm exam of theory and practical of 50 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each.

University Examination:

Mandatory 50% marks in theory and practical (practical = practical/clinical + viva)

(theory= theory paper(s)only)

Internal assessment marks are not to be added to marks of the University examination and should be shown separately in the grade card.

Scheme of Examination (50 marks in University Examination)

Written		Eligibility/Passing Marks		Practicals		Eligibility/Passing Marks	
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam
25	50	13	25	25	50	25	50

The internal assessment will be based on the following criteria -

Theory			**Practical/Viva**		
Written	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
15	10	25	15	10	25

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Scheme of Examination (100 marks University Examination)

Written		Eligibility/Passing Marks		Practical		Eligibility/Passing Marks	
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam
50	100	25	50	50	100	25	50

The internal assessment will be based on the following criteria -

Theory			**Practical/Viva**		
Written	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
30	20	50	30	20	50

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

The results of IA should be displayed on the notice board within a 1-2 week of the test. Universities shall guide the colleges regarding formulating policies for remedial measures for students who are either not able to score qualifying marks or have missed on some assessments due to any reason.
Summative assessment consists of University examinations. Each theory paper will have 100 marks. Mandatory 50% marks in theory and practical (practical = practical/ clinical + viva) [theory=theory paper(s) only]

Designing of question paper

Designing of question paper should take into consideration all levels of knowledge domain e.g. Bloom's taxonomy of cognitive domain. Use appropriate verbs for the questions at each level to assess higher levels of learning. An example is given below in Table. Use combination of various types of questions e.g. structured essays (Long Answer Questions - LAQ), Short Answers Questions (SAQ) and objective type questions (e.g. Multiple Choice Questions - MCQ). Marks for each part should be indicated separately. MCQs if used, should not have more than 20% weightage

The question paper should be evenly distributed to cover all the sections appropriately from competencies. The blueprinting grid can help the paper setters to balance the question papers in content related aspects as depicted below in Table. Moderation of theory question paper by subject expert may be arranged by Universities

Level Suggested Verbs

Verbs in various levels in Knowledge domain (Bloom's taxonomy)

Blueprinting in knowledge domain

Level	Total
Knowledge	20%
Comprehension	20%
Application	20%
Analysis	15%
Synthesis	10%
Evaluation	15%

Practical/Clinical examination

Include assessment in the psychomotor and effective domain. Assessment of clinical and procedural skills should be based on direct observations by the examiners.

Assessment tools like case presentations, Objective Structured Clinical Examination (OSPE OSCE and/or Objective Structured Practical Examination (OSPE) and Directly Observed Procedural Skills (DOPS) should be employed using checklists,

Practical/clinical examinations will be conducted in the laboratories and /or hospital wards/ OPD. Viva/oral examination should assess the approach to patient

management, emergencies, and attitudinal, ethical, and professional values.

Practical examination should be conducted by pair of examiners (one internal from same university and one external from another university) only and not by a single examiner / examiners of same university.

Summative assessment Logistics (For Universities)

Summative assessment consists of university examinations for various subjects is given in Table 2.

Table 2: distribution of various subjects in university examinations. (Semester Pattern/ Annual Pattern)

Phase of Course	Semester Pattern/ Annual Pattern	Written –Theory - Total	Practicals / Orals/ Clinicals	Pass Criteria
I BOTh				Internal Assessment: 50% combined in theory and practical (not less than 40% in each) for eligibility for appearing for university examinations University Examination: Mandatory 50% marks in theory and practical (practical = practical/clinical + viva) (theory= theory paper(s)only) Internal assessment marks are not to be added to marks of the University examination and should be shown separately in the grade card.
Human Anatomy I	Semester 1	50	50	
Human Anatomy II	Semester 2	50	**50**	
Human Anatomy	Annual Pattern	100	**100**	
Human Physiology I	Semester 1	50	**50**	
Human Physiology II	Semester 2	50	**50**	
Human Physiology	Annual Pattern	100	**100**	
Biochemistry	Semester 2/ Annual Pattern	50	-	
Fundamentals of OT I	Semester 1/ Annual Pattern	100	100	
Fundamentals of OT II	Semester 2 / Annual Pattern	100	100	
Communication Skills	Semester 1/ Annual Pattern	50	-	
Environmental Sciences	Semester 2/ Annual Pattern	50	-	

II BOTh				
Pharmacology	Semester 3/ Annual Pattern	50	-	
Pathology & Microbiology	Semester 3/Annual Pattern	100	-	
Psychology I	Semester 3	50	-	
Psychology II	Semester 4	50	-	
Psychology	Annual Pattern	100		
OT Diagnostics & Practice I	Semester 3/Annual Pattern	100	100	
OT Diagnostics & Practice II	Semester 4/Annual Pattern	100	100	
Biomechanics & Kinesiology I	Semester 3	50	50	
Biomechanics & Kinesiology II	Semester 4	50	50	
Biomechanics & Kinesiology	Annual Pattern	100	100	
First Aid & Emergency	Semester 3/Annual Pattern	50	-	
Computer Sciences	Semester 4/Annual Pattern	50	-	
III BOTh				
Medicine & Cardiovascular Medicine	Semester 5/Annual Pattern	100	-	
Neurology & Paediatrics		100	-	
Occupational Therapy in Medical Conditions	Semester 5/Annual Pattern	100	100	
Work Physiology	Semester 5	50	-	
Ergonomics	Semester 6	50	-	
WorkPhysiology & Ergonomics	Annual pattern	100		
Surgery & Orthopaedics	Semester 6/ Annual pattern	100	-	
Psychiatry	Semester 6/ Annual pattern	50	-	
Occupational Therapy in Surgical Condition	Semester 6/ Annual pattern	100	100	
Research Methodology & Biostatistics	Semester 6/ Annual pattern	50	-	

IV BOTh				
Occupational Therapy in Musculoskeletal Condition	Semester 7/ Annual pattern	100	100	
Occupational Therapy Services and Management	Semester 7/ Annual pattern	50	-	
Community Medicine & Public Health, Sociology	Semester 7/ Annual pattern	50	-	
Occupational Therapy in Neurological Condition	Semester 7/ Annual pattern	100	100	
Community Occupational Therapy and Rehabilitation	Semester 8/ Annual pattern	100	-	
Occupational Therapy practise in Psychiatry	Semester 8/ Annual pattern	100	100	
Occupational Therapy in Paediatric Condition	Semester 8 / Annual pattern	100	100	

Competency-based undergraduate curriculum in Bachelors in Occupational Therapy

BOT I (Annual Pattern)

Distribution of Teaching Hours, Credits & Examination

S.No	Course Code	Subjects	Total teaching hours /semester			CREDITS			Toral Credits	Marks Distribution
			Theory	Practical/ demo/ lab work	Clinical	Theory	Practical/ demo/ lab work	Clinical		Theory/ Practical
1	AN	Human Anatomy	**180**	**120**		**12**	4		**16**	**Theory-100 Practical-100**
2	PI	Human Physiology	**180**	**120**		**12**	4		**16**	**Theory-100 Practical-100**
3	BC	Biochemistry	**45**	**--**		**3**			**03**	**Theory- 50**
4	FOT I	Fundamentals of Occupational Therapy I	**90**	**120**		**6**	4		**10**	**Theory-100 Practical-100**
5	FOT II	Fundamentals of Occupational Therapy II	**90**	**120**		**6**	4		**10**	**Theory-100 Practical-100**
6	CS	Communication Skills – **NUE: Non University Exam**	**30**	**15**		**2**	.5		**2.5**	**Theory- 50**
T	EVS	Environmental Sciences- **NUE: Non University Exam**	**30**	**30**		**2**	1		**03**	**Theory- 50**
		Supervised Clinical training /Field work			**390**			**8.66**	**8.66**	
Total no. of hours / semester =1560									**69.16**	
Total no of marks for Examination			**-**	**-**	**-**					**850**

SEMESTER I										
Sr. No	**Course Code**	**Subjects**	**Total teaching hours /semester**			**Credits**			**Total Credits**	**Marks Distribution**
			Theory	**Practical/ demo/ lab work**	**Clinical**	**Theory**	**Practical / demo/ lab work**	**Clinical**		
1	AN I	Human Anatomy I	**90**	**60**		**6**	**2**		**8**	**Theory-50 Practicals -50**
2	PI I	Human Physiology I	**90**	**60**		**6**	**2**		**8**	**Theory 50 Practicals -50**
3	BC	Biochemistry	**45**	**--**		**3**			**3**	**Theory 50**
4	FOT I	Fundamentals of Occupational Therapy I	**90**	**120**		**6**	**4**		**10**	**Theory-100 Practicals -100**
5	CS	Communication Skills	**30**	**15**		**2**	**0.5**		**2.5**	**NUE (Non university Examination) 50 marks**
		Supervised Clinical training/ Field work			**180**			**4**	**4**	
Total no. of hours / semester =780									**35.5**	
Total no of marks for Examination/semester			**-**	**-**	**-**					**450**

HUMAN ANATOMY I

COURSE DESCRIPTION: For first year BOTh students this course gives the detail knowledge about the cells, different systems such as musculoskeletal, cardiovascular, pulmonary, digestive also the functional anatomy of various systems

Course Goals : Give the detailed knowledge of Human structure ,body functions ,anatomical orientation of different systems .The knowledge about cardiovascular & circulatory system, cell functions ,the detail skeletal system & muscular system

Course Objectives

KNOWLEDGE

Student will be able to

1. Gain knowledge of human body's structure and function
2. Understand normal anatomical position, various planes, relation, comparison, laterality & movement in our body
3. Know different types of cells and describe their functions
4. Describe the major components of the skeletal system and describe their functions, different types of bones and provide an example of each type
5. Learn and identify the major components of the integumentary system and their functions.
6. Differentiate types of bones and provide an example of each type.
7. Learn and identify the three types of muscle and the muscular system's functions.
8. Learn and identify the major components of the, circulatory respiratory, , urinary system and their functions.

SKILL

1. Identify or recognize various muscle tissues, bones and organs of the body
2. Identify the parts of the brain and other organs of the body.
3. Recognize the importance of an in-depth knowledge of the topics consistent with a proper medical education.
4. Identify the fundamental role of a proper theoretic knowledge of the subject in the clinical practice.

5. Identify the possible use of the acknowledged skills in the future career.
6. Assess the importance of the acquired knowledge in the overall medical education process.

ATTITUDE

1. Knowledge of anatomy will help to communicate with the clients and peers efficiently

Scheme of Examination:

Written		Eligibility/Passing Marks		Practicals		Eligibility/Passing Marks		Total Marks
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
25	50	13	25	25	50	25	50	100

The internal assessment will be based on the following criteria -

Subject	**Theory**			**Practical/Viva**		
Anatomy I	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
50 marks	15	10	25	15	10	25

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs,Short answer questions ,Brief answer questions

Competency Table: HUMAN ANATOMY

Code no	Objectives/Competency Students should be able to	Domains of Learning	Competencies levels K/Kh/Sh/Ps	Core Y/N	Teaching Learning methods	Assessment methods	Vertical Integration	Horizontal Integration
HUMAN ANATOMY I								
Topic: Anatomical terminology Number of competencies: (2)								
AN 1.1	Demonstrate normal anatomical position, various planes, relation, comparison, laterality & movement in our body	K, S	SH	Y	Lecture, DOAP session	Written/ Viva voce/skills assessment		
AN 1.2	Describe composition of bone and bone marrow	K	KH	Y	Lecture	Written/ Viva voce		
Topic: General features of bones & Joints Number of competencies: (6)								
AN 2.1	Describe parts, blood and nerve supply of a long bone	K	K	Y	Lecture	Written		
AN 2.2	Enumerate laws of ossification	K	K	Y	Lecture	Written		
AN 2.3	Enumerate special features of a sesamoid bone	K	K, KH	Y	Lecture, DOAP	Written		
AN 2.4	Describe various types of cartilage with its structure & distribution in body	K	K		Lecture, DOAP	Written		
AN 2.5	Describe various joints with subtypes and examples	K	K, KH		Lecture, DOAP	Written		
AN2.6	Explain the concept of nerve supply of joints & Hilton's law	K	K, KH		Lecture, DOAP	Written		
Topic: General features of Muscle Number of competencies: (2)								
AN 3.1	Classify muscle tissue according to structure & action	K	KH	Y	Lecture	Written, Viva voce		
AN 3.2	Enumerate parts of skeletal muscle and differentiate between tendonsand	K	KH	Y	Lecture	Written, Viva voce		

	aponeuroses with examples							
Topic: General features of skin and fascia		**Number of competencies: (3)**						
AN 4.1	Describe different types of skin & dermatomes in body	K	KH	N	Lecture, DOAP session	Written	OTDP II	
AN 4.2	Describe structure & function of skin with its appendages	K	KH	Y	Lecture, DOAP session	Written, Viva voce		
AN 4.3	Describe superficial fascia along with fat distribution in body	K	KH	Y	Lecture, DOAP session	Written, Viva voce		
Topic: General features of the cardiovascular system & Circulatory system				**Number of competencies: (9)**				
AN 5.1	Differentiate between blood vascular and lymphatic system	K	KH	Y	Lecture	Written, Viva voce	Medicine, OTM	
AN 5.2	Differentiate between pulmonary and systemic circulation	K	KH	Y	Lecture	Written, Viva voce		
AN 5.3	List general differences between arteries & veins	K	KH	Y	Lecture	Written, Viva voce		
AN 5.4	Explain functional difference between elastic, muscular arteries and arterioles	K	KH	Y	Lecture	Written, Viva voce		
AN 5.5	Describe portal system giving examples	K	KH	Y	Lecture	Written, Viva voce		
AN 5.6	Describe the concept of anastomoses and collateral circulation with significance of end-arteries	K	KH	Y	Lecture	Written, Viva voce		
AN 5.7	Explain function of meta-arterioles, precapillary sphincters, arterio-venousanastomoses	K	KH	N	Lecture	Written		
AN 5.8	Define thrombosis, infarction & aneurysm	K	KH	N	Lecture	Written		

AN 5.9	Describe the types of circulation and its importance, classification of vessels (anatomical and physiological) Structure of blood vessels. Factors affecting venous return. anastomosis, end arterie. Pulmonary and systemic circulation, define portal circulation with examples							
Topic: General Features of lymphatic system		**Number of competencies: (3)**						
AN 6.1	List the components and functions of the lymphatic system	K	KH	N	Lecture	Written		
AN 6.2	Describe structure of lymph capillaries & mechanism of lymph circulation	K	KH	N	Lecture	Written		
AN 6.3	Explain the concept of lymphoedema and spread of tumors via lymphatics and venous system	K	KH	N	Lecture	Written		
Features of individual bones (Upper Limb)		**Number of competencies: (6)**						
AN 7.1	Identify the given bone, its side, important features & keep it in anatomicalposition	K, S	SH	Y	DOAP session	Viva voce, Practicals/, OSPE		
AN 7.2	Identify & describe joints formed by the given bone	K, S	SH	Y	Lecture, DOAP session	Viva voce		
AN 7.3	Enumerate peculiarities of clavicle	K	KH	Y	Lecture, DOAP session	Viva voce		
AN 7.4	Demonstrate important muscle attachment on the given bone	K, S	SH	Y	Practical, DOAP session,Small group teaching	Viva voce,Practicals	Orthopaedics	
AN 7.5	Identify and name various bones in articulated hand, Specify the parts of metacarpals and phalanges and enumerate the peculiarities of	K, S	SH	Y	Practical, DOAP session, Small groupteaching	Viva voce, Practicals		

	pisiform							
AN 7.6	Describe scaphoid fracture and explain the anatomical basis of avascularnecrosis	K	KH	N	DOAP session	Viva voce		
Topic: Upper Limb regions-Shoulder, Axilla, Arm			**No of Competencies -20**					
AN 8.1	Describe attachment, nerve supply & action of pectoralis major and pectoralis minor	K	KH	Y	Lecture, Practical	Written	Biomechanics & Kinesiology	FOT I
AN 8.2	Breast: Describe the location, extent, deep relations, structure, age changes, blood supply, lymphatic drainage, microanatomy and appliedanatomy of breast	K	KH	Y	Practical, Lecture	Written, Viva voce		
AN 8.3	Describe development of breast	K	KH	N	Lecture	Written		
AN 8.4	Identify & describe boundaries and contents of axilla	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce		
AN 8.5	Identify, describe and demonstrate the origin, extent, course, parts,relations and branches of axillary artery & tributaries of vein	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 8.6	Describe, identify and demonstrate formation, branches, relations, areaof supply of branches, course and relations of terminal branches of brachial plexus	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 8.7	Explain variations in formation of brachial plexus	K	KH	Y	Practical, Lecture	Written, Viva voce		
AN 8.8	Explain the anatomical basis of clinical features of Erb's palsy and Klumpke's paralysis	K	KH	N	Lecture	Written		
AN 8.9	Explain anatomical basis of enlarged	K	KH	N	Lecture	Written		

	axillary lymph nodes							
AN 8.10	Describe, identify and demonstrate the position, attachment, nervesupply and actions of trapezius and latissimus dorsi	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 8.11	Describe the arterial anastomosis around the scapula and mention the boundaries of triangle of auscultation	K	KH	N	Lecture	Written		
AN 8.12	Describe and identify the deltoid and rotator cuff muscles	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 8.13	Describe & demonstrate attachment of serratus anterior with its action	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 8.14	Describe and demonstrate shoulder joint for– type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, musclesinvolved, blood supply, nerve supply and applied anatomy	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 8.15	Explain anatomical basis of Injury to axillary nerve during intramuscular injections	K	KH	N	Lecture	Viva voce		
AN 8.16	Describe and demonstrate muscle groups of upper arm with emphasis on biceps and triceps brachii	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 8.17	Identify & describe origin, course, relations, branches (or tributaries), termination of important nerves and vessels in arm	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 8.18	Describe the anatomical basis of Saturday night paralysis	K	KH	Y	Practical, Lecture	Written, Viva voce	Plastic surgery, OTSC, Orthopaedics	

AN 8.19	Identify & describe boundaries and contents of cubital fossa	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAPsession	Written, Viva voce, skill assessment		
AN 8.20	Describe the anastomosis around the elbow joint	K	KH	N	Lecture	Written		
Topic: Upper limb regions -Forearm & Hand			**No of competencies -21**					
AN 9.1	Describe and demonstrate important muscle groups of ventral forearmwith attachments, nerve supply and actions	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written, Viva voce, skill assessment		
AN 9.2	Identify & describe origin, course, relations, branches (or tributaries), termination of important nerves and vessels of forearm	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 9.3	Identify & describe flexor retinaculum with its attachments	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 9.4	Explain anatomical basis of carpal tunnel syndrome	K	KH	Y	Lecture	Written, Viva voce		
AN 9.5	Identify & describe small muscles of hand. Also describe movements of thumb and muscles involved	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 9.6	Describe & demonstrate movements of thumb and muscles involved	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 9.7	Identify & describe course and branches of important blood vessels andnerves in hand	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 9.8	Describe anatomical basis of Claw hand	K	KH	Y	Lecture	Written, Viva voce		
AN 9.9	Identify & describe fibrous flexor sheaths, ulnar bursa, radial bursa and digital synovial sheaths	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		

AN 9.10	Identify, describe and demonstrate important muscle groups of dorsal forearm with attachments, nerve supply and actions	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAPsession	Written, Viva voce, skill assessment		
AN 9.11	Identify & describe origin, course, relations, branches (or tributaries), termination of important nerves and vessels of back of forearm	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAPsession	Written, Viva voce, skill assessment		
AN 9.12	Describe the anatomical basis of Wrist drop	K	KH	Y	Lecture	Written, Viva voce		
AN 9.13	Identify & describe compartments deep to extensor retinaculum	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAPsession	Written, Viva voce, skill assessment		
AN 9.14	Identify & describe extensor expansion formation	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAPsession	Written, Viva voce, skill assessment		
AN 9.15	Describe and explain Fascia of upper limb and compartments, veins of upper limb and its lymphatic drainage	K	KH	Y	Lecture	Written, Viva voce		
AN 9.16	Describe dermatomes of upper limb	K	KH	N	Lecture	Written, Viva voce		
AN 9.17	Identify & describe the type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements, blood and nerve supply of elbow joint, proximal and distal radio-ulnar joints, wrist joint & first carpometacarpal joint	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written, Viva voce, skill assessment		
AN 9.18	Describe Sternoclavicular joint, Acromioclavicular joint, Carpometacarpal joints & Metacarpophalangeal joint	K	KH	N	Lecture	Written		
AN 9.19	Identify the bones and joints of upper limb seen in anteroposterior and lateral view radiographs of shoulder	K/S	SH	Y	Practical, Small group discussion, DOAP session	Viva voce, skill assessment		

	region, arm, elbow, forearm and hand							
AN 9.20	Identify & demonstrate important bony landmarks of upper limb: Jugular notch, sternal angle, acromial angle, spine of the scapula,vertebral level of the medial end, Inferior angle of the scapula	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Viva voce, skill assessment		
AN 9.21	Identify & demonstrate surface projection of: Cephalic and basilic vein, Palpation of Brachial artery, Radial artery, Testing of muscles: Trapezius, pectoralis major, serratus anterior, latissimus dorsi, deltoid, biceps brachii, Brachioradialis	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Viva voce, skill assessment		
Topic – Thoracic cage		**No of Competencies-7**						
AN 10.1	Identify and describe the salient features of sternum, typical rib, Ist rib andtypical thoracic vertebra	K/S	SH	Y	Lecture, DOAP sessi0n	Viva voce/ skill assessment	Orthopaedics	
AN 10.2	Identify & describe the features of 2nd, 11th and 12th ribs, 1st, 11th and 12th thoracic vertebrae	K/S	SH	N	Lecture, DOAP session	Viva voce/ skill assessment		
AN 10.3	Describe & demonstrate the boundaries of thoracic inlet, cavity and outlet	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAPsession	Written/ Viva voce/ skill assessment		
AN 10.4	Describe & demonstrate extent, attachments, direction of fibres, nerve supply and actions of intercostal muscles	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAPsession	Written/ Viva voce/ skill assessment		
AN 10.5	Describe & demonstrate mechanics and types of respiration	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAPsession	Written/ Viva voce/ skill assessment		
AN 10.6	Describe costochondral and interchondral joints	K	KH	N	Lecture	Written		

AN 10.7	Mention boundaries and contents of the superior, anterior, middle and posterior mediastinum	K	KH	Y	Practical, Lecture	Written/ Viva voce		
Topic – Heart , pericardium,Mediastinum			**No of Competencies-7**					
AN 11.1	Describe & demonstrate subdivisions, sinuses in pericardium, blood supply and nerve supply of pericardium	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment	Medicine, OTMC	
AN 11.2	Describe & demonstrate external and internal features of each chamber of heart	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 11.3	Describe & demonstrate origin, course and branches of coronary arteries	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ OSPE		
AN 11.4	Describe anatomical basis of ischaemic heart disease	K	KH	Y	Lecture	Written/ Viva voce		
AN 11.5	Describe & demonstrate the formation, course, tributaries and termination of coronary sinus	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ OSPE		
AN 11.6	Mention the parts, position and arterial supply of the conducting system of heart	K	KH	Y	Lecture	Written		
AN 11.7	Describe & demonstrate the external appearance, relations, blood supply, nerve supply,lymphatic drainage and applied anatomy of oesophagus	K/S	SH	Y	Practical, Lecture, DOAP session	Written/ Viva voce/ OSPE		
Topic_Lungs &Trachea			**No of Competencies-6**					
AN 12.1	Mention the blood supply, lymphatic drainage and nerve supply of pleura, extent of pleura and describe the pleural recesses and their applied anatomy	K	KH	Y	Practical, Lecture	Written/ Viva voce		Medicine ,OTMC
AN 12.2	Identify side, external features and relations of structures which form root of lung & bronchial tree and their	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/OSPE		

	clinical correlate							
AN 12.3	Describe a bronchopulmonary segment	K	KH	Y	Lecture	Written/ Viva voce		
AN 12.4	Identify phrenic nerve & describe its formation & distribution	K/S	SH	Y	Lecture, Practical	Written/ Viva voce		
AN 12.5	Mention the blood supply, lymphatic drainage and nerve supply of lungs	K	KH	Y	Lecture	Written/ Viva voce		
AN 12.6	Describe the extent, length, relations, blood supply, lymphatic drainageand nerve supply of trachea	K	KH	N	Lecture	Written		
Topic:Radiological Anatomy		**Number of competencies: 2**						
An 13.1	Understand Various imaging techniques with Principles of plain radiograms and CT scan, Ultrasonography,	K	KH	N	Lecture	Written		
AN 13.2	Bones and joints seen in AP and lateral view radiographs of shoulder, elbow, wrist joints & hand	K	KH	N	Lecture	Written	Orthopaedics	

Reference Book

S. No.	**Name of the Book**	**Edition**
	Gross Anatomy	
1.	B. D. Chaurasia's Human Anatomy. Volume: 1, 2, 3, 4	8th
2.	Vishram Singh's Textbook of Anatomy. Volume: 1, 2, 3	3rd
3.	Vishram Singh's Textbook of Neuroanatomy	4th
4.	B. D. Chaurasia's General Anatomy	6th

5.	Netter's Human Anatomy Atlas	7th
6.	Grant's Human Anatomy Atlas	13th
7.	Vishram Singh's General Anatomy	
8.	Gray's Anatomy for Students	
	Histology	
9.	Histology Text and Atlas. Brijesh Kumar	2nd
	Surface Anatomy and Radiology	
10.	Surface and Radiological Anatomy. A. Halim	3rd
11.	Cunninghams Practical Anatomy	

HUMAN PHYSIOLOGY I

Course Description

An overall goal of this course is to enable students to understand the role of molecules, cells, tissues, organs, and organ systems (endocrine, nervous, muscular and immune systems) in human health and disease. This class focuses on understanding physiology –the functioning of a living organism and its component parts. This requires going beyond memorization of facts to acquire an understanding of how and why the body functions the way it does, and what happens when it does not function properly.

COURSE OBJECTIVES

A. KNOWLEDGE

1. Understanding of the physiology and basic regulatory concepts related to the functioning of life processes
2. Understand the functions of important physiological systems including the cardio-respiratory, renal, reproductive and metabolic systems;
3. Define homeostasis and explain how homeostatic mechanisms normally maintain a constant interior milieu.
4. State the functions of each organ system of the body, explain the mechanisms by which each functions, and relate the functions and the anatomy and histology of each organ system.
5. Understand and demonstrate the interrelations of the organ systems to each other
6. Predict and explain the integrated responses of the organ systems of the body to physiological and pathological stresses.
7. Understand physiology of the neuromuscular system, particularly the regulation of strength and velocity of a contraction by muscle receptors interacting with the nervous system.
8. Understand the function of the,cardiovascular, circulatory and respiratory systems at rest and during exercise, and their adaptations to training.
9. Explain the pathophysiology of common diseases related to the organ systems of the body.

B. SKILL

1. Perform, analyse and report on experiments and observations in physiology
2. Recognise and identify principal tissue structures.
3. Identify different blood cells in a film, and indicate the identifying features of each type of leukocyte.
4. Clinically examine the Cardiovascular and respiratory system and record BP and pulse at rest and in different postures

C. ATTITUTE

1. Demonstrate ability to communicate adequately, sensitively, effectively and respectfully with patients and colleagues.
2. Demonstrate ability to apply newly gained knowledge.

Examination scheme

Scheme of Marks for University Theory exam : 50 Marks
MCQs,Short answer questions ,Brief answer questions
Scheme of examination for University Practical exam :50 Marks

Spots- Identification	Clinical Examination- CVS, Pulse, BP & Viva Voce	Presentation & Communication skills	Total
20marks	20 marks	10marks	50 marks

Competency Table: HUMAN PHYSIOLOGY I

Code no	Objectives/Competency Students should be able to	Domains of Learning	Competencies levels K/Kh/Sh/Ps	Core Y/N	Teaching Learning methods	Assessment methods	Vertical Integration	Horizintal Integration

HUMAN PHYSIOLOGY I								
Topic: General Physiology Number of competencies: 7								
PI 1.1	Introduction to Physiology, Organisation of Human Body	K/S	SH	Y	Lecture, DOAP session	Written/ Vivavoce		Biochemistry
PI 1.2	Compartments of Body Fluid	K	KH	Y	Lecture	Written/ Viva voce		
PI 1.3	Homeostasis and Biofeedback Mechanism	K	KH	Y	Lecture	Written/ Viva voce		
PI 1.4	. Cell Physiology	K	KH	Y	Lecture	Written/ Viva voce		
PI 1.5	Cell Membrane and Concept of Membrane Potentials	K	KH	Y	Lecture	Written/ Viva voce		
PI 1.6	Transport Across Cell Membrane	K	KH	Y	Lecture	Written/ Viva voce		
PI 1.7	Concept of Osmolar and Tonicity Units	K	KH	Y	Lecture	Written/ Viva voce		
Topic: : Haematology Number of competencies: (10)								
PI 2.1	Describe the composition and functions of blood components	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	Pathology	
PI 2.2	Discuss the origin, forms, variations and functions of plasmaproteins	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.3	Describe and discuss the synthesis and functions of Haemoglobin and explain its breakdown. Describe variants of haemoglobin	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.4	Describe RBC formation (erythropoiesis & its regulation) and itsfunctions	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.5	Describe different types of anaemias & Jaundice	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.6	Describe WBC formation (granulopoiesis) and its regulation	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.7	Describe the physiological basis of hemostasis and, anticoagulants. Describe bleeding & clotting disorders (Hemophilia, purpura)	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		

PI 2.8	Describe different blood groups and discuss the clinical importance of blood grouping, blood banking and transfusion	K	KH	Y	Lecture, Small group discussion, ECE-Visitto blood bank	Written/Viva voce		
PI 2.9	Define and classify different types of immunity. Describe the development of immunity and its regulation	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.10	Estimate Hb, RBC, TLC, RBC indices, DLC, Blood groups, BT/CT	K	KH	Y	Lecture, DOAP sessions	Practical/OSPE/Viva voce		
Topic:	**Cardiovascular Physiology (CVS) Number of competencies: 13**							
PI 3.1	Classify muscle tissue according to structure & action	K	KH	Y	Lecture	Written/ Viva voce	Medicine,OTMC	
PI 3.2	Enumerate parts of skeletal muscle and differentiate between tendonsand aponeuroses with examples	K	KH	Y	Lecture	Written/ Viva voce		
PI 3.3	Describe the functional anatomy of heart including chambers,sounds; and Pacemaker tissue and conducting system.	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 3.4	Describe the properties of cardiac muscle including its morphology, electrical, mechanical and metabolic functions	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 3.5	Discuss the events occurring during the cardiac cycle	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 3.6	Describe generation, conduction of cardiac impulse	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 3.7	Describe and discuss haemodynamics of circulatory system	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 3.8	Describe and discuss local and systemic cardiovascular regulatory mechanisms	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 3.9	Describe the factors affecting heart rate, regulation of cardiac output& blood pressure	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 3.10	Describe & discuss regional circulation including microcirculation, lymphatic circulation, coronary, cerebral, capillary, skin, foetal, pulmonary and splanchnic circulation	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 3.11	Describe the patho-physiology of shock, syncope and heart failure	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		

PI 3.12	Record blood pressure & pulse at rest and in different grades of exercise and postures in a volunteer or simulated environment	S	SH	Y	DOAP sessions	Practical/OSPE/ Vivavoce		
PI 3.13	Describe interpretation of normal ECG in a volunteer or simulatedenvironment	K	KH	Y	Lecture,DOAP sessions	Practical/OSPE/ Vivavoce		
Topic: Respiratory Physiology Number of competencies(7)								
PI 4.1	Describe the functional anatomy of respiratory tract	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	OTDP II, OTMC, Medicine	
PI 4.2	Describe the mechanics of normal respiration, pressure changes during ventilation, lung volume and capacities, alveolar surface tension, compliance, airway resistance, ventilation, V/P ratio,diffusion capacity of lungs	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 4.3	Describe and discuss the transport of respiratory gases: Oxygenand Carbon dioxide	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 4.4	Describe and discuss the physiology of high altitude and deep seadiving	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 4.5	Describe and discuss the pathophysiology of dyspnoea, hypoxia, cyanosis asphyxia; drowning, periodic breathing	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 4.6	Describe and discuss lung function tests & their clinical significance	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 4.7	Demonstrate the correct technique to perform & interpret Spirometry	S	SH	Y	DOAP sessions	Skill assessment/ Vivavoce		
Topic: Renal Physiology Number of competencies: (6)								
PI 5.1	Describe structure and function of kidney	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	Medicine, OTMC	
PI 5.2	Describe the structure and functions of juxta glomerular apparatusand role of renin-angiotensin system	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 5.3	Describe the mechanism of urine formation involving processes of filtration, tubular reabsorption & secretion; concentration and dilutingmechanism	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 5.4	Describe & discuss the significance & implication of Renalclearance	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		

PI 5.5	Describe the renal regulation of fluid and electrolytes & acid-basebalance	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 5.6	Describe the innervations of urinary bladder, physiology ofmicturition and its abnormalities	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
Topic: Endocrine Physiology Number of competencies: (6)								
PI 6.1	Describe the physiology of bone and calcium metabolism	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 6.2	Describe the synthesis, secretion, transport, physiological actions, regulation and effect of altered (hypo and hyper) secretion of pituitary gland, thyroid gland, parathyroid gland, adrenal gland, pancreas and hypothalamus	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 6.3	Describe the physiology of Thymus & Pineal Gland	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 6.4	Describe function tests: Thyroid gland; Adrenal cortex, Adrenalmedulla and pancreas	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 6.5	Describe the metabolic and endocrine consequences of obesity &metabolic syndrome, Stress response. Outline the psychiatry component pertaining to metabolic syndrome.	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 6.6	Describe & differentiate the mechanism of action of steroid, proteinand amine hormones	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		

REFERENCE BOOKS:

1. Text book on Medical Physiology – Guyton
2. Textbook of Physiology – A K Jain .
3. Review of Medical Physiology – Ganong
4. Samson & Wright‟s Applied Physiolo

BIOCHEMISTRY

COURSE DESCRIPTION:

Biochemistry, the study of biological phenomena at cellular and molecular level, is studied to gain knowledge about the principles that govern complex biological systems. The primary objective of this course is to give students a solid foundation in biochemical processes, to develop analytical, technical and critical thinking skills and to make them scientifically literate.

COURSE OBJECTIVES

At the end of first year BOTH students will be able to

A. **KNOWLEDGE:**

1. Explain the scientific basis for an understanding of the mechanisms of metabolic and functional disturbances
2. Gain knowledge and understand the principles that govern the structures of macromolecules and their participation in molecular recognition
3. Understand molecular and functional organization of cell and its subcellular components
4. Provide concept of enzymes
5. Describe the chemistry, metabolism of Carbohydrates, lipids and proteins and its related disorders
6. Understand the Integration and homeostasis of various metabolism
7. Understand the metabolism of Purines, Pyrimidines, Minerals and its related disorders
8. Understand the process of Acid- base and Water- Electrolyte balance and imbalance
9. Recognize the Biochemical role of vitamins and manifestations of its deficiencies

Scheme of Examination:

Written		**Eligibility/Passing Marks**		**Practicals**		**Eligibility/Passing Marks**		**Total Marks**
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
25	50	13	25	--	--	--	--	50

The internal assessment will be based on the following criteria -

Subject	**Theory**			**Practical/Viva**		
BIOCHEMISTRY	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
25 marks	15	10	25	--	--	--

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs,Short answer questions ,Brief answer questions and Long answer Questions

Semester pattern

For 50 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory and practical of 50 marks

Annual pattern

For 50 marks-

2 periodicals of 20 marks each and 1 midterm exam of theory and practical of 25 marks each and 1 Prelim/ model paper of theory50 marks each

Code no	Objectives/Competency Students should be able to	Domains of Learning	Competencies levels K/Kh/Sh/Ps	Core Y/N	Teaching Learning methods	Assessment methods	Vertical Integration	Horizintal Integration
			BIOCHEMISTRY					
Topic: : Fundamental Unit of Life: The Cell and Chemistry of Biomolecules (Carbohydrates, Lipids, Proteins, Nucleic Acids) Number of competencies: (6)								
BC 1.1	Describe Plasma membrane; structure and function	K	SH	Y	Lecture	Written/ Vivavoce	Pathology, Microbiology	
BC 1.2	Understand Function of intracellular organelle in brief (no structural details)	K	KH	Y	Lecture	Written/ Viva voce		
BC 1.3	.Define & explain the Classification (with proper examples) and their functions	K	KH	Y	Lecture	Written/ Viva voce		
BC 1.4	Define& explain the Various ways of Classification (with proper examples) proteins, amino acids, peptides & their biochemical importance, Denaturation,	K	KH	Y	Lecture	Written/ Viva voce		

	coagulation, isoelectric pH and its significance							
BC 1.5	Definition, Class Define& explain the ification (with proper examples) and functions of Lipids and fatty acids.	K	KH	Y	Lecture	Written/ Viva voce		
BC 1.6	Describe Structure & functions of DNA, RNA, Nucleotides & their biological importance	K	KH	Y	Lecture	Written/ Viva voce		
Topic: : Enzymes Number of competencies: (4)								
BC 2.1	. DescribeClassification of enzymes, Factors affecting enzyme activity.	k	K	Y	Lecture	Written		
BC 2.2	EnumerateEnzyme inhibitors (kinetic is not required)	K	K	Y	Lecture	Written		
BC 2.3	Describe Diagnostic clinical importance of enzymes & Isoenzymes	K	K, KH	Y	Lecture, DOAP	Written		
BC 2.4	. Diagnostic uses of enzymes	K	K, KH		Lecture	Written		
Topic: Biological Oxidation Mechanism of Hormone Action and Metabolism of Carbohydrate, Lipid, Protein and Nucleic Acid No of Competencies -19								
BC 3.1	Desccribe the Electron transport chain	K	KH	Y	Lecture, Practical	Written		FOT II
BC 3.2	Desccribe Substrate level & oxidative phosphorylation	K	KH	Y	Practical, Lecture	Written/ Viva voce		
BC 3.3	Definition, Desccribe Classification OF Enzymes	K	KH	N	Lecture	Written		
BC 3.4	Desccribe Mechanism of hormone action	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP session	Written/ Viva voce/skill assessment		

BC 3.5	Describe Biochemical aspects of digestion and absorption of carbohydrates	K/S	SH	Y	Practical, Lecture, Small groupdiscussion, DOAP sessin	Written/ Viva		
BC 3.6	Describe Glycolysis (Aerobic and Anaerobic)	K/S	SH	Y	Practical, Lecture, Small groupdiscussion,	Written/ Viva voce/		
BC 3.7	Describe Glycogen metabolism, its regulation and glycogen storage diseases	K	KH	Y	Practical, Lecture	Written/ Viva voce		
BC 3.8	Explain Gluconeogenesis-Cori's cycle, HMP shunt and its significance	K	KH	N	Lecture	Written		
BC 3.9	Explain . Blood glucose regulation, Lactose intolerance and Diabetes mellitus	K	KH	N	Lecture	Written		
BC 3.10	Describe Biochemical aspects of digestion and absorption of proteins	K	KH	Y	Lecture,	Written/ Viva voce/		
BC 3.11	Describe Fate of amino acids in the body (deamination, Transamination, transmethylation), fates of ammonia and urea cycle & disorders	K	KH	N	Lecture	Written		
BC 3.12	Describe Biochemical aspects of digestion and absorption of lipids	K	KH	N	Lecture	Written		
BC 3.13	Describe . Beta oxidation of fatty acids and its energetics Ketogenesis, ketolysis & ketosis	K	KH	N	Lecture	Written		
BC 3.14	Describe Cholesterol and its importance (No biosynthesis y	K	KH	N	Lecture	Written		
BC 3.15	Explain Classification and functions of Lipoproteins	K	KH	N	Lecture	Viva voce		
BC 3.16	Describe Fates of- acetyl CoA and glycerol	K	KH	N	Lecture	Written		

BC 3.17	Describe Catabolism of purines and related disorders	K	KH	N	Lecture	Written		
BC 3.18	Describe Lipid Profile-Triacylglycerol, cholesterol (HDL, LDL & VLDL)	K	KH	Y	Lecture	Written/ Viva voce	Patology, Micriology	
BC 3.19	Describe. Catabolism of purines and related disorders	K	KH	N	Lecture	Written		
Topic: Vitamins, Mineral & Nutrition		**No of competencies - 13**						
BC 4.1	Describe Classification, sources, functions and RDA of fat soluble and Water-soluble vitamins.	K	KH	N	Lecture	Written		
BC 4.2	Describe Active forms & metabolic role, deficiency manifestations	K	K	N	Lecture	Written		
BC 4.3	. Desccribe Co-enzyme firms of vitamin B- complex group	K	K	N	Lecture	Written		
BC 4.4	Explain Hypervitaminosis	K	KH	Y	Lecture	Written/ Viva voce		
BC 4.5	Describe Calcium and Phosphorous: Sources, RDA, functions and disorders	K	K	N	Lecture	Written		
BC 4.6	Describe Trace elements: Iron, Manganese, Selenium, Zinc & Fluoride	K	K	N	Lecture	Written		
BC 4.7	Describe Importance of nutrition	K	KH	N	Lecture	Written		
BC 4.8	Describe Calorimetry, Respiratory Quotient and its significance	K	K	Y	Lecture	Written/ Viva voce		
BC 4.9	Describe Energy requirement with reference to age and sex	K	KH	N	Lecture	Written		Physiology
BC 4.10	Describe Thermogenesis and specific dynamic action	K	KH	N	Lecture	Written		

BC 4.11	Discuss the Balance diet for normal adult and role of fibres in diet	K	KH	N	Lecture	Written		
BC 4.12	Desccribe Nitrogen balance and its significance.	K	K	Y	Lecture	Written/ Viva voce		
BC 4.13	Desccribe Protein energy malnutrition (Kwashiorkor & Marasmus)	K	K	N	Lecture	Written		
Topic: Acid Base and Water Electrolyte Balance and Imbalance **No of competencies -6**								
BC 5.1	. Describe Sodium, Potassium and their importance in body	K	KH	N	Lecture	Written	Microbiology	
BC 5.2	Describe Balance & imbalance of Water, Electrolytes	K	KH	N	Lecture	Written		
BC 5.3	Describe Balance & imbalance of Water, Electrolytes	K	KH	N	Lecture	Written		
BC 5.4	Describe Liver function tests and Renal function tests	K	KH	N	Lecture	Written		
BC 5.6	Describe Relevance of blood levels of glucose, urea, calcium, phosphorus and uric acid	K	KH	N	Lecture	Written		
Topic – Muscle Contraction and Connective Tissue No of Competencies- 4								
BC 6.1	Enumerate Contractile elements	K	KH	Y	Lecture	Written		Physiology
BC 6.2	Describe Biochemical events during contraction	K	KH	Y	Lecture	Written		
BC 6.3	Describe Energy metabolism in skeletal and cardiac muscles	K	KH	Y	Lecture	Written		
BC 6.4	Describe Biochemistry of connective tissue	K	KH	Y	Lecture	Written/ Viva voce		

Reference Books:

1. Essentials of Biochemistry, 1st Edition: Dr. Pankaja Naik
2. Essentials of Biochemistry 7th Edition: Dr. D M Vasudeva
3. Biochemistry 2012 Edition: Dr. U Satyanarayan

4. Review of Biochemistry (24th edition) – Harpar

FUNDAMENTS OF OCCUPATIONAL THERAPY - I

Course description :

This course gives an introduction to the foundational concepts of Occupational Therapy. This course introduces students to the professional standards, ethical principles, and documentation in occupational therapy practice. It also gives an overview of the Occupation Therapy process, its frameworks, components – OTPF, Rehabilitation Philosophy,methods ofassessment of ROM & muscle strength

Goal:

The primary goal of a first-year occupational therapy program is to lay the foundational knowledge and skills necessary for students to become competent and ethical occupational therapy practitioners. The program encourages students to progress through their education with a solid understanding of the profession and the skills needed to begin their journey as occupational therapy professionals

Objectives:

A. Knowledge

At the end of the first year, the student should be able to

1. remember and understand conceptual foundations of ethics and documentation
2. understand the therapeutic relationship among the rehabilitation team members, the patient and the therapist.
3. understand the assessment methods to improve participation in social and community life
4. understand use of therapeutic activity and apply knowledge of activity analysis to choose appropriate activity for therapeutic use
5. understand the principles & application of ROM ,muscle strength assessment ,its importance in Occupational Therapy

B. Skills

At the end of the first year, the student should be able to

1. Analyse various Therapeutic activities & match them with clients demands for participation in daily skills
2. Demonstrate assessment skills for ROM & muscle strength

C. Attitude

At the end of the first year, the student should be able to

1. Demonstrate understanding of respect and empathy in conduct with patients

Scheme of Examination:

Written		Eligibility/Passing Marks		Practicals		Eligibility/Passing Marks		Total Marks
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
50	100	25	50	50	100	25	50	200

The internal assessment will be based on the following criteria -

Subject	**Theory**			**Practical/Viva**		
FOT I	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
100 marks	30	20	50	30	20	50

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs, Short answer questions, Brief answer questions and Long answer Questions

Scheme of examination for University Practical exam

Activity Analysis (any two from adjunctive, enabling, purposeful & occupation based activities) & Viva Voce	**Assessment of Range of Motion Upper extremity & Lower Extremity(on normal subjects) & Viva Voce**	**Gross Muscle testing (On Normal subjects Upper & Lower extremity) & Viva Voce**	**Presentation & communication skills**	**Total**
20 marks	**40 marks**	**20 marks**	**20 marks**	**100 marks**

Sr. No.	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Teaching - Learning Methods**	**Assessment Methods**	**Number required to certify P**	**Vertical Integration**	**Horizontal Integration**
FUNDAMENTS OF OCCUPATIONAL THERAPY - I									
Topic: Introduction to Occupation, Occupational Science and Occupational Therapy		**Number of Competencies: 8**			**Number of procedures for certification : (NIL)**				

FOT I 1.1	Define and describe occupation, theory of occupation and evolutionary traits.	K/C	K	Y	Lecture	Written			
FOT I 1.2	Enumerate and describe dimensions of occupation.	K	K/KH	Y	Lecture	Written			
FOT I 1.3	Enumerate and describe forms of occupation.	K	K/KH	Y	Lecture	Written			
FOT I 1.4	Explain the need to understand occupation.	K	K	N	Lecture	Written			
FOT I 1.5	Understand the philosophy and concept of occupation.	K	K	Y	Lecture	Written			
FOT I 1.6	Explain therapeutic application of occupation.	K/C	K/KH	Y	Lecture	Written			
FOT I 1.7	Explain occupational science and application of its theory to occupational therapy.	K/C	K/KH	Y	Lecture	Written			
FOT I 1.8	Define and explain the scope of occupational therapy.	K/A/C	K	Y	Lecture	Written			
Topic : History & Evolution of Occupational Therapy		**Number of Competencies:8**			**Number of procedures for certification : (NIL)**				
FOT I 2.1	Describe the Historical Context of Occupational Therapy Across the World	K	K	Y	Lecture	Written/ Viva-Voce			
FOT I 2.2	Explain the influences on Evolution of Occupational Therapy	K	K/KH	Y	Lecture	Written			
FOT I 2.3	Explain Rehabilitation philosophy	K	K	Y	Lecture	Written			
FOT I 2.4	Describe Principles of Physical Medicine and Rehabilitation	K	K/KH	Y	Lecture	Written			
FOT I 2.5	Enlist International /National/State Organizations of Occupational Therapy	K	K	Y	Lecture	Written			
FOT I 2.6	Describe how Professional Organizations Supports Professional Development and Enlist Benefits of Professional Associations	K/A/C	K	Y	Lecture	Written/ Viva-Voce			
FOT I 2.7	Historical Context of Occupational Therapy in India Including State Council Organizations and NCAHP (National Council for Allied Health professionals)	K	K	Y	Lecture	Written			

FOT I 2.8	Describe composition and Functions of AIOTA and ACOT	K	K	Y	Lecture	Written			
Topic : Human Development and Maturation Number of competencies : 4 Number of procedures for certification : (NIL)									
FOT I I3.1	Define and describe importance of knowledge of human development.	K/C	K	Y	Lecture	Written			
FOT I I3.2	Describe aspects of human development.	K/C	K	Y	Lecture	Written			
FOT I I3.3	Describe factors influencing human growth and development.	K/C	K	Y	Lecture	Written			
FOT I I3.4	Describe general principles of human development and specific principles of maturation.	K/C	K	Y	Lecture	Written			Anatomy
Topic : Principles and Methods of Assessments Number of Competencies: 18 Number of procedures for certification : (NIL)									
FOT I I4.1	Define active, passive, and functional range of motion (ROM), total active and total passive motion.	K/C	K	Y	Lecture	Written			
FOT I I4.2	Describe various methods of range of motion evaluation.	K/C	K	Y	Lecture	Written			
FOT I I4.3	Enlist the purposes of measuring joint range of motion	K/C	K	Y	Lecture	Written			
FOT I I4.4	Enlist precautions for and contraindications to joint measurement	K/C	K	Y	Lecture	Written			
FOT I I4.5	Understand and recognize norms of joint range of motion of various joints of upper extremity, lower extremity and spine and end feels for each motion and describe how to establish ROM norms for clients with bilateral as well as unilateral involvement.	K/C	K	Y	Lecture	Written			
FOT I I4.6	Describe various types of goniometers and parts of goniometers.	K/C	K	Y	Lecture	Written			
FOT I I4.7	Evaluate range of motion of the upper extremity joints using a goniometer based on joint range of motion principles and procedures on normal individuals and patients.	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			

FOT I I4.8	Evaluate range of motion of the lower extremity joints using a goniometer based on joint range of motion principles and procedures on normal individuals and patients.	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			
FOT I I4.9	Evaluate range of motion of the spinal joints using a goniometer, inclinometer and tape method based on joint range of motion principles and procedures on normal individuals and patients	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			
FOT I I4.10	Understand evaluation of range of motion of the temporomandibular joint using a goniometer, and tape method based on joint range of motion principles and procedures on normal individuals.	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			
FOT I I4.11	Define types of muscle contractions, types of muscle strength and muscle power.	K/C	K	Y	Lecture	Written			
FOT I I4.12	Enlist the steps of the manual muscle test procedure in correct order and describe the limitations of the procedure.	K/C	K	Y	Lecture	Written			
FOT I I4.13	Enumerate and explain the various muscle strength grading systems	K/S/A/C	K	Y	Lecture	Written			
FOT I I4.14	Perform/administer a manual muscle test to evaluate strength of the upper extremity group muscles based on manual muscle test principles and procedures on normal person.	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			
FOT I I4.15	Perform/administer a manual muscle test to evaluate strength of the lower extremity group muscles based on manual muscle test principles and procedures on normal person.	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			
FOT I I4.16	Perform/administer a manual muscle test to evaluate strength of the spine group muscles based on manual muscle test principles and procedures on normal person.	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			
FOT I I4.17	Define and explain muscle endurance and general endurance or aerobic capacity.	K/C	K	Y	Lecture	Written			
FOT I	Perform/administer a muscle endurance test based	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			

I4.18	on the principles and procedures on normal person.								
Topic : Therapeutic Exercises Number of Competencies: 8 Number of procedures for certification : (NIL)									
FOT I I5.1	Explain principles of therapeutic exercises.	K/C	K	Y	Lecture	Written			
FOT I I5.2	Enumerate purposes and indications of therapeutic exercises.	K/C	K	Y	Lecture	Written			
FOT I I5.3	Enumerate precautions and contraindications of therapeutic exercises.	K/C	K	Y	Lecture	Written			
FOT I I5.4	Determine pre-requisites of prescriptions of therapeutic exercises.	K/C	K	Y	Lecture	Written			
FOT I I5.5	Define, classify, differentiate and demonstrate types of therapeutic exercises and give examples of its application to activities.	K/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			
FOT I I5.6	Describe treatment goals and enlist therapeutic activities for patients who have problems with range of motion and flexibility.	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			
FOT I I5.7	Describe treatment goals and enlist therapeutic activities for patients who have problems with muscle strength.	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			
FOT I I5.8	Describe treatment goals and enlist therapeutic activities for patients who have problems with muscle and general endurance.	K/S/A/C	K/KH/SH/P	Y	Lecture, DOAP	Written, Practical			
FOT I 6. Topic : Activity Analysis Number of Competencies: 4 Number of procedures for certification : (NIL)									
FOT I I6.1	Explain principles of activity analysis with respect to biomechanical, sensory motor & socio-cultural aspects including the criteria for selection of an activity for a client.	K/C/A	K	Y	Lecture	Written			
FOT I I6.2	Determine grading of occupations/activities/tasks to challenge the person's abilities to improve performance.	K/S/A/C	K/KH/SH	Y	Lecture, DOAP	Written, Practical			
FOT I I6.3	Determine adaptation of occupations/activities/tasks to increase their therapeutic value or to bring them within the	K/S/A/C	K/KH/SH	Y	Lecture, DOAP	Written, Practical			

	capability of a person.								
FOT I I6.4	Administer, demonstrate and explain activity analysis of any adjunctive activities, enabling activities (occupation-as-means), purposeful activities (occupation-as-end) and occupation.	K/S/A/C	K/KH/SH	Y	Lecture, DOAP	Written, Practical			
Topic : Media, Methods and Therapeutic and Physical Agent Modalities Number of Competencies: 4 Number of procedures for certification : (NIL)									
FOT I I7.1	Define media, methods and modalities.	K/C	K	Y	Lecture	Written			
FOT I I7.2	Describe the phases of tissue healing.	K/C	K	Y	Lecture	Written			
FOT I I7.3	Describe the appropriate indications, precautions and contraindications for use of superficial thermal agents, deep thermal agents, and electrotherapeutic agents.	K/C	K	Y	Lecture	Written			
FOT I I7.4	Enlist the role of physical agent modalities in occupational therapy practice.	K/C	K	Y	Lecture	Written			

Reference Books:

1. Willard and Spackman's Occupational Therapy by Elizabeth Blesedel lCrepeau, Ellen S. Cohn, Barbara A. Boyt Schell.
2. Occupational Therapy - Practice Skills for Physical Dysfunction by Lorraine Williams Pedretti. Published by Mosby
3. Occupational Therapy for Physical Dysfunction by Catherine A. Trombly, Mary Vining Radomski. Published by Lippincott Williams & Wilkins
4. Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice by Annie Turner, Marg Foster, Sybil E. Johnson. Published by Churchill Livingstone
5. Introduction to Occupational Therapy by Hussey Subonis ,Chafea O Brien

COMMUNICATION SKILLS

Course description :

This course gives a brief overview of understanding of the importance of communication skills in Occupational Therapy practice,Gives the guidelines for developing communication skills for professional.

Goal:

The primary goal of delivering the effective communication for the first year Occupational Therapy under graduate aware about the effective communication skills & need for addressing them.

Objectives:

D. Knowledge

At the end of the first year, the student should be able to

1. remember and understand the importance and process of communication
2. explain education and career skills, planning, decision making and organization, culture and etiquette.
3. describe the method of creating a first impression and explain the way of introduction & presentation of self (physical appearance) at the university and during academic meetings and conferences.
4. enlist online and offline meeting etiquette

Scheme of Examination:

Written		Eligibility/Passing Marks		Practical		Eligibility/Passing Marks		Total Marks
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
50	NA	25	NA	NA	NA	NA	NA	50

Total Theory Marks: 50

Theory Internal Assessment Marks: 50

MCQs, Short answer questions, Brief answer questions and Long answer Questions

Theory University Examination Marks: NUE

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Teaching - Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
COMMUNICATION SKILLS									
Topic : Communication Skills **Number of Competencies: 5** **Number of procedures for certification : (NIL)**									

CS 1.1	Enlist the importance and process of communication.	K/A/C	K/KH	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment			
CS 1.2	Enumerate the Barriers to effective communication.	K/A/C	K/KH	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment			
CS 1.3	Differentiate between verbal and non-verbal communication.	K/S/A/C	K/KH/SH	Y	Lecture/ Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment			
CS 1.4	Define types of and describe communication skills and etiquettes.	K/S/A/C	K/KH/SH/P	Y	Lecture/ Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment			
CS 1.5	Describe purpose of communication skills and define roles of varied stakeholders of communication.	K/A/C	K/KH	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment			Clinical Assignment
Topic : Basic Life Skills		**Number of Competencies: 6**		**Number of procedures for certification : (NIL)**					
CS 2.1	Define and explain the concept of self-care, self-development, self-appraisal, goal setting and time management.	K/A/C	K/KH	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment	CS2.1	Define and explain the concept of self-care, self-development, self-appraisal, goal setting and time management.	K/A/C
CS 2.2	Enlist the goals of education and career skills, planning, decision making and organization, culture and etiquette.	K/A/C	K/KH	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment	CS2.2	Enlist the goals of education and career skills, planning, decision making and organization, culture and etiquette.	K/A/C
CS 2.3	Describe the concept of homecare and family care, culture and etiquette.	K/A/C	K/KH	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment	CS2.3	Describe the concept of homecare and family care, culture and etiquette.	K/A/C
CS 2.4	Define and describe the concept of group discussion and team skills, interpersonal and intrapersonal people skills.	K/A/C	K/KH	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment	CS2.4	Define and describe the concept of group discussion and team skills, interpersonal and intrapersonal people skills.	K/A/C

CS 2.5	Understand the process of preserving documents in hard and soft copy [In various National portals e.g. Digi locker]	K/A/C	K/KH	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment	CS2.5	Understand the process of preserving documents in hard and soft copy [In various National portals e.g. Digi locker]	K/A/C
CS 2.6	Define and explain the concept of change management and stress management.	K/S/A/C	K/KH	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment	CS2.6	Define and explain the concept of change management and stress management.	K/S/A/C
Topic : Professional Etiquette Number of Competencies: 4 Number of procedures for certification : (NIL)									
CS 3.1	Define and classify behaviours and describe the concept of behaviour training.	K/S/A/C	K/KH	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment			
CS 3.2	Define and describe the method of creating a first impression and explain the way of introduction & presentation of self (physical appearance) at the university and during academic meetings and conferences.	K/S/A/C	K/KH/SH/P	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment			During Lectures and Clinical Assignment
CS 3.3	Understand how to exhibit professionalism in social settings. Describe and enlist online and offline meeting etiquette.	K/S/A/C	K/KH/SH/P	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment			Clinical Assignment
CS 3.4	Understand dining etiquette in social settings and professional settings	K/S/A/C	K/KH/SH/P	Y	Lecture, Small group discussion	Written, Viva Voce/Role Play/Seminar/Group Assignment			Clinical Assignment

Reference Books:

1. Cole K. Crystal clear communication. 2nd ed. Chennai: East West Books, 2001.
2. Taylor G. English conversation practice. New Delhi: Tata Mc Graw Hill Publishing Company; 2001.
3. Thomas EB. The most common mistakes in English. New Delhi: Tata Mc Graw Hill Publishing Company; 2001.
4. Yadurajan KS. Current English. New Delhi: Oxford University Press; 2001.

Semester II										
S.No	Course Code	Subjects	Total teaching hours /semester			Credits			Total Credits	Marks Distribution
			Theory	Practical/ demo/ lab work	Clinical	Theory	Practical/ demo/ lab work	Clinical		Total (including the internal assessment)
1	AN II	Human Anatomy II	**90**	**60**		**6**	**2**		**8**	**Theory-50 Practicals -50**
2	PI II	Human Physiology II	**90**	**60**		**6**	**2**		**8**	**Theory 50 Practicals -50**
3	FOT II	Fundamentals of Occupational Therapy II	**90**	**120**		**6**	**4**		**10**	**Theory-100 Practicals -100**
4	EVS	Environmental Sciences	**30**	**30**		**2**	**1**		**3**	**NUE-50 marks**
		Supervised Clinical training /Field work			**210**			**4.66**	**4.66**	
Total no. of hours / semester =780									**33.66**	
Total no of marks for Examination/semester			**-**	**-**	**-**					**400**

SEMESTER PATTERN (I BOT)

NUE- Non University Examination

NUE- Non University Examination

Scheme of HUMAN ANATOMY II

COURSE DESCRIPTION: For first year BOTh students this course gives the detail knowledge about the cells , different systems such as musculoskeletal system, nervous system, ,also the functional anatomy of various systems

Goal: Give the detailed knowledge of Human structure ,body functions ,anatomical orientation of different systems .The knowledge about neuroanatomy ,cell functions ,the detail skeletal system & muscular system

Course Objectives

KNOWLEDGE

Student will be able to

I. Gain knowledge of human body's structure and function
II. Understand normal anatomical position, various planes, relation, comparison, laterality & movement in our body
III. Know different types of cells and describe their functions
IV. Describe the major components of the skeletal system and describe their functions, different types of bones and provide an example of each type
V. Learn and identify the major components of the integumentary system and their functions.
VI. Differentiate types of bones and provide an example of each type.
VII. Learn and identify the three types of muscle and the muscular system's functions.
VIII. Learn and explain the major components of the nervous system and their functions

KNOWLEDGE

I. Provide a detailed description of the topography and structural organization of the brain and spinal cord, as well as the structure of neurons and glia cells and the main properties of the architecture of the brain and spinal cord.
II. Understand the functional anatomy of sensory and motor processing and of higher brain functions such as language and emotions.
III. Understand the importance of the position of organs and their relationship with adjacent structures.

SKILL

I. Identify or recognize various muscle tissues, bones and organs of the body

II. Identify the parts of the brain and other organs of the body.
III. Recognize the importance of an in-depth knowledge of the topics consistent with a proper medical education.
IV. Identify the fundamental role of a proper theoretic knowledge of the subject in the clinical practice.
V. Identify the possible use of the acknowledged skills in the future career.
VI. Assess the importance of the acquired knowledge in the overall medical education process.

ATTITUDE

Knowledge of anatomy will help to communicate with the clients and peers efficiently

Examination:

Written		Eligibility/Passing Marks		Practicals		Eligibility/Passing Marks		Total Marks
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
25	50	13	25	25	50	25	50	100

The internal assessment will be based on the following criteria -

Subject	**Theory**			**Practical/Viva**		
Anatomy I	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
50 marks	15	10	25	15	10	25

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs,Short answer questions, Brief answer questions and Long answer Questions

Scheme of examination for University Practical exam

Spots-Identification of soft parts (heart, RS, Circulatory system) & living Anatomy	Spots- Bones (Upper limbs,Thorax), Viva Voce	Presentation & Communication skills	Total
20marks	20 marks	10marks	50 marks

Semester pattern

For 50 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory and practical of 50 marks each

Annual pattern

For 100 marks-

2 periodicals of 20 marks each and 1 midterm exam of theory and practical of 50 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each.

Code no	Objectives/Competency Students should be able to	Domains of Learning	Competencies levels K/Kh/Sh/Ps	Core Y/N	Teaching Learning methods	Assessment methods	Vertical Integration	Horizintal Integration
			HUMAN ANATOMY II					
Features of individual bones (Lower Limb)			**No of Competencies-3**					
AN 1.1	Identify the given bone, its side, important features & keep it in anatomicalposition	K/S	SH	Y	DOAP session	Viva voce		
AN 1.2	Identify & describe joints formed by the given bone	K/S	SH	Y	Lecture, DOAP session	Viva voce		
AN 1.3	Describe the importance of ossification of lower end of femur & upper endof tibia	K	KH	Y	Lecture	Viva voce/Practicals	Medicine, Orthopaedics	
Topic-- Lower limb Region - Thigh			**No of competencies - 11**					
AN 2.1	Describe and demonstrate the type,	K/S	SH	Y	Practical, Lecture, Small	Written/ Viva voce/ skill assessment		

	articular surfaces, capsule, synovial membrane, ligaments, relations, movements and muscles involved, blood and nerve supply, bursae around the hip joint				group discussion, DOAP session			
AN 2.2	Describe and demonstrate origin, course, relations, branches (or tributaries), termination of important nerves and vessels of anterior,medial & gluteal region of thigh	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 2.3	Describe and demonstrate major muscles with their attachment, nerve supply and actions	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 2.4	Describe and demonstrate boundaries, floor, roof and contents of femoraltriangle	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 2.5	Describe anatomical basis of sciatic nerve injury during gluteal intramuscular injections	K	KH	Y	Lecture, DOAP session	Written/ Viva voce		
AN 2.6	Explain the anatomical basis of Trendelenburg sign	K	KH	Y	Lecture, DOAP session	Written/ Viva voce		
AN	Describe and	K/S	SH	Y	Practical, Lecture,	Written/ Viva voce/		

2.7	demonstrate the hamstrings group of muscles with their attachment, nerve supply and actions				Small group discussion, DOAP session	skill assessment		
AN 2.8	Describe and demonstrate the boundaries, roof, floor, contents and relations of popliteal fossa	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 2.9	Describe and demonstrate the type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements and muscles involved, blood and nerve supply, bursae around the hip joint	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 2.10	Describe anatomical basis of complications of fracture neck of femur	K	KH	N	Lecture	Written/ Viva voce		
AN 2.11	Describe dislocation of hip joint and surgical hip replacement	K	KH	N	Lecture	Written/ Viva voce		
Topic - Lower limb Region -Knee ,Leg & Foot					**No of competencies -** 16			
AN 3.1	Describe and demonstrate major muscles of anterolateral compartment of leg with their attachment, nerve supply and actions	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment	Orthopaedics	
AN	Describe and	K/S	SH	Y	Practical, Lecture,	Written/ Viva voce/		

3.2	demonstrate origin, course, relations, branches (or tributaries), termination of important nerves and vessels of of leg				Small group discussion,	skill assessment		
AN 3.3	Explain the anatomical basis of foot drop	K	KH	Y	Lecture,	Written/ Viva voce	OTSC, Surgery	
AN 3.4	Describe and demonstrate the type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements and muscles involved, blood and nerve supply, bursae around the knee joint	K/S	SH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voce/ skill assessment		
AN 3.5	Explain the anatomical basis of locking and unlocking of the knee joint	K	KH	Y	Small group teaching	Written/ Viva voce		
AN 3.6	Describe knee joint injuries with its applied anatomy	K	KH	N	Lecture	Written/ Viva voce		
AN 3.7	Explain anatomical basis of Osteoarthritis	K	KH	N	Lecture	Written/ Viva voce	Orthopaedics ,OT SC	
AN 3.8	Explain the anatomical basis of rupture of calcaneal tendon	K	KH	N	Lecture	Written/ Viva voce		
AN 3.9	Describe factors maintaining importance arches of the foot with its importance	K	KH	Y	Lecture	Written/ Viva voce		
AN	Explain the anatomical	K	KH	N	Lecture	Written/ Viva voce		

3.10	basis of Flat foot & Club foot							
AN 3.11	Explain the anatomical basis of Metatarsalgia & Plantar fasciitis	K	KH	N	Lecture	Written/ Viva voce		
AN 3.12	Describe and demonstrate the type, articular surfaces, capsule, synovial membrane, ligaments, relations, movements and muscles involved, bloodand nerve supply of tibiofibular and ankle joint	K/S	SH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voce/ skill assessment		
AN 3.13	Describe the subtalar and transverse tarsal joints	K	KH	N	Lecture	Written/ Viva voce		
AN 3.14	Describe and demonstrate Fascia lata, Venous drainage, Lymphatic drainage, Retinacula & Dermatomes of lower limb	K	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce/ OSPE		
AN 3.15	Explain anatomical basis of varicose veins and deep vein thrombosis	K	KH	Y	Lecture	Written/ Viva voce		
AN 3.16	Identify & demonstrate important bony landmarks of lower limb: -Vertebrallevels of highest point of iliac crest, posterior superior iliac spines, iliac tubercle, pubic tubercle,	K/S	SH	Y	Practical, Lecture, Small group discussion	Viva voce/ OSPE		

	ischial tuberosity, adductor tubercle, -Tibial tuberosity, head of fibula, -Medial and lateral malleoli, Condyles of femur and tibia, sustentaculum tali, tuberosity of fifth metatarsal, tuberosity of thenavicular							
Topic--Face ,Scalp ,neck			**No of Competencies**-13					
AN 4.1	Demonstrate anatomical position of skull, Identify and locate individual skull bones in skull	K/S	SH	Y	Lecture,	Viva voce/ skill assessment	Medicine ,Surgery	
AN 4.2	Describe features of typical and atypical cervical vertebrae (atlas andaxis)	K/S	SH	Y	Lecture,	Viva voce/ skill assessment		
AN 4.3	Describe the features of the 7th cervical vertebra	K/S	SH	N	DOAP session	Viva voce		
AN 4.4	Describe & demonstrate muscles of facial expression and their nervesupply	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 4.5	Describe sensory innervation of face	K	KH	Y	Practical, Lecture	Written/ Viva voce		
AN 4.6	Describe & demonstrate origin /formation, course, branches /tributaries of facial vessels	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		

AN 4.7	Describe & demonstrate branches of facial nerve with distribution	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessmentOSPE		
AN 4.8	Identify superficial muscles of face, their nerve supply and actions of facial muscles	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 4.9	Explain the anatomical basis of facial nerve palsy	K	KH	Y	Lecture	Written		
AN 4.10	Describe & demonstrate attachments, nerve supply, relations and actions of sternocleidomastoid	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 4.11	Explain anatomical basis of Erb's & Klumpke's palsy	K	KH	Y	Lecture	Written	Surgery, OTSC	
AN 4.12	Explain anatomical basis of wry neck	K	KH	N	Lecture	Written		
AN 4.13	Describe & demonstrate attachments of 1) inferior belly of omohyoid, 2)scalenus anterior, 3) scalenus medius & 4) levator scapulae	K/S	SH	N	Lecture, Practical	Written/ Viva voce		
Topic-Facial region		**No of Competencies**-10						
AN 5.1	Describe & identify extra ocular muscles of eyeball	K/S	SH	Y	Practical, Lecture, Small group	Written/ Viva voce/ skill assessment	Surgery	

					discussion, DOAP session			
AN 5.2	Describe & demonstrate nerves and vessels in the orbit	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 5.3	Describe anatomical basis of Horner's syndrome	K	KH	N	Lecture	Written		
AN 5.4	Explain the anatomical basis of oculomotor, trochlear and abducent nerve palsies along with strabismus	K	KH	Y	Lecture	Written		
AN 5.5	Describe & demonstrate attachments, direction of fibres, nerve supply and actions of muscles of mastication	K/S	SH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voce/ skill assessment		
AN 5.6	Describe & demonstrate articulating surface, type & movements of temporomandibular joint	K/S	SH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voce/ skill assessment		
AN 5.7	Explain the clinical significance of pterygoid venous plexus	K	KH	Y	Lecture	Written		
AN 5.8	Describe the features of dislocation of temporomandibular joint	K	KH	N	Lecture	Written		
AN 5.9	Describe & demonstrate the morphology, relations and nerve supply of submandibular	K/S	SH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voce/		

	salivary gland & submandibular ganglion							
AN 5.10	Describe the basis of formation of submandibular stones	K	KH	N	Lecture	Written		
Topic _-Vertebral column,Spinal Cord					**No of Competencies - 17**			
AN 6.1	Describe the parts, extent, attachments, modifications of deep cervicalfascia	K	KH	Y	Lecture	Written		
AN 6.2	Describe & demonstrate location, parts, borders, surfaces, relations & blood supply of thyroid gland	K/S	KH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voce		
AN 6.3	Demonstrate & describe the origin, parts, course & branches subclavian artery	K/S	KH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voce/	Surgery,Orthopaedics	
AN 6.4	Describe & demonstrate origin, course, relations, tributaries and termination of internal jugular & brachiocephalic veins	K/S	SH	Y	Practical, Lecture, Small group discussion	Written/ Viva voce/		
AN 6.5	Describe the course and branches of IX, X, XI & XII nerve in the neck	K	KH	Y	Lecture	Written		
AN 6.6	Describe the anatomically relevant clinical features of Thyroid swellings	K	KH	N	Lecture	Written		
AN 6.7	Describe the clinical features of compression of subclavian artery and	K	KH	N	Lecture	Written		

	lower trunk of brachial plexus by cervical rib							
AN 6.8	Describe the contents of the vertebral canal	K/S	SH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voce/ skill assessment		
AN 6.9	Describe the boundaries and contents of Suboccipitaltriangle	K	KH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voce/ skill assessment		
AN 6.10	Describe the curvatures of the vertebral column	K	KH	Y	Lecture	Written/ Viva voce		
AN 6.11	Describe & demonstrate the type, articular ends, ligaments and movements of Intervertebral joints, Sacroiliac joints & Pubic symphysis	K/S	SH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voc/eOSPE		
AN 6.12	Explain the anatomical basis of Scoliosis, Lordosis, Prolapsed disc, Spondylolisthesis & Spina bifida	K	KH	N	Lecture	Written		
AN 6.13	Identify external features of spinal cord	K/S	SH	Y	Practical, Lecture, Small group discussion,	Written/ Viva voce/	OTOC, OTNC	
AN 6.14	Describe extent of spinal cord in child & adult with its clinical implication	K	KH	Y	Lecture	Written/ Viva voce		
AN 6.15	Draw & label transverse section of spinal cord at mid-cervical & mid-thoracic level	K	KH	Y	Lecture	Written/ Viva voce		

AN 6.16	Enumerate ascending & descending tracts at mid thoracic level of spinal cord	K	KH	Y	Lecture	Written/ Viva voce		
AN 6.17	Describe anatomical basis of syringomyelia	K	KH	N	Lecture	Written	OTNC, Neuroogy	
Topic- Brain			**No of Competencies- 21**					
AN 7.1	Identify external features of medulla oblongata	K/S	SH	Y	Lecture, DOAP session	Written/ Viva voce	Neurology, OTNC	
AN 7.2	Describe transverse section of medulla oblongata at the level of 1)pyramidal decussation, 2) sensory decussation 3) ION	K	KH	Y	Lecture	Written/ Viva voce		
AN 7.3	Enumerate cranial nerve nuclei in medulla oblongata with their functionalgroup	K	KH	Y	Lecture	Written/ Viva voce		
AN 7.4	Describe anatomical basis & effects of medial & lateral medullary syndrome	K	KH	N	Lecture	Written		
AN 7.5	Identify external features of pons	K/S	SH	Y	Lecture, DOAP session	Written/ Viva voce/		
AN 7.6	Draw & label transverse section of pons at the upper and lower level	K	KH	Y	Lecture	Written/ Viva voce		
AN 7.7	Enumerate cranial nerve nuclei in pons with their functional group	K	KH	Y	Lecture	Written/ Viva voce		
AN 7.8	Describe & demonstrate external & internal features of cerebellum	K/S	SH	Y	Practical, Lecture, Small group	Written/ Viva voce/		

					discussion, DOAP			
AN 7.9	Describe connections of cerebellar cortex and intracerebellar nuclei	K	KH	Y	Lecture	Written/ Viva voce		
AN 7.10	Describe anatomical basis of cerebellar dysfunction	K	KH	N	Lecture	Written		
AN 7.11	Identify external & internal features of midbrain	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 7.12	Describe internal features of midbrain at the level of superior & inferiorcolliculus	K	KH	Y	Lecture	Written/ Viva voce		
AN 7.13	Describe anatomical basis & effects of Benedikt's and Weber's syndrome	K	KH	N	Lecture	Written		
AN 7.14	Enumerate cranial nerve nuclei with its functional component	K	KH	Y	Lecture	Written/ Viva voce	Neurology,OTNC	Physiology
AN 7.15	Describe & demonstrate surfaces, sulci, gyri, poles, & functional areas ofcerebral hemisphere	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 7.16	Describe the white matter of cerebrum	K	KH	Y	Lecture	Written/ Viva voce		
AN 7.17	Enumerate parts & major connections of basal ganglia & limbic lobe	K	KH	Y	Lecture	Written/ Viva voce		

AN 7.18	Describe boundaries, parts, gross relations, major nuclei and connections of dorsal thalamus, hypothalamus, epithalamus, metathalamus and subthalamus	K	KH	Y	Lecture	Written/ Viva voce		
AN 7.19	Describe & identify formation, branches & major areas of distribution of circle of Willis	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 7.20	Describe & demonstrate parts, boundaries & features of IIIrd, IVth & lateral ventricle	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
AN 7.21	Describe anatomical basis of congenital hydrocephalus	K	KH	N	Lecture	Written		
Topic: : Abdominal cavity		**Number of competencies: 4**						
AN 8.1	Describe boundaries and recesses of Lesser & Greater sac	K	KH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce	Surgrry	
AN 8.2	Describe & identify the origin, course, important relations and branches of Abdominal aorta, Coeliac trunk, Superior mesenteric, Inferior	K	KH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		

	mesenteric & Common iliac artery							
AN 8.3	Describe important nerve plexuses of posterior abdominal wall,describe the abdominal muscles in different layers	K	KH	N	Lecture	Written		
AN 8.4	Describe & demonstrate the attachments, openings, nerve supply & action of the thoracoabdominal diaphragm	K/S	SH	Y	Practical, Lecture, Small group discussion, DOAP session	Written/ Viva voce/ skill assessment		
Topic: Perenial Region ,Sacral Plexus				**Number of competencies: 8**				
AN 9.1	Describe the (position, features, important peritoneal and other relations, blood supply, nerve supply, lymphatic drainage and clinical aspects of) important male & female pelvic viscera	K	KH	Y	Practical, Lecture, Small group discuss	Written/ Viva voce/		
AN 9.2	Desccribe the origin, course, important relations andbranches of internal iliac artery	K	H	Y	Practical, Lecture, Small group discussion	Written/ Viva voce		
AN 9.3	Describe the branches of sacral plexus	K	KH	Y	Lecture	Written		
AN 9.4	Describe the neurological basis of Automatic bladder	K	KH	N	Lecture	Written		
AN 9.5	Describe the superficial & deep perineal pouch (boundaries and	K	KH	Y	Lecture, Small group discussion	Written/ Viva voc		

	contents)							
AN 9.6	Describe & identify Perineal body	K/	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce		
AN 9.7	Describe Perineal membrane in male & female	K/S	KH	Y	Lecture, Small group discussion, DOAP session	Written/ Viva voce/		
AN 9.8	Explain the anatomical basis of Perineal tear, Episiotomy, Perianal abscess and Anal fissure	K	KH	N	Lecture	Written		
Topic: Larynx,Eyes,hearing & organs of equilibrium					**Number of competencies: 4**			
AN 10.1	Describe the morphology, identify structure of the wall, nerve supply, blood supply and actions of intrinsic and extrinsic muscles of the larynx	K/S	SH	Y	Practical, Lecture, Small group discussion	Written/ Viva voce		Surery,OTSC
AN 10.2	Describe the anatomy of ear	K	KH	N	Lecture	Written		
AN 10.3	Describe anatomy of eyes & muscles	K	KH	N	Lecture	Written		
AN 10.4	Explain the anatomical basis of hypoglossal nerve palsy	K	KH	N	Lecture	Written		
Topic:Radiological Anatomy					**Number of competencies: 2**			
AN 11.1	Understand Various imaging techniques with Principles of plain radiograms and CT scan,	K	KH	N	Lecture	Written	orthopaedics	

	Ultrasonography,							
AN 11.2	. Bones and joints seen in AP and lateral view radiographs of hip, knee, ankle joints and foot	K	KH	N	Lecture	Written		
Topic: Applied Anatomy			**Number of competencies: 3**					
AN 12.1	. **Muscles** **Describe** Classification, each type: structure, ultrastructure, function, applied anatomy	K	KH	N	Lecture	Written		
AN 12.2	**Nervous Tissue** .:Describe structure, coverings, functionsof Peripheral nerve&. Ganglia:	K	KH	N	Lecture	Written		
AN 12.3	. **Skin** Describe Types: features of skin with examples and functions, cells, appendages	K	KH	N	Lecture	Written		

Reference Book

S. No.	Name of the Book	Edition
	Gross Anatomy	
1.	B. D. Chaurasia's Human Anatomy. Volume: 1, 2, 3, 4	8th
2.	Vishram Singh's Textbook of Anatomy. Volume: 1, 2, 3	3rd
3.	Vishram Singh's Textbook of Neuroanatomy	4th
4.	B. D. Chaurasia's General Anatomy	6th
5.	Netter's Human Anatomy Atlas	7th
6.	Grant's Human Anatomy Atlas	13th
7.	Vishram Singh's General Anatomy	
8.	Gray's Anatomy for Students	
	Histology	
9.	Histology Text and Atlas. Brijesh Kumar	2nd
	Surface Anatomy and Radiology	
10.	Surface and Radiological Anatomy. A. Halim	3rd
11.	Cunningham's Practical Anatomy	

HUMAN PHYSIOLOGY II

Course Description:

An overall goal of this course is to enable students to understand the role of molecules, cells, tissues, organs, and organ systems (nervous, muscular and immune systems) in human health and disease. This class focuses on understanding physiology –the functioning of a living organism and its component parts. This requires going beyond memorization of facts to acquire an understanding of how and why the body functions the way it does, and what happens when it does not function properly.

COURSE OBJECTIVES:

A. KNOWLEDGE

1. Understanding of the physiology and basic regulatory concepts related to the functioning of life processes

Understand the functions of important physiological systems including the Neuromuscular system, Neurophysiology and metabolic systems;

2. State the functions of each organ system of the body, explain the mechanisms by which each function, and relate the functions and the anatomy and histology of each organ system.
3. Understand and demonstrate the interrelations of the organ systems to each other
4. Predict and explain the integrated responses of the organ systems of the body to physiological and pathological stresses.
5. Understand physiology of the neuromuscular system, particularly the regulation of strength and velocity of a contraction by muscle receptors interacting with the nervous system.
6. Understand the function of the endocrinal, Nervous and reproductive systems at rest and during exercise, and their adaptations to training.
7. Explain the pathophysiology of common diseases related to the organ systems of the body.

B. SKILL

1. Perform, analyse and report on experiments and observations in physiology
2. Recognise and identify principal tissue structures.
3. Identify different blood cells in a film, and indicate the identifying features of each type of leukocyte.
4. Clinically examine the Nervous, muscular system.
5. Demonstrate the correct clinical examination of the nervous system: Higher functions, sensory system, motor system, reflexes and cranial nerves in a normal

.

Scheme of Examination:

Written	Eligibility/Passing Marks	Practicals	Eligibility/Passing Marks	Total Marks

Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
25	50	13	25	25	50	25	50	100

The internal assessment will be based on the following criteria -

Subject	**Theory**			**Practical/Viva**		
Human Physiology II	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
50 marks	15	10	25	15	10	25

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs, Short answer questions, Brief answer questions and Long answer Questions

Scheme of examination for University Practical exam

Spots- Identification of soft parts	**Clinical Examination - PNF, CNS & Viva Voce**	**Presentation & Communication skills**	**Total**
20marks	**20 marks**	**10marks**	**50 marks**

Semester pattern

For 50 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory and practical of 50 marks each

Annual pattern

For 100 marks-

2 periodicals of 20 marks each and 1 midterm exam of theory and practical of 50 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

Code no	Objectives/Competency Students should be able to	Domains of Learning	Competencies levels K/Kh/Sh/Ps	Core Y/N	Teaching Learning methods	Assessment methods	Vertical Integration	Horizontal Integration
HUMAN PHYSIOLOGY II								
Topic: Nerve and Muscle Physiology			**No of Competencies-(15)**					
PI 1.1	Describe the structure and functions of a neuron and neuroglia; Discuss Nerve Growth Factor & other growth factors/cytokines	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 1.2	Describe the types, functions & properties of nerve fibers	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	OTDP I, OTSC, OTMC, OTOC, OTNC	FOT I
PI 1.3	Describe the degeneration and regeneration in peripheral nerves	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	OTDP I, OTSC, OTMC, OTOC, OTNC	FOT I
PI 1.4	Describe the structure of neuro-muscular junction and transmissionof impulses	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	OTDP I, OTSC, OTMC, OTOC, OTNC	FOT I
PI 1..5	Discuss the action of neuro-muscular blocking agents	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 1.6	Describe the pathophysiology of Myasthenia gravis	K	KH	Y	Lecture, Small groupdiscussion	Written/Viva voce	Medicine, OTNC	
PI 1.7	Describe the different types of muscle fibres and their structure	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 1.8	Describe action potential and its properties in different muscle types (skeletal & smooth)	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 1.9	Describe the molecular basis of muscle contraction in	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		

	skeletal and in smooth muscles							
PI 1.10	Describe the mode of muscle contraction (isometric and isotonic)	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		FOT I, OTDP I
PI 1.11	Explain energy source and muscle metabolism	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 1.12	Explain the gradation of muscular activity	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 1.13	Describe muscular dystrophy: myopathies	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 1.14	Perform Ergography	S	SH	Y	DOAP sessions	Practical/OSPE/Viva voce		
PI 1.15	Demonstrate effect of mild, moderate and severe exercise and record changes in cardiorespiratory parameters	S	SH	Y	DOAP sessions	Practical/OSPE/Viva voce	Work physiology , OTMC	FOT I
Topic - Gastro-intestinal Physiology		**No of competencies – (8)**						
PI 2.1	Describe the structure and functions of digestive system	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.2	Describe the composition, mechanism of secretion, functions, and regulation of saliva, gastric, pancreatic, intestinal juices and bile secretion	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.3	Describe GIT movements, regulation and functions. Describe defecation reflex. Explain role of dietary fibre.	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.4	Describe the physiology of digestion and absorption of nutrients	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI	Describe the source of GIT	K	KH	Y	Lecture, Small	Written/Viva voce		

2.5	hormones, their regulation and functions				group discussion			
PI 2.6	Describe the Gut-Brain Axis	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.7	Describe & discuss the structure and functions of liver and gallbladder	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 2.8	Describe & discuss gastric function tests, pancreatic exocrine function tests & liver function tests	K	KH	Y	Lecture, Small group discussion, Demonstration Esophageal Manometry & endoscopy	Written/Viva voce		
Topic - Reproductive Physiology		**No of competencies – (5)**						
PI 3.1	Describe and discuss sex determination; sex differentiation and their abnormities and outline psychiatry and practical implication of sex determination.	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		Orthopaedics
PI 3.2	Describe and discuss puberty: onset, progression, stages; early and delayed puberty and outline adolescent clinical and psychological association.	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 3.3	Describe male reproductive system: functions of testis and control of spermatogenesis & factors modifying it and outline its association with psychiatric illness	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI	Describe female	K	KH	Y	Lecture, Small	Written/Viva voce		

3.4	reproductive system: (a) functions of ovary and its control; (b) menstrual cycle - hormonal, uterine and ovarian changes				group discussion			
PI 3.5	Describe and discuss the physiological effects of sex hormones	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
Topic--Neurophysiology		**No of Competencies- 18**						
PI 4.1	Describe and discuss the organization of nervous system	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 4.2	Describe and discuss the functions and properties of synapse, reflex, receptors	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 4.3	Describe and discuss somatic sensations & sensory tracts	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	Medicine, OTSCII	
PI 4.4	Describe and discuss motor tracts, mechanism of maintenance of tone, control of body movements, posture and equilibrium & vestibular apparatus	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	OTSC I,Medicine	
PI 4.5	Describe and discuss structure and functions of reticular activating system, autonomic nervous system (ANS)	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	OTSC I,Medicine	
PI 4.6	Describe and discuss Spinal cord, its functions, lesion & sensory disturbances	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	FOT I, OTSC I, OTOC, OTNC, Orthopaedics	Anatomy
PI 4.7	Describe and discuss functions of cerebral cortex, basal ganglia, thalamus, hypothalamus, cerebellum	K	KH	Y	Lecture, Small groupdiscussion	Written/Viva voce	Medicine, OTDP II, OTNC	

	and limbic system and their abnormalities							
PI 4.8	Describe and discuss behavioural and EEG characteristics during sleep and mechanism responsible for its production	K	KH	Y	Lecture, Small groupdiscussion	Written/Viva voce	OTPSY, Psychology	
PI 4.9	Describe and discuss the physiological basis of memory, learningand speech	K	KH	Y	Lecture, Small groupdiscussion	Written/Viva voce	Psychology, OTMC, OTPSY	
PI 4.10	Describe and discuss chemical transmission in the nervous system.(Outline the psychiatry element).	K	KH	Y	Lecture, Small groupdiscussion	Written/Viva voce		
PI 4.11	Demonstrate the correct clinical examination of the nervous system: Higher functions, sensory system, motor system, reflexes, cranial nerves in a normal volunteer or simulated environment	S	P	Y	DOAP sessions	Skill assessment/ Vivavoce/OSCE	OTDP I,OTDP II, OTNC	
PI 4.12	Identify normal EEG forms	S	S	Y	Small group teaching	OSPE/Viva voce		
PI 4.13	Describe and discuss perception of smell and taste sensation	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	OTDP II, OTNC	
PI 4.14	Describe and discuss patho-physiology of altered smell and tastesensation	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	OTDP II, OTNC	
PI 4.15	Describe and discuss functional anatomy of ear and auditory pathways & physiology of hearing	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	Surgery, OTSC	
PI	Describe and discuss	K	KH	Y	Lecture, Small group	Written/Viva voce	Surgery, OTSC	

4.17	functional anatomy of eye, physiology of image formation, physiology of vision including colour vision, refractive errors, colour blindness, physiology of pupil and light reflex				discussion			
PI 4.18	Describe and discuss the physiological basis of lesion in visualpathway	K	KH	Y	Lecture, Small group discussion	Written/Viva voce	Surgery,OTSC	
Topic- Integrated Physiology		**No of Competencies-(9)**						
PI 5.1	Describe and discuss mechanism of temperature regulation	K	KH	Y	Lecture, Small group discussion	Written/Viva voce		
PI 5.2	Describe and discuss adaptation to altered temperature (heat andcold)	K	KH	Y	Lecture, Small groupdiscussion	Written/Viva voce		
PI 5.3	Describe and discuss cardio-respiratory and metabolic adjustments during exercise; physical training effects	K	KH	Y	Lecture, Small groupdiscussion	Written/Viva voce		
PI 5.4	Discuss & compare cardio-respiratory changes in exercise (isometric and isotonic) with that in the resting state and under different environmental conditions (heat and cold)	K	KH	Y	Lecture, Small groupdiscussion	Written/Viva voce		
PI 5.5	Describe physiology of Infancy	K	KH	N	Lecture, Small groupdiscussion	Written/Viva voce		
PI	Interpret growth charts	K	KH	N	Small group teaching	Practical/OSPE/		

5.6						Vivavoce		
PI 5.7	Interpret anthropometric assessment of infants	K	KH	N	Small group teaching	Practical/OSPE/ Vivavoce		
PI 5.8	Discuss the physiological effects of meditation	K	KH	N	Lecture, Small groupdiscussion	Written/Viva voce		
PI 5.9	Describe and discuss physiology of aging; free radicals andantioxidants	K	KH	N	Lecture, Small groupdiscussion	Written/Viva voce		

Reference Books:

1. Text book on Medical Physiology – Guyton,12th Edition
2. Textbook of Physiology – A K Jain.
3. Review of Medical Physiology – Ganong
4. Samson & Wright's Applied Physiology
5. Textbook of Medical Physiology – Bern and Levy.

FUNDAMENTS OF OCCUPATIONAL THERAPY - II

Course description:

This course gives an introduction to the foundational concepts of Occupational Therapy. This course introduces students to the professional standards, ethical principles, and documentation in occupational therapy practice. It also gives an overview of the Occupation Therapy process, its frameworks, components – Activities of daily living, Work, hand functions and hand splinting.

Goal:

The primary goal of a first-year occupational therapy program is to lay the foundational knowledge and skills necessary for students to become competent and ethical occupational therapy practitioners. The program encourages students to progress through their education with a solid understanding of the profession and the skills needed to begin their journey as occupational therapy professionals.

Objectives:

E. **Knowledge**

At the end of the first year, the student should be able to

1. remember and understand conceptual foundations of ethics and documentation
2. understand the therapeutic relationship between the patient and the therapist.
3. understand the role of activities of daily living for maintaining health, well-being, and participation in social and community life
4. understand concept of work and work evaluation and apply knowledge for return to work when dealing with clients in the forthcoming years
5. understand the basic hand functions and assessment tools used
6. identify equipment, material, and tools used in occupational therapy practice
7. understand basics of hand splint making.

F. **Skills**

At the end of the first year, the student should be able to

1. Analyse various jobs with respect to psychological and physical demands
2. Demonstrate making a paper pattern of commonly used hand splints by applying the principles of splint making.

G. **Attitude**

At the end of the first year, the student should be able to

1. Demonstrate understanding of respect and empathy in conduct with patients

Scheme of Examination:

Written		Eligibility/Passing Marks		Practicals		Eligibility/Passing Marks		Total Marks
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
50	100	25	50	50	100	25	50	200

The internal assessment will be based on the following criteria -

Subject	Theory			Practical/Viva		
FOT II	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
100 marks	30	20	50	30	20	50

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs, Short answer questions, Brief answer questions and Long answer Questions

Scheme of examination for University Practical exam

JobAnalysis (Any of any two from Heavy, moderate, Light, sedentary jobs) & Viva Voce	Identification of Splint Tools, Materials & equipments) (Spots any 4) & Viva Voce	Splints Paper Patterns & Viva Voce	Presentation & communication skills	Total
20marks	**40marks**	**20marks**	**20 marks**	**100 marks**

Semester pattern

For 100 marks- In semester pattern- 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

Annual pattern

For 100 marks- 2 periodicals of 20 marks each and 1 midterm exam of theory and practical of 50 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

Sr. No.	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Teaching - Learning Methods	Assessment Methods	Number required to	Vertical Integration	Horizontal Integration

							certify P		
FUNDAMENTS OF OCCUPATIONAL THERAPY - II									
1.Topic : Code of Ethics and Conduct in Occupational Therapy		**Number of Competencies: 5**				**Number of procedures for certification : (NIL)**			
FOT II 1.1	Define the terms ethics, morality and moral reasonining	K	K	Y	Lecture	Written, viva			
FOT II 1.2	Discuss ethical implications of trends in healthcare and Occupational therapy practice	K, A	K/KH	Y	Lecture, Small group discussion ,Role play	Written, viva			
FOT II 1.3	Enumerate the ethical theories and principles that apply to clinical practice of occupational therapy	K	K	Y	Lecture	Written, viva			
FOT II 1.4	Enumerate the code of ethics and the principles of American Occupational Therapists's Association (AOTA) and All India Occupational Therapists's Association (AIOTA) , National Commission of Allied & Healthcare Professionals	K	K	Y	Lecture	Written			
FOT II 1.5	Outline the ethical elements of the therapeutic relationship between client and Therapist	K, A	KH	Y	Lecture, Small group discussion, Role play	Written, viva			
Topic : Uniform Terminology and Occupational Therapy Practice Framework			**Number of Competencies:4**			**Number of procedures for certification : (NIL)**			
FOT II 2.1	Describe historical overview of uniform terminology	K	K	Y	Lecture	Written			
FOT II 2.2	Describe the evolution of the occupational therapy practice framework (OTPF)	K	K	Y	Lecture	Written, viva			
FOT II 2.3	Describe Domains (Occupations, Contexts, Performance Patterns, Performance Skills & Client Factors) and Practice (Evaluation, Intervention & Outcomes)of OTPF	K	K/KH	Y	Lecture	Written, viva			
FOT II 2.4	Give brief overview of ICF	K	K	Y	Lecture	Written, viva			
Topic : Overview of the Occupational Therapy process and outcome			**Number of competencies: 2**			**Number of procedures for certification : (NIL)**			
FOT II 3.1	Describe Occupational therapy as a process and enumerate its components	K	K/KH	Y	Lecture	Written, viva			
FOT II 3.2	Describe the evaluation related to Occupational profile, occupational performance and targeted outcomes	K	K/KH	Y	Lecture	Written, viva			
Topic : Documentation of Occupational Therapy Services			**Number of Competencies: 3**			**Number of procedures for certification : (NIL)**			
FOT II 4.1	Describe the terms Screening, Evaluation and Assessment	K	K	Y	Lecture	Written, viva			

FOT II 4.2	Differentiate standardised, non standardised, subjective and objective assessments	K	K/ KH	Y	Lecture	Written, viva			
FOT II 4.3	Understand purpose and types of documentation	K	K	Y	Lecture	Written , viva			
Topic : Activities of Daily Living Number of Competencies: 4 Number of procedures for certification : (NIL)									
FOTII 5.1	Define and classify activities of daily living (ADL)	K	K	Y	Lecture	Written, viva			
FOT II 5.2	Discuss ADL evaluation and describe various scales used in evaluation of both basic and instrumental ADL	K	K/KH	Y	Lecture, DOAP, CASE STUDY	Written, viva			
FOT II 5.3	Discuss and understand principles and Specific Techniques in ADL Training for: Weakness, Low Endurance, Limited Range of Motion, Inco-ordination, Loss of Use of One Side of the Body, Limited Vision, Decreased Sensation, Access to Home, Community and Workplace	K	K/ KH	Y	Lecture, demonstration	Written, viva			
FOTII 5.4	Define Adaptation and explain its process	K	K	Y	Lecture,	Written, viva			
Topic : Return to Work Number of Competencies: 5 Number of procedures for certification : (NIL)									
FOT II 6.1	Define and classify work	K	K	Y	Lecture	Written, viva			
FOT II 6.2	Understand and describe Work Evaluations & its assessment tools –	K	K/KH	Y	Lecture, Tutorial, Small Group discussionDemonstration	Written, viva			
FOT II 6.3	Define Prevocational Testing and Training and describe work conditioning and work hardening	K	K/KH	Y	Lecture, small group discussion	Written, viva			
FOT II 6.4	Enumerate assessment needs and components of job analysis	K	K/KH	Y	Lecture	Written, viva			
FOT II 6.5	Understand and explain job analysis of Tailoring, carpentry, Driving, data entry on computers	K/S	K/KH/SH	Y	Lecture, Tutorial, Demonstration	Written, viva			
Topic : Hand Functions & its Evaluation Methods Number of Competencies: 4 Number of procedures for certification : (NIL)									
FOT II 7.1	Define and classify normal hand functions	K	KH	Y	Lecture	Written, viva			
FOT II 7.2	Describe resting and functional position of the hand	K	KH	Y	Lecture, Demonstrate	Written, viva			
FOT II 7.3	Describe various assessment methods for hand functions	K/S	K/KH/SH	Y	Lecture, DOAP	Written, viva, DOP			

FOT II 7.4	Define oedema and describe its assessment by various methods	K/S	K/KH/SH	Y	Lecture, DOAP	Written, viva, DOP			
Topic: Tools, Equipment and Materials Used in Splint Fabrication Number of Competencies: 4 Number of procedures for certification: (NIL)									
FOT II 8.1	Identify and explain the types, components, therapeutic values & demonstrate the uses of various tools used in fabrication of splints	K/S	K/KH/SH	Y	Lecture, demonstration	Written, OSPE, spots			
FOT II 8.2	Identify and explain the uses of various equipments used in fabrication of splints	K/S	K/KH/SH	Y	Lecture, demonstration	Written, OSPE, spots			
FOT II 8.3	Identify and explain the uses of various materials used in fabrication of splints	K/S	K/KH/SH	Y	Lecture, demonstration	Written, OSPE, spots			
FOT II 8.4	understand and apply its knowledge in use, storage and maintenance of tools and equipments	K	K/KH	Y	Lecture, demonstration	Written, viva			
Topic : Introduction to Hand Splinting Number of Competencies:6 Number of procedures for certification : (NIL)									
FOT II 9.1	Define & classify hand splints	K	KH	Y	Lecture,	Written, viva			
FOT II 9.2	Explain the various characteristics of splint fabrication materials	K	KH	Y	Lecture,	Written, viva			
FOT II 9.3	Enumerate the indications and therapeutic uses of hand splints	K	KH	Y	Lecture	Written, viva			
FOT II 9.4	Describe the various principles of hand splints	K	KH	Y	Lecture,	Written, viva			
FOT II 9.5	Demonstrate the fitting and the check out of hand splints	K/S	KH/SH	Y	Lecture, demonstration	Written, viva			
FOT II 9.6	Prepare the paper model of following splints – finger gutter , functional hand splint, short opponens, radial bar cock up, dynamic extension outrigger splint.	K/S	KH/SH	Y	DOAP	DOP, Practical			

Reference Books:

1. Willard and Spackman's Occupational Therapy by Elizabeth Blesedel Crepeau, Ellen S. Cohn, Barbara A. Boyt Schell.
2. Occupational Therapy - Practice Skills for Physical Dysfunction by Lorraine Williams Pedretti. Published by Mosby
3. Occupational Therapy for Physical Dysfunction by Catherine A. Trombly, Mary Vining Radomski. Published by Lippincott Williams & Wilkins
4. Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice by Annie Turner, Marg Foster, Sybil E. Johnson. Published by Churchill Livingstone
5. Therapeutic Exercise by John V. Basmajian& Steven L. Wolf. Published by Williams & Wilkins

6. Therapeutic Exercise, Foundation & Techniques by Carolyn Kisner & Lynn Allen Colby. Published by F. A. Davis Company
7. Muscle Testing & Function by F.P. Kendall
8. Daniel's &Worthingham's Muscle Testing.
9. Measurement of Joint Motion: A guide to goniometry by C.C. Norkin & D. J. White
10. Principle of Exercise Therapy by Dena Gardiner

ENVIRONMENTAL SCIENCES

Course description :

This course gives a brief overview of understanding of the effects of climate change on the natural systems and processes on earth, need for substantive environmental laws and growing public awareness of a need for action in addressing environmental problems

Goal:

The primary goal of environmental sciences is to make the first year Occupational Therapy under graduate aware about the environmental problems and need for action in addressing them.

Objectives:

A. Knowledge

At the end of the first year, the student should be able to

1. remember and understand the ecological and biological concepts of environment
2. explain forms of energy, effects of climate change and conservation methods as relating to green house gas emissions
3. understand and be aware about the policy and governance and ethics related to environment

Scheme of Examination:

Written		Eligibility/Passing Marks		Practical		Eligibility/Passing Marks		Total Marks
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
50	NA	25	NA	NA	NA	NA	NA	50

Total Theory Marks: 50

Theory Internal Assessment Marks: 50
MCQs, Short answer questions, Brief answer questions and Long answer Questions
Theory University Examination Marks: NUE

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Teaching - Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
ENVIRONMENTAL SCIENCES									
1. Topic : Introduction to Ecology and Biology (NIL)			Number of Competencies: 8				Number of procedures for certification :		
EV 1.1	Explain the concepts of ecosystems and ecology	K	K		Lecture	Written			
EV 1.2	Describe Biotic and abiotic components of ecosystem and the Interactions between populations and communities in an ecosystem	K	KH		Lecture	Written			
EV 1.3	Describe cycling and importance of essential and nonessential chemicals in biosphere	K	KH		Lecture	Written			
EV 1.4	Describe the two main kingdoms of Biology i.e. plant and animal kingdoms	K	K		Lecture	Written			
EV 1.5	Discuss the functioning of basic unit of life i.e. cell	K	K		Lecture	Written			
EV 1.6	Enumerate Principles of biological diversity	K	K		Lecture	Written			
EV 1.7	Enumerate causes and consequences of biodiversity loss	K	K		Lecture	Written			
EV 1.8	Explain established and emerging conservation actions and measures.	K	KH		Lecture	Written			
2. Topic : Energy, Climate change, Economics and Environment procedures for certification : (NIL)			**Number of Competencies: 8**				**Number of**		
EV 2.1	Enumerate the various forms of energy	K	K		Lecture	Written			

EV 2.2	Describe the effect of the various forms of energy on the climate of the planet	K	KH		Lecture	Written			
EV 2.3	Explain economics of energy use	K	K		Lecture	Written			
EV 2.4	Enumerate the factors that determine the climate of our planet	K	K		Lecture	Written			
EV 2.5	Explain the natural variability and variations in climate due to anthropogenic causes	K	KH		Lecture	Written			
EV 2.6	Discuss the policies related to climate change	K	K		Lecture	Written			
EV 2.7	Describe Procedures, tools and techniques for Environmental Impact Assessment (EIA)	K	K		Lecture	Written			
EV 2.8	Explain the concepts of carbon accounting & carbon footprint and greenhouse gas emission	K	KH		Lecture	Written			
3. Topic : Policy and Governance (NIL)Policy and Governance			**Number of Competencies: 4**			**Number of procedures for certification :**			
EV 3.1	Explain the concept of Environmental Law and Governance	K	K		Lecture	Written			
EV 3.2	Describe Formulation of Environmental Policy, and its Implementation and Evaluation	K	KH		Lecture	Written			
EV 3.3	Explain Environmental Ethics and Justice	K	KH		Lecture	Written			
EV 3.4	Describe role of research in conservation science	K	KH		Lecture	Written			

II BOT

II BOT ANNUAL PATTERN									
Sr.no.	Course code	Subject	Total Teaching Hours/Semester			Credits			Marks
			Theory	Practical/Demo/Lab work	Clinical	Theory	Practical/Demo/Lab work	Clinical	Total
1	PM	Pathology & Microbiology	90	--	--	6		--	Theory-100
2	PM	pharmacology	45	--	--	3		--	Theory-50
3	PSY	Psychology	90	10	--	6	0.33		Theory-100
4	BMK	Biomechanics & Kinesiology	90	120	--	6	4		Theory-100 Practical-100
5	OTDP I	Occupational Therapy Diagnostic & practice I	90	105	--	6	3.5		Theory-100 Practical-100
6	OTDP II	Occupational	90	120	--	6	4		Theory-

		Therapy Diagnostic & practice II							100 Practical-100
7	COMP	Computer Sciences	30	15		2	0.5		Theory-50 (NUE)
8	FAE	First aid & Emergency Care	30	30		2	1		Theory-50 (NUE)
9		Supervised Clinical Traninig / Field Work			605			13.44	
Total Marks									850
Total Hours			1560						
Total no. of Credits as per heads						37	13.33	13.44	
Total Credits			63.77						

"NUE-- Non University Examinations "

Setting Question Paper will be done as per the subjects in semester pattern & as per Section A and Section B (where ever applicable) Syllabus of annual pattern.
2. The examination of NUE Subjects will be at the college level and the students' needs to pass the college level examination with minimum 50% scoring before appearing for the University Examination. the marks of NUE subject will not be added with University Marks but will be reflected in the
Marks Sheet given by the University
3. Internal Assessment passing score: 50% combined in theory and practical (not less than 40% in each) for eligibility in appearing for University Examinations
4. University Examination:
Mandatory 50% marks In theory and practical (practical = practical/clinical & viva)
(theory=theory paper(s)only Internal assessment marks are not to be added to marks of the University examination and should be shown separately in the grade card

Semester Pattern:

SEMESTER III									
Sr.no.	**Course code**	**Subject**	**Total Teaching Hours/Semester**			**Credits**			**Marks**
			Theory	**Practical/Demo/Lab work**	**Clinical**	**Theory**	**Practical/Demo/Lab work**	**Clinical**	**Total**
1	PM	Pathology & Microbiology	90	--	--	6		--	Theory-100
2	PSY I	Psychology I	45	--	--	3			Theory-50
3	BMK I	Biomechanics & Kinesiology I	45	60	--	3	2		Theory-50 Practical-50
4	OTDP I	Occupational Therapy Diagnostic & practice I	90	105	--	6	3.5		Theory-100 Practical-100
	COMP	Computer Sciences	30	15		2	0.5		Theory-50 (NUE)
		Supervised Clinical Traninig / Field Work			300			6.66	
Total Hours			780						450
Total no. of Credits as per heads						20	6	6.66	
Total Credits			32.66						

NUE-- Non University Examinations

1. Setting Question Paper will be done as per the subjects in semester pattern & as per Section A and Section B (where ever applicable) Syllabus of annual pattern.
2. The examination of NUE Subjects will be at the college level and the students' needs to pass the college level examination with minimum 50% scoring before appearing for the University Examination. the marks of NUE subject will not be added with University Marks but will be reflected in the Marks Sheet given by the University
3. Internal Assessment passing score: 50% combined in theory and practical (not less than 40% in each) for eligibility in appearing for University Examinations
4. University Examination:
   Mandatory 50% marks in theory and practical (practical = practical/clinical & viva) (theory=theory paper(s)
   only Internal assessment marks are not to be added to marks of the University examination and should be shown separately in the grade card

Pathology and Micro biology

COURSE DESCRIPTION: This course follows the basic subjects of Anatomy, Physiology, and Biochemistry and it forms a vital link between pre-clinical subjects and clinical subjects. Pathology involves the study of cause and mechanism of diseases. The knowledge and understanding of pathology of diseases is essential to institute appropriate treatment or suggest preventive measures to the patent. Particular. effort is made in this course to avoid burdening of the student

GOAL: Give the concept of cell injury and changes in relation towards the pathological effects of infectious and non-infectious diseases and understand the disease process, the clinical significance (with special emphasis on musculoskeletal, neuro pathological and cardio respiratory system). Utilize concepts on microbiology, diagnosis of infections and immunology. Identify structure and features of disease-causing bacteria and viruses.

COURSE OBJECTIVES:

Knowledge

I. Describe etiology pathogenesis and clinico-pathological co-relation of common infectious and non-infectious disease.
II. Describe the changes in cells after cell injury and its healing process.
III. Describe the normal and altered in different organ system in different disease and their clinical significance.
IV. Understand the common hematological disorders and investigations necessary to diagnose them.
V. Understand in brief about the hematological disease and their resultant effects on the human body.
VI. Describe process of diseases, diagnosis of it and the role of immunity.

VII. Define characteristics of the micro-organisms causing diseases.

1.**Pathology & Microbiology**

Scheme of Examination:

Written		Eligibility/Passing Marks		Practicals		Eligibility/Passing Marks		Total Marks
Internal Assessment	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	
50	100	25	50	--	--	25	50	100

The internal assessment will be based on the following criteria -

Subject	Theory			Practical/Viva		
Pathology & Microbiology	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
100 marks	30	20	50	--	--	--

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Semester pattern

For 100 marks-

In semester pattern 2 periodicals of minimum 10 marks each and 1 Prelim/ model paper of theory of 50 marks.

Annual pattern

For 50 marks-

2 periodicals of minimum 10 marks each and 1 midterm exam of theory of 25 marks and 1 Prelim/ model paper of theory

Scheme of Marks for University Theory exam

MCQs, Short answer questions, Brief answer questions and Long answer Questions

PATHOLGY									
Number	**COMPETENCY The student should be able to**	**Domain K/S/A/C**	**Level K/KH/SH/P**	**Core Y/N**	**Suggested Teaching Learning methods**	**Suggested Assessment methods**	**Number required to certify P**	**Vertical integration**	**Horizontal Integration**
Topic: Introduction to Pathology Number of competencies: (02) Number of procedures that require certification: (NIL)									
PM1.1	Describe the role of a pathologist in diagnosis and management of disease	K	K	Y	Departmental orientation	Written/ Viva voce			
PM1.2	Enumerate common definitions and terms used in Pathology	K	K	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
Topic: Cell Injury and Adaptation Number of competencies: (07) Number of procedures that require certification: (NIL)									
PM2.1	Demonstrate knowledge of the causes, mechanisms, types and effects of cell injury and their clinical significance	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
PM2.2	Describe the etiology of cell injury. Distinguish between reversible-irreversible injury: mechanisms; morphology of cellinjury	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
PM2.3	Intracellular accumulation of fats, proteins, carbohydrates,pigments	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
PM2.4	Describe and discuss Cell death- types, mechanisms, necrosis,apoptosis (basic as contrasted with necrosis),	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			

	autolysis								
PM2.5	Describe and discuss pathologic calcifications, gangrene.	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
PM2.6	Describe and discuss cellular adaptations: atrophy, hypertrophy, hyperplasia, metaplasia, dysplasia	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
PM2.7	Describe and discuss the mechanisms of cellular aging andapoptosis.	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce			
Topic: Amyloidosis Number of competencies: (01) Number of procedures that require certification: (NIL)									
PM3.1	Describe the pathogenesis and pathology of amyloidosis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
Topic: Inflammation Number of competencies: (03) Number of procedures that require certification: (NIL)									
PM4.1	Define and describe the general features of acute and chronic inflammation including stimuli, vascular and cellular events	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PM4.2	Enumerate and describe the mediators of acute inflammation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PM4.3	Define and describe chronic inflammation including causes, types, non-specific and granulomatous; and enumerate examples of each	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			

Topic: Healing and repair Number of competencies: (01) Number of procedures that require certification: (NIL)									
PM5.1	Define and describe the process of repair and regeneration including wound healing and its types	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
Topic: Hemodynamic disorders Number of competencies: (06) Number of procedures that require certification: (NIL)									
PM6.1	Define and describe edema, its types, pathogenesis and clinical correlations	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
PM6.2	Define and describe hyperaemia, congestion, haemorrhage	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
PM6.3	Define and describe shock, its pathogenesis and its stages	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PM6.4	Define and describe normal haemostasis and the etiopathogenesis and consequences of thrombosis.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
PM6.5	Define and describe embolism and its causes and common types	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
PM6.6	Define and describe Ischaemia/infarction its types, etiology, morphologic changes and clinical effects	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
Topic: Neoplastic disorders Number of competencies: (05) Number of procedures that require certification: (NIL)									
PM7.1	Define and classify neoplasia. Describe the characteristics of neoplasia including gross, microscopy,	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			

	biologic, behaviour and spread. Differentiate between benign from malignant neoplasm								
PM7.2	Describe the molecular basis of cancer	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
PM7.3	Enumerate carcinogens and describe the process of carcinogenesis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
PM7.4	Describe the effects of tumor on the host including paraneoplastic syndrome	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
PM7.5	Describe immunology and the immune response to cancer	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce			Microbiology
Topic: Immunopathology and AIDS		**Number of competencies: (07)**				**Number of procedures that require certification: (NIL)**			
PM8.1	Describe the principles and mechanisms involved in immunity	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Pediatrics	Microbiology
PM8.2	Describe the mechanism of hypersensitivity reactions	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Microbiology
PM8.3	Describe the HLA system and the immune principles involved in transplant and mechanism of transplant rejection	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Microbiology
PM8.4	Define autoimmunity. Enumerate autoimmune disorders	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM8.5	Define and describe the pathogenesis of systemic LupusErythematosus	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	

PM8.6	Define and describe the pathogenesis and pathology of HIVand AIDS	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Microbiology
PM8.7	Define and describe the pathogenesis of other common autoimmune diseases	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
Topic: Infections and Infestations Number of competencies: (04) Number of procedures that require certification: (NIL)									
PA9.1	Define and describe the pathogenesis and pathology of malaria	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Microbiology
PA9.2	Define and describe the pathogenesis and pathology ofcysticercosis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Microbiology
PA9.3	Define and describe the pathogenesis and pathology of leprosy	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Microbiology
PA9.4	Define and describe the pathogenesis and pathology of common bacterial, viral, protozoal and helminthic diseases	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Microbiology
Topic: Genetic and paediatric diseases Number of competencies: (03) Number of procedures that require certification: (NIL)									
PM10.1	Describe the pathogenesis and features of common cytogenetic abnormalities and mutation in childhood.	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		Pediatrics	
PM10.2	Describe the pathogenesis and pathology of tumour and tumour- like conditions in infancy and childhood	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		Pediatrics	
PM10.3	Describe the pathogenesis of common storage disorders in infancy and	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		Pediatrics	

	childhood								
Topic: Environmental and nutritional diseases Number of competencies: (03) Number of procedures that require certification: (NIL)									
PM11.1	Enumerate and describe the pathogenesis of disorders caused by air pollution, tobacco and alcohol	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Community Medicine
PM11.2	Describe the pathogenesis of disorders caused by protein calorie malnutrition and starvation	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Biochemistry, Pediatrics	
PM11.3	Describe the pathogenesis of obesity and its consequences	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
Topic: Introduction to haematology Number of competencies: (05) Number of procedures that require certification: (NIL)									
PM12.1	Describe haematopoiesis and extramedullary haematopoiesis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM12.2	Describe the role of anticoagulants in haematology	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM12.3	Define and classify anaemia	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM12.4	Enumerate and describe the investigation of anaemia	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM12.5	Perform, Identify and describe the peripheral blood picture inanaemia	S	SH	Y	DOAP session	Skill assessment		General Medicine	
Topic: Microcytic anaemia Number of competencies: (02) Number of procedures that require certification: (NIL)									
PM13.1	Describe iron metabolism	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Biochemistry	

PM13.2	Describe the etiology, investigations and differential diagnosis of microcytic hypochromic anaemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
Topic: Macrocytic anaemia Number of competencies:(04) Number of procedures that require certification: (NIL)									
PM14.1	Describe the metabolism of Vitamin B12 and the etiology and pathogenesis of B12 deficiency	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, General Medicine	
PM14.2	Describe laboratory investigations of macrocytic anaemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
PM14.3	Identify and describe the peripheral blood picture of macrocytic anaemia.	S	SH	Y	DOAP session	Skill assessment			
PM14.4	Enumerate the differences and describe the etiology and distinguishing features of megaloblastic and non-megaloblastic macrocytic anaemia	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
Topic: Haemolytic anaemia Number of competencies: (05) Number of procedures that require certification: (NIL)									
PM15.1	Define and classify haemolytic anaemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, General Medicine	
PM15.2	Describe the pathogenesis and clinical features and hematologic indices of haemolytic anaemia.	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, General Medicine	
PM15.3	Describe the pathogenesis, features, hematologic indices and peripheral blood picture of sickle cell anaemia and thalassemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, General Medicine	

PM15.4	Describe the etiology pathogenesis, hematologic indices and peripheral blood picture of Acquired haemolytic anaemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Biochemistry, General Medicine	
PM15.5	Describe the peripheral blood picture in different haemolytic anaemias	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
Topic: Aplastic anemia Number of competencies: (01) Number of procedures that require certification: (NIL)									
PM16.1	Enumerate the etiology, pathogenesis and findings in aplastic anaemia	K	K	N	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
Topic: Leukocyte disorders Number of competencies: (02) Number of procedures that require certification: (NIL)									
PM17.1	Enumerate and describe the causes of leucocytosis leukopenia lymphocytosis and leukemoid reactions	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
PM17.2	Describe the etiology, genetics, pathogenesis classification, features, hematologic features of acute and chronic leukaemia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
Topic: Lymph node and spleen Number of competencies: (04) Number of procedures that require certification: (NIL)									
PM18.1	Enumerate the causes and describe the differentiating features of lymphadenopathy	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PM18.2	Describe the pathogenesis and pathology of tuberculous lymphadenitis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	

PM18.3	Describe and discuss the pathogenesis, pathology and the differentiating features of Hodgkin's and non-Hodgkin's lymphoma	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PM18.4	Enumerate and differentiate the causes of splenomegaly	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery, General Medicine	
Topic: Haemorrhagic disorders Number of competencies: (04) Number of procedures that require certification: (NIL)									
PM19.1	Describe normal haemostasis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
PM19.2	Classify and describe the etiology, pathogenesis and pathology of vascular and platelet disorders including ITP and haemophilia's	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pediatrics	
PM19.3	Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of disseminated intravascular coagulation	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
PM19.4	Define and describe disseminated intravascular coagulation, its laboratory findings and diagnosis of Vitamin K deficiency	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
Topic: Blood banking and transfusion Number of competencies: (05) Number of procedures that require certification: (NIL)									
PM20.1	Classify and describe blood group systems (ABO and RH)	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			

PM20.2	Enumerate blood components and describe their clinical uses	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery, General Medicine	
PM20.3	Enumerate and describe infections transmitted by bloodtransfusion	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			Microbiology
PM20.4	Describe transfusion reactions and enumerate the steps in theinvestigation of a transfusion reaction	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM20.5	Enumerate the indications and describe the principles andprocedure of autologous transfusion	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
Topic: Clinical Pathology Number of competencies: (01) Number of procedures that require certification: (NIL)									
PM20.1	Describe abnormal findings in body fluids in various diseasestates	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
Topic: Gastrointestinal Tract Number of competencies: (06) Number of procedures that require certification: (NIL)									
PM21.1	Describe the etiology, pathogenesis, pathology and clinical features of oral cancers	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		Dentistry	
PM21.2	Describe the etiology, pathogenesis, pathology, microbiology, clinical and microscopic features of peptic ulcer disease	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM21.3	Describe and etiology and pathogenesis and pathologic features of carcinoma of the stomach	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	

PM21.4	Describe and etiology and pathogenesis and pathologic features of Tuberculosis of the intestine	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	
PM21.5	Describe and etiology and pathogenesis and pathologic and distinguishing features of Inflammatory bowel disease	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	
PM21.6	Describe and etiology and pathogenesis and pathologic and distinguishing features of carcinoma of the colon	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	
Topic: Hepatobiliary system Number of competencies: (05) Number of procedures that require certification: (NIL)									
PM22.1	Describe bilirubin metabolism, enumerate the etiology and pathogenesis of jaundice, distinguish between direct and indirect hyperbilirubinemia	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Biochemistry, General Medicine	
PM22.2	Describe the pathophysiology and pathologic changes seen in hepatic failure and their clincial manifestations, complications and consequences	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine, General Surgery	
PM22.3	Describe the etiology and pathogenesis of viral and toxic hepatitis: distinguish the causes of hepatitis based on the clinical and laboratory features.	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	

	Describe the pathology, complications and consequences of hepatitis								
PM22.4	Describe the pathophysiology, pathology and progression of alcoholic liver disease including cirrhosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, General Surgery	
PM22.5	Describe the etiology, pathogenesis and complications of portal hypertension	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, General Surgery	
Topic: Respiratory system Number of competencies: (07) Number of procedures that require certification: (NIL)									
PM23.1	Define and describe the etiology, types, pathogenesis, stages, morphology and complications of pneumonia	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
PM23.2	Describe the etiology, gross and microscopic appearance and complications of lung abscess	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
PM23.3	Define and describe the etiology, types, pathogenesis, stages, morphology and complications and evaluation of Obstructive airway disease (OAD) and bronchiectasis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, General Medicine	Microbiology
PM23.4	Define and describe the etiology, types, pathogenesis, stages,	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology

	morphology microscopic appearance and complications of tuberculosis								
PM23.5	Define and describe the etiology, types, exposure, environmental influence, pathogenesis, stages, morphology, microscopic appearance and complications of Occupational lung disease	K	KH	Y	Lecture, Small groupdiscussion	Written / Viva voce		General Medicine, Community Medicine	
PM23.6	Define and describe the etiology, types, exposure, genetics environmental influence, pathogenesis, stages, morphology, microscopic appearance,metastases and complications of tumors of the lung and pleura	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM23.7	Define and describe the etiology, types, exposure, genetics environmental influence, pathogenesis, morphology, microscopic appearance and complications of mesothelioma	K	KH	N	Lecture, Small groupdiscussion	Written / Viva voce		General Medicine, Community Medicine	
Topic: Cardiovascular system Number of competencies: (09) Number of procedures that require certification: (NIL)									
PM24.1	Distinguish arteriosclerosis from atherosclerosis. Describe the pathogenesis and pathology of various	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	

	causes and types of arteriosclerosis								
PM24.2	Describe the etiology, dynamics, pathology types and complications of aneurysms including aortic aneurysms	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM24.3	Describe the etiology, types, stages pathophysiology, pathologyand complications of heart failure	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine, Physiology	
PM24.4	Describe the etiology, pathophysiology, pathology, gross and microscopic features, criteria and complications of rheumatic fever	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Microbiology
PM24.5	Describe the epidemiology, risk factors, etiology, pathophysiology, pathology, presentations, gross and microscopic features, diagnostic tests and complications of ischemic heart disease	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM24.6	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of infective endocarditis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Microbiology
PM24.7	Describe the etiology, pathophysiology, pathology, gross and microscopic features, diagnosis and	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	

	complications of pericarditis and pericardial effusion								
PM24.8	Classify and describe the etiology, types, pathophysiology, pathology, gross and microscopic features, diagnosis and complications of cardiomyopathies	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine, Physiology	
PM24.9	Describe the etiology, pathophysiology, pathology features and complications of syphilis on the cardiovascular system	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Microbiology
Topic: Urinary Tract Number of competencies: (16) Number of procedures that require certification: (NIL)									
PM25.1	Describe the normal histology of the kidney	K	K	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
PM25.2	Define, classify and distinguish the clinical syndromes and describe the etiology, pathogenesis, pathology, morphology, clinical and laboratory and urinary findings, complications ofrenal failure	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce			
PM25.3	Define and describe the etiology, precipitating factors, pathogenesis, pathology, laboratory urinary findings, progression and complications of acute renal failure	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	

PM25.4	Define and describe the etiology, precipitating factors, pathogenesis, pathology, laboratory urinary findings progression and complications of chronic renal failure	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM25.5	Define and classify glomerular diseases. Enumerate and describe the etiology, pathogenesis, mechanisms of glomerular injury, pathology, distinguishing features and clinical manifestations of glomerulonephritis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Physiology, General Medicine	
PM25.6	Define and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, progression and complications of IgA nephropathy	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM25.7	Enumerate and describe the findings in. glomerular manifestations of systemic disease	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM25.8	Enumerate and classify diseases affecting the tubularinterstitium	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM25.9	Define and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, progression and complications of acute tubular necrosis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	

PM25.10	Describe the etiology, pathogenesis, pathology, laboratory findings, distinguishing features progression and complications of acute and chronic pyelonephritis and reflux nephropathy	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Human Anatomy, General Surgery	
PM25.11	Define classify and describe the etiology, pathogenesis pathology, laboratory, urinary findings, distinguishing features progression and complications of vascular disease of the Kidney	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM25.12	Define classify and describe the genetics, inheritance, etiology, pathogenesis, pathology, laboratory, urinary findings, distinguishing features, progression and complications of cystic disease of the kidney	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine, Pediatrics	
PM25.13	Define classify and describe the etiology, pathogenesis, pathology, laboratory, urinary findings, distinguishing features progression and complications of renal stone disease and obstructive uropathy	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	

PM25.14	Classify and describe the etiology, genetics, pathogenesis, pathology, presenting features, progression and spread of renaltumors	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Pediatrics	
PM25.15	Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of thrombotic angiopathies	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
PM25.16	Describe the etiology, genetics, pathogenesis, pathology, presenting features and progression of urothelial tumors	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	
Topic: Male Genital Tract Number of competencies: (05) Number of procedures that require certification: (NIL)									
PM26.1	Classify testicular tumors and describe the pathogenesis, pathology, presenting and distinguishing features, diagnostictests, progression and spread of testicular tumors	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	
PM26.2	Describe the pathogenesis, pathology, presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the penis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	
PM26.3	Describe the pathogenesis, pathology, hormonal dependency presenting and	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	

	distinguishing features, urologic findings & diagnostic tests of benign prostatic hyperplasia								
PM26.4	Describe the pathogenesis, pathology, hormonal dependency presenting and distinguishing features, diagnostic tests, progression and spread of carcinoma of the prostate	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	
PM26.5	Describe the etiology, pathogenesis, pathology and progressionof prostatitis	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	
Topic: Female Genital Tract Number of competencies: (09) Number of procedures that require certification: (NIL)									
PM27.1	Describe the epidemiology, pathogenesis, etiology, pathology, screening, diagnosis and progression of carcinoma of the cervix	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Obstetrics & Gynaecology	
PM27.2	Describe the pathogenesis, etiology, pathology, diagnosis and progression and spread of carcinoma of the endometrium	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Obstetrics & Gynaecology	
PM27.3	Describe the pathogenesis, etiology, pathology, diagnosis and progression and spread of carcinoma of the leiomyomas and leiomyosarcomas	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Obstetrics & Gynaecology	
PM27.4	Classify and describe the etiology, pathogenesis, pathology, morphology,	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Obstetrics & Gynaecology	

	clinical course, spread and complications of ovarian tumors								
PM27.5	Describe the etiology, pathogenesis, pathology, morphology, clinical course, spread and complications of gestational trophoblastic neoplasms	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Obstetrics & Gynaecology	
PM27.6	Describe the etiology and morphologic features of cervicitis.	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		Obstetrics & Gynaecology	
PM27.7	Describe the etiology, hormonal dependence, features and morphology of endometriosis	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		Obstetrics & Gynaecology	
PM27.8	Describe the etiology and morphologic features of adenomyosis	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		Obstetrics & Gynaecology	
PM27.9	Describe the etiology, hormonal dependence and morphology of endometrial hyperplasia	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		Obstetrics & Gynaecology	
Topic: Breast Number of competencies: (03) Number of procedures that require certification: (NIL)									
PM28.1	Classify and describe the types, etiology, pathogenesis, pathology and hormonal dependency of benign breast disease	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Human Anatomy, General Surgery	
PM28.2	Classify and describe the epidemiology, pathogenesis, classification, morphology, prognostic factors, hormonal	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Surgery	

	dependency, staging and spread of carcinoma of the breast								
PM28.3	Enumerate and describe the etiology, hormonal dependency and pathogenesis of gynecomastia	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Pediatrics, General Medicine	
Topic: Endocrine system Number of competencies: (09) Number of procedures that require certification: (NIL)									
PM29.1	Enumerate, classify and describe the etiology, pathogenesis, pathology and iodine dependency of thyroid swellings	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy, Physiology, General Medicine, General Surgery	
PM29.2	Describe the etiology, cause, iodine dependency, pathogenesis, manifestations, laboratory and imaging features and course of thyrotoxicosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, General Medicine	
PM29.3	Describe the etiology, pathogenesis, manifestations, laboratory and imaging features and course of thyrotoxicosis/ hypothyroidism	K	KH	Y	Lecture, Small group	Written/ Viva voce		Physiology, General Medicine	
PM29.4	Classify and describe the epidemiology, etiology, pathogenesis, pathology, clinical laboratory features, complications and progression of diabetes mellitus	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Physiology, General Medicine	

PM29.5	Describe the etiology, genetics, pathogenesis, manifestations, laboratory and morphologic features of hyperparathyroidism	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Physiology, General Medicine	
PM29.6	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications and metastases of pancreatic cancer	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PM29.7	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of adrenal insufficiency	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Physiology, General Medicine	
PM29.8	Describe the etiology, pathogenesis, manifestations, laboratory, morphologic features, complications of Cushing's syndrome	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Physiology, General Medicine	
PM29.9	Describe the etiology, pathogenesis, manifestations, laboratory and morphologic features of adrenal neoplasms	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy, Physiology, General Medicine, General Surgery	
Topic: Bone and soft tissue Number of competencies: (05) Number of procedures that require certification: (NIL)									
PM30.1	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Human Anatomy, Orthopaedics	Microbiology

	and complications of osteomyelitis								
PM30.2	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of bone tumors	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Orthopaedics	
PM30.3	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features and complications and metastases of soft tissue tumors	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Orthopaedics	
PM30.4	Classify and describe the etiology, pathogenesis, manifestations, radiologic and morphologic features andcomplications of Paget's disease of the bone	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		Orthopaedics	
PM30.5	Classify and describe the etiology, immunology, pathogenesis, manifestations, radiologic and laboratory features, diagnostic criteria and complications of rheumatoid arthritis	K	KH	N	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	
Topic: Skin **Number of competencies: (03)** **Number of procedures that require certification: (NIL)**									
PM31.1	Describe the risk factors pathogenesis, pathology and natural history of	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		Dermatology, Venereology & Leprosy	

	squamous cell carcinoma of the skin								
PM31.2	Describe the risk factors pathogenesis, pathology and natural history of basal cell carcinoma of the skin	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Dermatology, Venereology & Leprosy	
PM31.3	Describe the distinguishing features between a nevus and melanoma. Describe the etiology, pathogenesis, risk factors morphology clinical features and metastases of melanoma	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Dermatology, Venereology & Leprosy	
Topic: Central Nervous System Number of competencies: (02) Number of procedures that require certification: (NIL)									
PM32.1	Describe the etiology, types and pathogenesis, differentiating factors, CSF findings in meningitis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Microbiology
PM32.2	Classify and describe the etiology, genetics, pathogenesis, pathology, presentation sequelae and complications of CNS tumors	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Pediatrics	
Topic: Eye Number of competencies: (01) Number of procedures that require certification: (NIL)									
PM33.1	Describe the etiology, genetics, pathogenesis, pathology, presentation, sequelae and complications of retinoblastoma	K	KH	N	Lecture, Small group discussion	Written/ Viva voce		Ophthalmology	
MICROBIOLOGY									

Topic: General Microbiology and Immunity Number of competencies: (10) Number of procedures that require certification: (NIL)									
PM34.1	Describe the different causative agents of Infectious diseases, the methods used in their detection, and discuss the role of microbes in health and disease	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
PM34.2	Describe the epidemiological basis of common infectious diseases	K	KH	Y	Lecture	Written/ Viva voce			Community Medicine
PM34.3	Classify and describe the different methods of sterilization and disinfection. Discuss the application of the different methods in the laboratory, in clinical and surgical practice	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PM34.4	Choose the most appropriate method of sterilization and disinfection to be used in specific situations in the laboratory, in clinical and surgical practice	K	KH	Y	Small group discussion, Case discussion	Written/Viva voce/OSPE		General Surgery	
PM34.5	Describe the mechanisms of drug resistance, and the methods of antimicrobial susceptibility testing and monitoring of antimicrobial therapy	K	K	Y	Lecture, Small group discussion	Written/ Viva voce			Pharmacology
PM34.6	Describe the immunological mechanisms in health	K	KH	Y	Lecture	Written/ Viva voce			Pathology

PM34.7	Describe the mechanisms of immunity and response of the host immune system to infections	K	KH	Y	Lecture	Written/ Viva voce		Pediatrics	Pathology
PM34.8	Discuss the immunological basis of vaccines and describe the Universal Immunisation schedule	K	KH	Y	Lecture	Written/ Viva voce		Paediatrics	
PM34.9	Describe the immunological mechanisms in immunological disorder (hypersensitivity, autoimmune disorders and immunodeficiency states) and discuss the laboratory methods used in detection.	K	KH	Y	Lecture	Written/ Viva voce		Paediatrics	
PM34.10	Describe the immunological mechanisms of transplantation and tumor immunity	K	KH	Y	Lecture	Written/ Viva voce			
Topic: CVS and Blood Number of competencies: (06) Number of procedures that require certification: (NIL)									
PM35.1	Describe the etiologic agents in rheumatic fever and their diagnosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pathology
PM35.2	Describe the classification etio-pathogenesis, clinical features and discuss the diagnostic modalities of Infective endocarditis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pathology
PM35.3	List the common microbial agents causing anemia. Describe the morphology, mode of infection and discuss the pathogenesis,	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pathology

	clinical course, diagnosis and prevention and treatment of the common microbial agents causing Anaemia								
PM35.4	Describe the etio-pathogenesis and discuss the clinical evolution and the laboratory diagnosis of kalaazar, malaria, filariasis and other common parasites prevalent in India	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pathology
PM35.5	Identify the causative agent of malaria and filariasis	K	SH	Y	DOAP session	Skill assessment		General Medicine	
PM35.6	Describe the epidemiology, the etio- pathogenesis, evolution complications, opportunistic infections, diagnosis, prevention and the principles of management of HIV	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pathology
Topic: Gastrointestinal and hepatobiliary system Number of competencies: (06) Number of procedures that require certification: (NIL)									
PM36.1	Enumerate the microbial agents causing diarrhea and dysentery. Describe the epidemiology, morphology, pathogenesis, clinical features and diagnostic modalities of these agents	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Paediatrics	Pathology
PM36.2	Describe the enteric fever pathogens and discuss the evolution of the clinical course and the laboratory	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	Pharmacology, Pathology

	diagnosis of the diseases caused by them								
PM36.3	Enumerate the causative agents of food poisoning and discuss the pathogenesis, clinical course and laboratory diagnosis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Pharmacology
PM36.4	Describe the etio-pathogenesis of Acid peptic disease (APD) and the clinical course. Discuss the diagnosis and management of the causative agent of APD	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Pharmacology, Pathology
PM36.5	Describe the epidemiology, the etio-pathogenesis and discuss the viral markers in the evolution of Viral hepatitis. Discuss the modalities in the diagnosis and prevention of viral hepatitis	K	KH	Y	Lecture, Small groupdiscussion	Written/ Viva voce		General Medicine	Pathology
PM36.6	Choose the appropriate laboratory test in the diagnosis of viral hepatitis with emphasis on viral markers	K	KH	Y	Small group discussion, Case discussion	Written/ Viva voce/ OSPE		General Medicine	Pathology
Topic: Musculoskeletal system skin and soft tissue infections Number of competencies: (03) Number of procedures that require certification: (NIL)									
PM37.1	Enumerate the microbial agents causing anaerobic infections. Describe the etiopathogenesis, clinical	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	

	course and discuss the laboratory diagnosis of anaerobic infections								
PM37.2	Describe the etiopathogenesis, clinical course and discuss the laboratory diagnosis of bone & joint infections	K	KH	Y	Lecture	Written/ Viva voce		Orthopaedics	
PM37.3	Describe the etio-pathogenesis of infections of skin and soft tissue and discuss the clinical course and the laboratory diagnosis	K	KH	Y	Lecture	Written/ Viva voce		Dermatology, Venereology & Leprosy, General Surgery	
Topic: Central Nervous System Infections Number of competencies: (02) Number of procedures that require certification: (NIL)									
PM38.1	Describe the etiopathogenesis, clinical course and discuss the laboratory diagnosis of meningitis	K	KH	Y	Lecture	Written/ Viva voce		General Medicine, Pediatrics	Pathology
PM38.2	Describe the etiopathogenesis, clinical course and discuss the laboratory diagnosis of encephalitis	K	KH	Y	Lecture	Written/ Viva voce		General Medicine, Pediatrics	Pathology
Topic: Genitourinary & Sexually transmitted infections Number of competencies: (03) Number of procedures that require certification: (NIL)									
PM40.1	Describe the etio-pathogenesis and discuss the laboratory diagnosis of infections of genitourinary system	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Surgery	
PM40.2	Describe the etio-pathogenesis and discuss	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		Dermatology, Venereology &	

	the laboratory diagnosis of sexually transmitted infections. Recommend preventive measures							Leprosy, Obstetrics & Gynaecology	
PM40.3	Describe the etio-pathogenesis, clinical features, the appropriate method for specimen collection, and discuss the laboratory diagnosis of Urinary tract infections	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
Topic: Zoonotic diseases and miscellaneous Number of competencies: (09) Number of procedures that require certification: (NIL)									
PM41.1	Enumerate the microbial agents and their vectors causing Zoonotic diseases. Describe the morphology, mode of transmission, pathogenesis and discuss the clinical course, laboratory diagnosis and prevention	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine	
PM41.2	Describe the etio-pathogenesis of opportunistic infections (OI) and discuss the factors contributing to the occurrence of OI, and the laboratory diagnosis	K	KH	Y	Lecture	Written/ Viva voce		General Medicine	Pathology
PM41.3	Describe the role of oncogenic viruses in the evolution of virus associated malignancy	K	KH	Y	Lecture	Written		General Medicine	Pathology

PM41.4	Describe the etiologic agents of emerging Infectious diseases. Discuss the clinical course and diagnosis	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Community Medicine	
PM41.5	Define Healthcare Associated Infections (HAI) and enumerate the types. Discuss the factors that contribute to the development of HAI and the methods for prevention	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce		General Medicine, Community Medicine	
PM41.6	Describe the basics of Infection control	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			Community Medicine
PM41.7	Describe the methods used and significance of assessing the microbial contamination of food, water and air	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
PM41.8	Discuss the appropriate method of collection of samples in the performance of laboratory tests in the detection of microbial agents causing infectious diseases	K	KH	Y	Lecture, Small group discussion	Written/ Viva voce			
PM41.9	Describe the National Health Programs in the prevention of common infectious disease (for information purpose only as taught in CM)	K	K	Y	Lecture	Written/ Viva voce			Community Medicine

Recommended Books

PATHOLOGY

1. Text book of Pathology –Harsh Mohan
2. Basic Pathology-Robbins
3. Pathologic Basis of Disease – Robbins and Cotran
4.. General Pathology – Bhende

MICROBIOLOGY 1. Concise Textbook of Microbiology –Ananthnarayan
2. Concise Textbook of Microbiology –C.P. Baweja
3. Textbook of Microbiology –Nagoba
4.Text books of Microbiology – R. Ananthnarayan& C.K. Jayrampanikar

PSYCHOLOGY I

Course Description: This course will develop the basic knowledge of elements of psychology along with the normal development of a human being through life span and the psychological, behavioral condition in school children.

Goal: The broad goal to teach the second year BOT students the psychological development of human being through life span. They understand the elementary principles of behaviour for applying in the therapeutic environment. They will have proficiency based on written evaluation.

OBJECTIVES:

A. KNOWLEDGE:

At the end of second BO Th

i. Describe the Fields of Psychology, Schools of thoughts related to Psychology
ii. Explain the terms attention, perception, motivation.
iii. Describe the concept emotion, cognition, thinking.
iv. Describe the principles of learning.

v. Describe various aspect of psychosocial learning & psychological maturation during human development, growth, & alterations during aging process
vi. Describe the different aspects of school Psychology- the psychological, behavioral issues related to school children and their therapeutic intervention

Psychology I &II

Scheme of Examination:

Written		Eligibility/Passing Marks		Practicals		Eligibility/Passing Marks		Total Marks
Internal	University	Internal	University	Internal	University	Internal	University	

Assessment	exam	Assessment	exam	Assessment	exam	Assessment	exam	
25	50	13	25	-	-	-	-	50

The internal assessment will be based on the following criteria -

Subject	Theory			Practical/Viva		
Psychology I	Written	Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc	Total	Practical	Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc	Total
50 marks	15	10	25	--	--	--

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Scheme of Marks for University Theory exam

MCQs,Short answer questions ,Brief answer questions

Examination scheme

Semester pattern

For 50 marks-

In semester pattern 2 periodicals of minimum 10 marks each and 1 Prelim/ model paper of theory of 50 marks.

Annual pattern

For 50 marks-

2 periodicals of minimum 10 marks each and 1 midterm exam of theory of 25 marks and 1 Prelim/ model paper of theory

1. **Scheme of Marks for University Theory exam**
2. **MCQs,Short answer questions ,Brief answer questions**

Code no	Objectives/Competency Students should be able to	Domains of Learning	Competencies levels K/KH/SH/Ps	Core Y/N	Teaching Learning methods	Assessment methods	Vertical Integration	Horizintal Integration
PSYCHOLOGY I								

Topic– General Psychology No of competencies -7								
PSY I 1.1	Describe the Fields of Psychology, Schools of thoughts related to Psychology.	K	K	Y	Lecture	written		
PSY I 1.2	Define Attention & explain the classification of attention.	K	K, KH	Y	Lecture	Written		
PSY I 1.3	Define & explain the Perception	K	KH	Y	Lecture	Written		OTDP II
PSY I 1.4	Define Stress. Explain stress cycle, and coping strategies from Stress	K	KH	Y	Lecture,	Written		
PSY I 1.5	Explain difference & similarities in term Feeling Emotions.	K	K, KH	Y	Lecture	written		
PSY I 1.6	Define& explain term Motivation.	K	K, KH	Y	Lecture	Written		OTDP II
PSY I 1.7	Describe the types of theories of personality	K	K, KH	Y	Lecture,	Written		
Topic Cognition & Thinking No of competencies -02								
PSY I 2.1	Describe the intelligence & nature theories of intelligence.	K	K	Y	Lecture	Written		OTDP II
PSY I 2.2	Describe Thinking – thinking process, concept.	K	KH	Y	Lecture	Written		
Topic - Principles of Learning No of competencies – 3								
PSY I 3.1	Define learning. Explain the process of Learning.	K	K	Y	Lecture	written		OTDP II
PSY I 3.2	Describe various types of learning process.	K	KH	Y	Lecture	written		
PSY I 3.3	Explain the relationship of the learner & learning process.	K	K	Y	Lecture,	Written		
Topic: Perception no of competencies -2								

PSYI 4.1	Explain the term social perception.	K	K	Y	Lecture	Written		OTDP II
PSY I 4.2	Describe the social influence on the social perception.	K	KH	Y	Lecture	Written		
Topic: Psychosocial development No of competencies -5								
PSY I 5.1	Identify influence of heredity & environment on psychological development.	K	K	Y	Lecture	Written		OTDP II
PSY I 5.2	Explain psychological theories of human development.	K	K	Y	Lecture	Written		
PSY I 5.3	Explain prenatal, perinatal, antenatal & postnatal development.	K	K	Y	Lecture	Written		
PSY I 5.4	Explain Development in Infancy, early childhood, middle childhood, puberty, adolescent state & early. middle adulthood.	K	K	Y	Lecture	Written		
PSY I 5.5	Describe the psychological changes in old age.	K	K	Y	Lecture	Written		
Topic: School Psychology No of competencies -2								
PSY I 6.1	Describe the Concept and objectives of school psychology.	K	K	Y	Lecture	Written		OTDP II
PSY I	Explain psychological disorders in	K	KH	Y	Lecture,	Written		

6.2	school children & its Therapeutic intervention.				DOAP			

Recommended Books

1. Morgan C.T., King R. A., Weijz J. R. Schopler J. (1993). Introduction to Psycology, 7th Edition, Tata McGraw-Hill Publishing Co. Ltd
2. Papalia D. E., Olds S. W (2008), Human Development, 5th. Edition, Tata McGraw Hill Publishing Co. Ltd
3. Fernald, L Dodge, Munn's Introduction to Psychology, 5th edition, AITBS publisher
4. Developmental Psychology by Hurlock C.

BIOMECHANICS & KINESIOLOGY I

COURSE DESCRIPTION: Course explores Biomechanical & Kinesiological aspects of various Joints of upper extremity in the Human body and its importance in OT Practice. This course supplements the knowledge of anatomy and enables the student to have a better understanding of the principles of biomechanics. It builds concepts of training strategies that can be used to train the various aspects of mobility. It emphasizes on fabrication & scientific basis for the need of splints, orthoses & adaptive devices in Occupational Therapy.

GOAL: The broad goal to teach the second year BOT students the theoretical basis for joint mobility including the knowledge of Biomechanics & kinesiology, and Knowledge of splints, orthoses & adaptive devices in Occupational therapy.

OBJECTIVES:

B. KNOWLEDGE:

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

vii. Explain Biomechanics & kinesiology related to Human body
viii. Explain the concept of application of knowledge of Biomechanics & kinesiology in Occupational Therapy
ix. Describe the concepts of Orthoses, Splinting & adaptive devices & application to Occupational Therapy
x. Develop, designing and fabricating Orthosis based on Biomechanical Principles

C. SKILLS:

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

i. Develop Skills to assess the effect of Paatho-mechanics on the joints & application of general Biomechanics to analyse movements
ii. Demonstrate the effective transfer techniques on normal subjects Demonstrate the skills of designing & fabricating splints, Orthoses & adaptive devices

D. ATTITUDE:

a. The teaching and training at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.
b. Students should develop behavioural skills and humanitarian approach while communicating with patients about the need for orthoses, adaptive devices as individuals, relatives, society at large & the co- professionals

Biomechanics & Kinesiology 1 & Biomechanics & Kinesiology2

Written		Eligibility/Passing Marks		Practicals		Eligibility/Passing Marks		Total Marks
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
25	50	13	25	25	50	13	25	100

1. The internal assessment will be based on the following criteria -
2. For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Subject	**Theory**			**Practical/Viva**		
Biomechanics & Kinesiology 1	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
50 marks	15	10	25	15	10	25

Examination scheme

3. **Scheme of Marks for University Theory exam**
4. **MCQs,Short answer questions ,Brief answer questions** and Long answer Questions

Scheme of examination for University Practical exam
Biomechanics & Kinesiology Paper I(Semester 3)

Splint making & Viva Voce	Adaptive device making & Viva voce	Presentation & Communication skills	Total
20marks	20 marks	10marks	50 marks

Examination scheme
Semester pattern

For 50 marks-
In semester pattern 2 periodicals of minimum 10 marks each and 1 Prelim/ model paper of theory and practical of 50 marks each.
Annual pattern
For 50 marks-
2 periodicals of minimum 10 marks each and 1 midterm exam of theory and practical of 25 marks each and 1 Prelim/ model paper of theory and practical of 50 marks each

Course content

Code no	Objectives/Competency Students should be able to	Domains of Learning	Competencies levels K/Kh/Sh/Ps	Core Y/N	Teaching Learning	Assessment methods	Vertical Integration	Horizintal Integration

					methods			
			Biomechanics & Kinesiology I					
Topic – Foundational concepts of Joint structure & functions No of competencies -5								
BMK I 1.1	Define & describe the term Kinematics & kinetics	K	K	Y	Lecture	written	Anatomy	
BMK I 1.2	Describe different types of motions with reference to types location, direction, magnitude &rate of displacement	K	KH		Lecture	Written		
BMK I 1.3	Understand &define forces, force vectors	K	K, KH		Lecture,	Written		
BMK I 1.4	Describe the concept of Gravity &its application to internally &externally applied forces	K	K, KH, S		Lecture, Small group discussion	Written		
BMK I 1.5	Classify &describe different force systems	K/C	K, KH		Lecture, Seminars	Written		
Topic – Kinetics considering Rotatory &Translatory Forces &motion No of competencies -5								
BMK I 2.1	Understand &explain the Torque or Moment of Force	K	KH	Y	Lecture	Written		
BMK I 2.2	Describe the concept of muscle forces	K	K	Y	Lecture	Written		
BMK I 2.3	Classify Levers &explain the application of Levers in the body	K	K, KH	Y	Lecture, Small group discussion	Written		
BMK I 2.4	Describe composition &Resolution of Forces	K	K,		Lecture,	Written		
BMK I 2.5	Explain application of composition &Resolution of Forces in the Human body	K	K, KH		Lecture, Seminars, Small group discussion	Written, OSPE		
Topic - Joint Structure & Function No of competencies -4								
BMK I 3.1	Describe the components in human Joints	K	K	Y	Lecture	written	Anatomy	

BMK I 3.2	Understand the different designs of the joints	K	KH	Y	Lecture, Seminar	written		
BMK I 3.3	Describe the kinematic chains, Joint motion & applied Biomechanics.	K/S	K, KH	Y	Lecture, Small Group discussion	Written, Skill assessment (OSPE)		
BMK I 3.4	Describe Classification of muscles, factors affecting muscle function & applied Biomechanics of muscles	K	KH	Y	Lecture, Small group discussion	Written		
Topic: Upper Extremity Joint Complexes No of competencies -6								
BMK I 4.1	Describe the components of Shoulder complexes.	K	KH	Y	Lecture	Written	Anatomy	
BMK I 4.2	Describe the integrated functions of shoulder complex with reference to specific actions of the muscles acting on the shoulder joint.	K	KH	Y	Lecture	Written		
BMK I 4.3	Describe the components & the functions of different muscles around the elbow joint.	K	KH	Y	Lecture	Written		
BMK I 4.4	Describe the mobility & stability components & their action at Proximal & distal radioulnar Joint.	K	KH	Y	Lecture	Written		
BMK I 4.5	Describe the components & the biomechanical applications at the wrist joint.	K	K, KH	Y	Lecture	Written		
BMK I 4.6	Describe the Hand complex, importance of functional positioning & functions of hand.	K	K, KH	Y	Lecture, Small Group discussion	Written		
Topic 5: Orthotics		**No of competencies -7**						
BMKI 5.1	Describe goals of splinting& classify hand splint.	K	KH	Y	Lecture, small group discussion	Written	Anatomy. OT in MSK, OT in Medical conditions, OT in	OTDP I & II

							surgical conditions, OT in neurological Conditions.	
BMK I 5.2	Describe the application of Hand splints in different cases.	K	K.KH	Y	Lecture/	Written		
BMK I 5.3	Identify splint types and materials used	K/S/C	KH, SH (P under supervision)	Y	Lecture, DOAP, Skill training under supervision	Written, Skill assessment, Practical, OSPE		
BMK I 5.4	Demonstrate the appropriate method of fabrication of Hand Splints (Resting, Dynamic-flexor /extensor, Thumb Spica & C- bar, finger splints	K	K, KH, SH (P Under supervision)	Y	Lecture/small group discussion /DOAP session, Skill training	Written Skill assessment, practical, OSPE		
BMK I 5.6	Describe goals of Lower extremity orthoses& classify orthoses							
BMK I 5.7	Identify material used & demonstrate the fabrication of the appropriate method of fabrication of Lower extremity orthosis (Static & Dynamic)	K	K, KH SH (P Under supervision)	Y	Lecture/small group discussion /Skill training	Written Skill assessment, practical, OSPE		
Topic 6: Adaptive devices No of competencies :2								
BMK I 6.1	Understand & explain the need of Adaptive devices	K	KH	Y	Lecture, Small group discussion		OT in MSK, OT in Medical conditions, OT in surgical conditions, OT in neurological Conditions.	OTDP I & II
BMK I 6.2	Identify the material used, indications & fabricate adaptive device to improve the participation of patients	K	K, KH SH (P Under supervision)	Y	Lecture/small group discussion /Skill training			

	(Universal cuff, Writing Device, Reacher/ dressing stick, long handle Scrubber)							

BIOMECHANICS & KINESIOLOGY

1.Joint Structure and Function –1. A Comprehensive Analysis by C.C. Norkin, P.K. Levangie,
2.Physiology of Joint & Joint motion by Kapandji
3.A. Therapeutic exercise by J. Basmajian
4.Biomechanics of human motion by Williams Lissner
5.Measurement of joint motion: a guide to goniometry by C.C. Norkin & D.J. White
6. Occupational Therapy & Physical Dysfunction by A. Turner

OCCUPATIONAL THERAPY DIAGNOSTICS AND PROCESS -I

COURSE DESCRIPTION: At this course, the students will have an understanding of human development, theoretical basis of occupational therapy profession, and various treatment approaches used in occupational therapy.

It focuses on concept of spatiotemporal adaptations & the developmental trajectory. It includes understanding of clinical assessment of individual muscle testing, Muscle tone, developmental reflexes. It emphasizes on therapeutic applications in Occupational Therapy based on human development. It includes standardized methods of assessment of Muscle power & its interpretations

GOAL: The broad goal to teach the second year BOT students OT skills of assessment methods and intervention approaches in Occupational therapy. The goal is to have the knowledge, skills for assessment of performance components and the theoretical basis for Occupational Therapy intervention.

OBJECTIVES:

E. KNOWLEDGE:

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

xi. Understand the growth and development along with its theoretical basis in a typically developing human being.
xii. Explain the concept of spatiotemporal adaptation in Occupational Therapy.
xiii. Explain the concept of development of muscle tone & abnormality in tone
xiv. Describe the Characteristics of coordinated movements.
xv. Describe various neurophysiological techniques of intervention
xvi. Describe the & developmental reflexes &assessment
xvii. Describe evaluation of Physical Dysfunction for Muscle strength, Coordination

F. SKILLS:

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

iii. Develop Skills to assess coordination & Developmental reflexes

iv. Demonstrate the neurophysiological techniques on dummy
v. Demonstrate the Use of the standardized tools of Individual Muscle testing& assessment of muscle tone

G. ATTITUDE:

c. The teaching and training at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.
d. It is necessary to develop in students a sense of responsibility towards assessment of Physical Dysfunctions
e. Understanding of handling & facilitatory techniques used during application of Neurophysiological techniques
f. Students should develop behavioural skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co-professionals

Scheme of Examination:

Written		Eligibility/Passing Marks		Practicals		Eligibility/Passing Marks		Total Marks
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
50	100	25	50	50	100	25	50	200

3. The internal assessment will be based on the following criteria -
4. For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Subject	**Theory**			**Practical/Viva**		
OTDP I	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
100 marks	30	20	50	30	20	50

Examination scheme

5. **Scheme of Marks for University Theory exam**
6. **MCQs,Short answer questions ,Brief answer questions** and Long answer Questions

7. Scheme of examination for University Practical exam

1. OTDP paper 1

Muscle Tone assessment & VivaVoce	Individual Muscles testting (Upper Ext.,lower ext. & spinal muscles) & Viva Voce	Developmental reflex evaluation (On Dummy) & Viva Voce	Coordination Assessment (on dummy) & Viva Voce	Presentation & Communication skills	Total
30 marks	30 marks	10 marks	(10 marks)	20 marks	100 marks

Semester pattern

For 100 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

Annual pattern

For 100 marks-

2 periodicals of 20 marks each and 1 midterm exam of theory and practical of 50 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

Course Content

Code	Competency	Domain	Level	Core Y/N	Teaching Learning Method	Assessment	Vertical Integration	Horizontal Integration
Topic 1: Human Development no of Competencies -4								
OTDP I 1.1	Enumerate the stages of motor development as per the age.	K, C	K, KH	Y	Lecture, DOAP	Written	FOT I Physiology, OT in paediatric conditions	
OTDP I 1.2	Enumerate the stages of Gross motor development.	K, C	K, KH	Y	Lecture, DOAP	Written		
OTDP I 1.3	Enumerate the stages of Fine	K, C	K, KH	Y	Lecture, DOAP	Written		

	motor development.							
OTDP I 1.4	Remember and analyse the critical age and developmental activities.	K, C, A	K, KH, S	Y	Lecture, Practical	Written		
Topic 2: Human Development Process- Theoretical Foundations no of Competencies -9								
OTDP I 2.1	List out the theories related to Socio emotional development.	K, C	K, KH	Y	Lecture,	Written, Viva	Psychology, OT in psychiatry, OT in paediatric condition	
OTDP I 2.2	Explain the Erik Erikson's stages of psychosocial development	K, C	K, KH	Y	Lecture,	Written,		
OTDP I 2.3	Describe Ecologic Theory, Motivational Theory, Social, Emotional Theory	K, C	K, KH	Y	Lecture,	Written,		
OTDP I 2.4	Describe Psychoanalytic theory of Freud,	K, C	K, KH	Y	Lecture,	Written,		Psychology
OTDP I 2.5	Explain the Freud Psychosexual stages	K, C	K, KH	Y	Lecture,	Written,		Psychology
OTDP I 2.6	List out the theories related to cognitive development.	K, C	K, KH	Y	Lecture,	Written,		
OTDP I 2.7	Describe Theory of Learning, Behavioral Theory, Social learning theory and Maturational Theory of Arnold Gesell	K, C	K, KH	Y	Lecture,	Written,		Psychology
OTDP I 2.8	Describe Cognitive Theory of Jean Piaget	K, C	K, KH	Y	Lecture,	Written,		Psychology
OTDP I 2.9	Explain the Piaget stages of Cognitive development.	K, C	K, KH	Y	Lecture,	Written,		Psychology
Topic 3: Muscle Tone Competency no of Competencies -5								
OTDP I 3.1	Define muscle tone.	K C	K, KH	Y	Lecture,	Written	Physiology ' OT in Neurological condition, OT in paediatric condition	

OTDP I 3.2	Describe the Difference between Normal Muscle tone and Abnormal Muscle tone	K S	K, KH	Y	Lecture, DOAP	Written		
OTDP I 3.3	Describe different types of abnormal muscle tone.	K, S	K, KH	Y	Lecture, DOAP	Written, Practical		
OTDP I 3.4	Evaluate Muscle tone. Understand Modified Ashworth Scale and Pearsons rating of mild, moderate severe spasticity.	K, S	K, KH, SH	Y	Lecture, DOAP	Written, Practical		
OTDP I 3.5	Practically demonstrate evaluation of muscle tone on a model.	K, S	K, KH, SH	Y	Lecture, DOAP, Skill demonstration	Skill assessment Practical		
Topic 4: Co -ordination competency no of Competencies -7								
OTDP I 4.1	Define coordination.	K, C	K, KH	Y	Lecture DOAP	Written, Practical	Physiology	
OTDP I 4.2	Describe the Characteristics of coordinated movements.	K, S	K, KH	Y	DOAP	Written, Practical		
OTDP I 4.3	Explain in coordination found as Cerebellar signs.	K, S	K, KH, S, SH	Y	DOAP	Written, Practical		
OTDP I 4.4	Describe in coordination found as Extra pyramidal signs.	K, S	K, KH, S, SH	Y	DOAP	Written, Practical		
OTDP I 4.5	Evaluate coordination.	K, S	K, KH, S, SH	Y	DOAP	Written, Practical		

OTDP I 4.6	Understand using standardized and non-standardized test for evaluating coordination.	K, S	K, KH, S, SH	Y	DOAP	written		
OTDP I 4.7	Demonstrate method of using Standardized assessments for cerebellar signs, Extrapyramidal signs	K, S	K, KH, S, SH	Y	DOAP	Practical		
Topic 5: Spatiotemporal Adaptations no of Competencies – 6								
OTDP I 5.1	Define and explain spatiotemporal adaptation as a grounded theory	K, S	K, KH, SH	Y	Lecture, Demonstration	Practical		
OTDP I 5.2	Define terminology specific to the theory of Spatiotemporal adaptation.	K C	K, KH	Y	Lecture	Written		
OTDP I 5.3	Explain four conceptual categories of the theory	K C	K, KH	Y	Lecture, DOAP	Written,		
OTDP I 5.4	Describe the properties of the conceptual category.	K, C	K, KH	Y	Lecture, DOAP	Written		
OTDP I 5.5	Identify and discuss principles of spiralling continuum as used with spatiotemporal adaptation theory.	K S	K, KH	Y	Lecture, DOAP	Written		
OTDP I 5.6	Explain movement and environment as a system of relationships culminating in acquisition of performance skills	K, S	K, KH	Y	Lecture, DOAP	Written,		
Topic 6: Reaction and Reflex maturation no of Competencies -6								

OTDP I 6.1	Define developmental Reflexes and Reactions	K	K	Y	Lecture	Written	Physiology, OT in paediatric conditions	
OTDP I 6.2	Describe the importance of Reflexes on the motor development and Brain maturation., the position os stimulus & responses	K, C, S	K, KH	Y	Lecture, Small group discussion DOAP	Written		
OTDP I 6.3	Explain the different Reflexes based on the levels of nervous system	K, C, S	K, KH	Y	Lecture DOAP	Written		
OTDP I 6.4	Demonstrate the procedure of testing developmental reflexes of different level.	K, C, S	K, KH, SH, P under supervision	Y	Lecture DOAP, Case study	Written, Skill assessment, practical, OSPE		
OTDP I 6.5	Enumerate the significance of persisting developmental reflex beyond time on Motor Development.	K, C, S	K, KH	Y	Lecture DOAP	Written		
OTDP I 6.6	Document the age of Integration of developmental reflexes of different level.	K, C, S	K, KH	Y	Lecture DOAP	Written		
Topic 7: Neurological Approaches used in OT intervention no of competencies -13								
OTDP I 7.1	Describe Rood's four components of motor control, and identify the application of it in OT practice.	K, C, S	K, KH, S, SH	Y	Lecture DOAP	Written		
OTDP I 7.2	Elicit an Overview of the Evolution of NDT approach with its use in occupational therapy practices with various techniques.	K, C, S	K, KH, S, SH	Y	Lecture DOAP	Written		
OTDP I 7.3	Describe brunnstorm approach with demonstration of its application in Occupational	K, C, S	K, KH, S, SH	Y	Lecture DOAP	Written		

	therapy intervention with various techniques.							
OTDP I 7.4	Describe the theoretical base of the sensory integration approach with demonstration of its application in Occupational Therapy practice with various techniques.	K, C, S	K, KH, S, SH	Y	Lecture DOAP	Written		
OTDP I 7.5	Define client-centered practice & its importance in Occupational Therapy practices.	K, C, S	K, KH,	Y	Lecture DOAP	Written		
OTDP I 7.6	Describe the background and theory of the motor relearning program with demonstration of its application in Occupational Therapy practice with various techniques.	K, C, S	K, KH, S, SH	Y	Lecture DOAP	Written		
OTDP I 7.7	Elicit & demonstrate the Overview of history and development of PNF with demonstration of its application in Occupational Therapy with various techniques.	K, C, S	K, KH, S, SH	Y	Lecture DOAP	Written Practical		
OTDP I 7.8	Describe the theoretical assumptions and models underlying the task-oriented approach with its application in occupational Therapy with various techniques.	K, C, S	K, KH, S, SH	Y	Lecture DOAP	Written Practical		
OTDP I 7.9	Describe the background and theory behind Affolter's approach with its application in Occupational Therapy with various techniques.	K, C,	K, KH,	Y	Lecture DOAP	Written		
OTDP I	Describe the background and	K	KH	Y	Lecture	Written		

7.10	theory behind Quadriphonic approach Elaborate the key assumptions and principles of Quadraphonic approach.							
OTDP I 7.11	Describe the background and theory behind Cognitive retraining model & its In cognitive retraining Model.	K	KH	Y	Lecture	Written		
OTDP I 7.12	Describe the background and theory behind Neurofunctional Model.	K	KH	Y	Lecture	Written		
OTDP I 7.13	Describe the background and theory behind Cognitive orientation of daily Occupational performance Model List the steps in using Cognitive orientation of daily Occupational performance Model	K	KH	Y	Lecture	Written		
Topic 8: CLINICAL REASONING No of competencies -6								
OTDP I 8.1	Describe the characteristics of clinical reasoning in occupational therapy	K, C,	K, KH,	Y	Lecture DOAP	Written		
OTDP I 8.2	Describe decision tree process aid in clinical reasoning	K, C,	K, KH,	Y	Lecture DOAP	Written		
OTDP I 8.3	Describe the clinical strategies, those are employed in occupational therapy.	K, C,	K, KH,	Y	Lecture DOAP	Written		
OTDP I 8.4	Define Three-Track Mind concept in clinical reasoning	K, C,	K, KH,	Y	Lecture DOAP	Written		
OTDP I 8.5	Describe the facets of clinical reasoning	K, C,	K, KH,	Y	Lecture DOAP	Written		
OTDP I 8.6	Mentioned the models used in clinical reasoning in	K, C,	K, KH,	Y	Lecture DOAP	Written		

	occupational therapy?							
Topic :9 Evaluation of Individual Muscle strength No of Competencies -5								
OTDP I 9.1	Describe the screening tests for muscle strength assessment	K	K, KH,	Y	Lecture, DOAP	Written	FOT I	
OTDP I 9.2	List the diagnosis for which the MMT is appropriate & List contraindicated with its rationale	K	K, KH,	Y	Lecture	Written		
OTDP I 9.3	Describe the need for individual muscle testing, with the principles of Individual Muscle testing	K,	K, KH,	Y	Lecture DOAP	Written Practical		
OTDP I 9.4	Demonstrate & perform under supervision different tests for individual muscle testing with proper positioning, stabilisation, the movements, directions, resistance (if required), avoidance of substitution	K, C, S, A	K, KH, S, SH	Y	Lecture DOAP, Case Study	Written Practical, Skill assessment, OSCE		
OTDP I 9.5	Interpret the results of muscle strength assessment (Weakness, shortening, substitution etc)	K, S	K, KH,	Y	Lecture DOAP	Written Practical		

Recommended Books

1. Occupational Therapy: Practice skills for Physical Dysfunction by L.V. Pedretti
2. Occupational Therapy for Physical Dysfunction by C.A. Trombly
3. Occupational Therapy & physical dysfunction A. Turner
4. Willard & Spackman's Occupational Therapy,5th,6th,7th,11th edition
5. Daniels and Worthinghams's Muscle Testing – Techniques of Manual Examination.
6. Neuro-developmental treatment a guide to clinical practice judith c. bierman
7. Brunnstorm's movement therapy in hemiplegia – a neurophysiological approach 2nd edition
8. Frames of references for peaditaric occupational therapy (paula kramer) 3rd edition

9. Creeks occupational therapy and mental health 5th edition
10. Mental health consepts and techniques for the ota Mary beth early
11. Clinical reasoning in physical disability, Rebecca dutton

Computer Science

COURSE DESCRIPTION: Course explores Basic Computer and Smartphone Skills, digital skills in the learner. It includes, basic knowledge regarding computers, the parts of computers & their uses, building the typing skills, MS office skills & job readiness skills in the learner

COURSE Goal: The at the end of Second BOTh, the students will gain knowledge and skill in the computer operation required in modern daily life & apply the knowledge & skills in Occupational Therapy

COURSE Objectives: At end of second BOTh the student shall be able to

Knowledge i. Describe the basic parts of computers & their uses, Ability to familiarize with basics of computers

ii. Describe about operation of computers & smart phones.
iii. Understand the smart use of computer skills in occupational therapy profession and in daily activities

Skills: -

- **i)** Demonstrate the ability to do smart typing and ability to navigate the file system
- **ii)** the digital operational skills required in operation of computers & smart phones
- **iii)** Able to create and edit documents, spread sheets for basic data entry, and presentations
- **iv)** use Indian languages in documents, & have effective digital communication
- **v)** able to receive, download & answer the emails, safely create -upload videos, navigate website

Scheme of Examination:

Written		**Eligibility/Passing Marks**		**Practicals**		**Eligibility/Passing Marks**		**Total Marks**
Internal Assessment	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	

50	--	50	--	--	--	25	--	50

The internal assessment will be based on the following criteria -

Subject	Theory		
Computer Science	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/, etc**	**Total**
50 marks	30	20	50

For a candidate who fails in a subject(s), his/ her marks of will not be able to appear for the university exams of other subject in the academic year /academic term

Code no	**Objectives/Competency Students should be able to**	**Domains of Learning**	**Competencies levels K/Kh/Sh/Ps**	**Core Y/N**	**Teaching Learning methods**	**Assessment methods**
	Computer science					
Topic –Basics of Information Technology No of competencies -4						
CS 1.1	Describe characteristics of a computer, components of a computer system – CPU, memory, storage devices and I/O devices	K	K	Y	Lecture	written
CS 1.2	Describe the Types of software: system software (operating system, device drivers), application software including mobile applications	K	K		Lecture	Written
CS 1.3	Describe the Type of networks and understand the difference between public & private networking	K	K,		Lecture, DOAP	Written
CS 1.4	Describe the various Multimedia sources images, audio, video, animation	K	K,		Lecture, DOAP	Written
Topic – Cyber Safety -Frames of references No of competencies -2						
CS 2.1	• Understand the procedure of Safely browsing the web and using social networks	K	K	Y	Lecture	Written

	• Enumerate intellectual property rights, plagiarism and digital property rights.					
CS 2.2	Explain the existence of Malware: Viruses, adware	K	K		Lecture	Written
Topic Essential Office tools No of competencies 1						
CS 3.1	Enlist, Describe& demonstrate various office tools.	K	K, SH (P)	Y	Lecture, DOAP, Skill training	Written, Skill assessment
Topic: Networking No of competencies -3						
CS 4.1	Explains about Internet: And demonstrate the creation of email account, website	K	KH, SH	Y	Lecture, DOAP	Written
CS 4.2	Demonstrate the use of Web services	K	KH, SH		Lecture, DOAP session, practical	Written, skill assessment
CS 4.3	Describe & demonstrate the use of mobile technologies.	K	KH, SH		Lecture, DOAP session, practical	Written, skill assessment

Recommended Books

1.Introduction to computer Science; Textbook for beginners in Informatics: Gilbert Brands, Publisher Barnes & Nobel
2.Computer Science An overview by J.Glen Bookshear Publisher Denis Bryłów ,Pearson
3.Cambridge IGCSE computer science course book
4.Computer Science: Very Short Introduction,by Subrata Dasgupta

III BOT ANNUAL PATTERN

Sr.no.	Course code	Subject	Total Teaching Hours/Semester			Credits			Marks	
			Theory	Practical/Demo/ Lab work	Clinical	Theory	Practical/Demo/ Lab work	Clinical	Total	
1	MCV	Medicine & Cardiovascular medicine (170 hrs)	**90**	**30**	50	6	1	1.1	**8.1**	**Theory-100** IA-50
2	NP	Neurology & Paediatrics	90	30	50	6	1	1.1	**8.1**	**Theory 100** IA -50
3	OTMC	Occupational Therapy in Medical Conditions	**90**	**70**	220 + 20(visits)	6	2.3	5.3	**13.6**	**Theory 100 Practicals-10050**
4	WP	Work Physiology	**40**	**-**	**--**	2.66			**2.66**	**Theory-50**
5	SO	Surgery & Orthopaedics (170)	**90**	**30**	50	6	1	1.1	**8.1**	**Theory-100**
6	PS	Psychiatry (80)	50	10	20	3.3	0.3	0.4	**4**	**Theory-50**
7	OTSC	Occupational Therapy in Surgical conditions (400)	**90**	**70**	220+20 (visits)	6	2.3	5.3	**13.6**	**Theory-100 Practical -100**
8	ERG	Ergonomics (65)	50	**15**	–	3.3	0.5		3.8	Theory - 50
9	RMB	Research Methodology & Biostatistics (65)	**50**	15	—-	3.5	0.5		4	Theory -50
10		Supervised Clinical training /Field work			**650**					
Total Hours					1560					
Total no. of Credits as per heads						42.76	8.9	14.3	65.96	

Total Credits		65.96	
Total no of marks for Examination/semester		900	

III BOT (V SEMESTER)

		V SEMESTER								
Sr.no.	**Course code**	**Subject**	**Total Teaching Hours/Semester**			**Credits**				**Marks**
			Theory	**Practical/Demo/ Lab work**	**Clinical**	**Theory**	**Practical/Demo/ Lab work**	**Clinical**		**Total**
1	MCV	Medicine & Cardiovascular medicine (170 hrs)	**90**	**30**	50	6	1	1.1	8.1	**Theory-100**
2	NP	Neurology & Paediatrics	90	30	50	6	1	1.1	8.1	**Theory 100**
3	OTMC	Occupational Therapy in Medical Conditions	**90**	**70**	220 + 20(visits)	6	2.3	5.3	13.6	**Theory 100 Practicals- 100**
4	WP	Work Physiology	**40**	**-**	**--**	2.66			2.66	**Theory-50**
5		Supervised Clinical training /Field work			**340**					
Total Hours					780					
Total no. of Credits as per heads						20.66	4.3	7.5		
Total Credits									32.46	
Total no of marks for Examination/semester						450				

MEDICINE & CARDIOVASCULAR MEDICINE

COURSE DESCRIPTION: This course intends to familiarize students with medical terminology & abbreviations for efficient & effective chart reviewing & documentation. It also explores selected systemic diseases, focusing on epidemiology, pathology, histology, aetiology as well as primary & secondary clinical characteristics, complications and their management. Discusses & integrates subsequent medical management of General Conditions, Rheumatology, Gerontology, and Cardio-vascular & Respiratory systems, genetic disorders, hematologic and infective disorders with reference to red flag indicators, indications, contraindications & precautions to formulate appropriate intervention

GOAL: The broad goal of the teaching of undergraduate students in Medicine & Cardiovascular medicine is to have the knowledge, skills and behavioural attributes to function effectively as a clinician.

OBJECTIVES:

H. KNOWLEDGE:

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

xviii. Diagnostic process of common clinical disorders with special reference to infectious diseases, nutritional disorders, tropical, cardiovascular and environmental diseases;

xix. Outline various modes of management including drug therapeutics especially dosage, side effects, toxicity, interactions, indications and contra-indications;

xx. Process to propose diagnostic and investigative procedures and ability to interpret them;

xxi. Process to provide first level management of acute emergencies promptly and efficiently and decide the timing and level of referral, if required;

xxii. Recognize geriatric disorders and their management.

I. SKILLS:

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

vi. develop clinical skills (history taking, clinical examination and other instruments of examination to diagnose various common medical disorders and emergencies;

vii. refer a patient to secondary and/or tertiary level of health care after having instituted primary care;

viii. perform simple routine investigations like hemogram, stool, urine, sputum and biological fluid examinations;

ix. assist the common bedside evaluations and investigative procedures related to medicine and cardiovascular conditions.

A course of systematic instruction in the principles and practice of medicine, including medical disease of infancy;

a. Lecture - demonstrations, seminars and conferences in clinical medicine during the 3 years shall run concurrently with other clinical subjects;

b. Instructions in comprehensive medical care;

c. Instructions in applied anatomy and physiology and pathology throughout the period of clinical studies;

d. Instructions in dietetics, nutrition and principles of nursing Medical and in simple ward procedure e.g. should be imparted during clinical concurrently.

J. ATTITUDE:

g. The teaching and training in clinical medicine must aim at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.

h. It is necessary to develop in students a sense of responsibility towards holistic patient care & prognostic outcomes.

i. Students should develop behavioural skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- professionals.

Scheme of Examination:

Written		**Eligibility/Passing Marks**		**Practical**		**Eligibility/Passing Marks**		**Total Marks**
Internal Assessment	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	
50	100	25	50	--	--	25	50	100

The internal assessment will be based on the following criteria -

Subject	**Theory**			**Practical/Viva**		
Medicine & Cardiovascular Medicine	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
100 marks	30	20	50	--	--	--

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs,Short answer questions ,Brief answer questions and Long answer Questions

Examination scheme

Semester pattern

For 100 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory of 100 marks.

Annual pattern

For 100 marks-

2 periodicals of minimum 20 marks each and 1 midterm exam of theory of 50 marks and 1 Prelim/ model paper of theory of 100 marks

COURSE CONTENT

Code No.	Competency: Student should be able to	Domains K/S/A/C	Levels K/KH/SH/P	Core Y/N	Teaching Leaning Method	Assessment method	Vertical Integration	Horizontal Integration
MEDICINE & CARDIOVASCULAR MEDICINE								
Topic:	**General Medicine** **No of Competencies: 10**							
MCV 1.1	Describe clinical features, investigations, & management of following endocrine system disorders: Thyroid, pituitary, Adrenal, pancreas, obesity & nutritional deficiency	K	K/ KH	Y	Lecture, Bed side clinic, small group discussion	Written	Pathology Pharmacology	
MCV 1.2	Describe clinical features, investigations and management of the following diseases respiratory system: Bronchial Asthma, Bronchiectasis, Pulmonary Embolism, Tuberculosis, Lung abscess, Emphysema, Lobar Pneumonia, Pleurisy, Empyema and Cor	K	KK/ H	Y	Lecture, Bed side clinic, small group discussion	Written	Pathology Pharmacology	OT in medical conditions

	Pulmonale., Intensive respiratory care (ICU)							
MCV 1.3	Describe the pathogenesis, clinical features, investigations, complications and brief outline of management of the following auto immune conditions / diseases: Rheumatoid Arthritis, seronegative Spondylosing Arthritis, SLE, Gout, Still Disease Polymyositis, CREST syndrome	K	K/ SH	Y	Lecture Bed side clinic, small group discussion	Written	Pathology Pharmacology	OT in Medical conditions
MCV 1.4	Discuss the management of gastric and Duodenal ulcer, hematemesis, Hepatitis & Malabsorption Syndrome	K	K/KH	Y	Lecture, Small group discussion,	Written		
MCV 1.5	Describe the clinical features, investigations and management of: Rickets, Protein deficiency, Beri Beri, Subacute Combined Degeneration	K	K/KH	Y	Lecture, Small group discussion,	Written	Pharmacology	
MCV 1.6	Describe the age-related problems in elderly and their management in health care and wellness clinics	K	K/KH	Y	Lecture, Small group discussion,	Written		OT in Medical condition
MCV 1.7	Describe clinical features and management of acute and Chronic Renal Failure, glomerular nephritis, Urinary Tract Infection	K	KH	Y	Lecture	Written		
MCV 1.8	Describe the clinical features and management of: Anemias, Hemophilia, Thalassemia, Leukemia Hodgkin's diseases	K	K/KH	Y	Lecture, Bed side clinic, small group discussion	Written		OT in Medical conditions
MCV 1.9	Describe the causes, symptoms and management of Common Infectious Diseases: Malaria, Rabies, Leptospirosis, dengue, Diseases of lymphatic system	K	KH	Y	Lecture	Written		
MCV 1.10	Intensive Medical Care (ICU)	K	K	Y	Lecture, Bed side clinic	Written		
Topic: Cardiovascular Disease No of Competencies:07								
MCV 2.1	Describe ischemic heart disease their clinical features	K	K/KH	Y	Lecture	Written		OT in medical

	investigation and management.							conditions
MCV 2.2	Explain management of hypertension	K	K/KH	Y	Lecture	Written		
MCV 2.3	Describe Rheumatic heart diseases with their clinical features investigation and management	K	K/KH	Y	Lecture, Small group discussion,	Written		
MCV 2.4	Enumerate the cause of peripheral vascular disease and discuss its management	K	K/KH	Y	Lecture, Small group discussion,	Written		OT in surgical conditions
MCV 2.5	Describe etiology classification management of congenital heart disease. Describe basics in ECG as applicable to ischemic heart diseases	K	K/KH	Y	Lecture,	Written		
MCV 2.6	Describe basics in ECG as applicable to ischemic heart diseases	K	K/KH	N	Lecture,	-		
MCV 2.7	Intensive Cardiac Care Unit (CCU)	K	KH	Y	Lecture,	Written		
Topic: Dermatology No of Competencies: 04								
MCV 3.1	Describe the clinical features, investigations and management of Leprosy	K	K/KH	Y	Lecture, Bed side clinic Small group discussion,	Written		OT in Medial conditions
MCV 3.2	Describe the clinical features, investigations and management of HIV infections	K	K/KH	Y	Lecture, Bed side clinic Small group discussion	Written		OT in Medial conditions
MCV 3.3	Describe the clinical features, investigations and management: in brief common skin infections: psoriasis and venereal diseases.	K	K	Y	Lecture,	Written		
MCV 3.4	Trophic ulcers- their classification and management	K	K	Y	Lecture,	Written		

MEDICINE AND CARDIOVASCULAR MEDICINE

1. API- Text book of Medicine, 5th edition
2. Medicine-- P.J. Mehta

3. Principles & Practice of Medicine – Davidson
4. Textbook of dermatology – Dr. Khopkar
5. Medicine for Students Golwalla'
6. First AID and Emergency Care- Harris N.
7. Manual of First Aid- Gupta L.C

NEUROLOGY AND PEADIATRICS

COURSE DESCRIPTION: This course introduces the student to the neurological & peadiatric conditions which commonly cause disability. Particular effort is made in this course to avoid burdening the student with any details pertaining to diagnosis which will not contribute to their understanding of the limitations imposed by neurological pathology on the functioning of the individual.

COURSE OBJECTIVES: This course intends to familiarize students with medical terminology & abbreviations for efficient & effective chart reviewing & documentation. It also explores selective systemic diseases, focusing on epidemiology, etiology, pathology, histology as well as primary & secondary clinical characteristics & their management. It discusses & integrates subsequent medical management of Neurological & Paediatric conditions to formulate appropriate intervention; indications, precautions & contraindications with respect to clinical presentation

GOAL: The broad goal of the teaching of undergraduate students in Neurology and Peadiatrics is to have the knowledge, skills and behavioural attributes to function effectively as a clinician.

OBJECTIVES:

K. KNOWLEDGE:

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

xxiii. Understand basics of Diagnostic process of common Neurology and Peadiatrics disorders related to the profession.

xxiv. Outline various modes of management including medical management, drug therapeutics, side effects, toxicity, interactions, indications and contra-indications, basics of surgical management, and other interventions.

xxv. Basic understanding about the Process to propose diagnostic and investigative procedures.

xxvi. Process to understand the basics about first level management of acute emergencies promptly and efficiently and decide the timing and level of referral, if required;

xxvii. Recognize paediatric disorders and their management.

L. SKILLS:

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

x. develop clinical skills (history taking, clinical examination and other instruments of examination of various common Neurology and Peadiatrics disorders and emergencies;

xi. refer a patient to secondary and/or tertiary level of health care after screening if needed;

xii. perform simple routine evaluations related to OT

xiii. assist the common clinical assessment procedures related to Neurology and Peadiatrics conditions.

A course of systematic instruction in the principles and practice of Neurology and Peadiatrics;

e. Lecture - demonstrations, seminars and conferences in clinical subjects during the 3 years shall run concurrently with other clinical subjects.;

f. Basic Instructions in comprehensive Neurology and Peadiatrics care;

g. Basic Instructions in applied anatomy and physiology and pathology (related to OT) throughout the period of clinical studies;

h. Basics Instructions in dietetics, nutrition and principles of nursing for Neurology and Peadiatrics

M. ATTITUDE:

j. The teaching and training in clinical subjects like paediatrics and neurology must aim at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.

k. It is necessary to develop in students a sense of responsibility towards holistic patient care & prognostic outcomes related to OT.

l. Students should develop behavioural skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- professionals.

m. Scheme of Examination:

Written		**Eligibility/Passing Marks**		**Practical**		**Eligibility/Passing Marks**		**Total Marks**
Internal Assessment	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	
50	100	25	50	--	--	25	50	100

The internal assessment will be based on the following criteria -

Subject	Theory			Practical/Viva		
NEUROLOGY AND PEADIATRICS	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
100 marks	30	20	50	--	--	--

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs,Short answer questions ,Brief answer questions and Long answer Questions

Examination scheme

Semester pattern

For 100 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory of 100 marks.

Annual pattern

For 100 marks-

2 periodicals of minimum 20 marks each and 1 midterm exam of theory of 50 marks and 1 Prelim/ model paper of theory of 100 marks

COURSE CONTENT

Code No.	Competency: Student should be able to	Domains K/S/A/C	Levels K/KH/SH/P	Core Y/N	Suggested Learning methods	Suggested Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
NEUROLOGY THIRD (BOT)									
Topic: NEUROANATOMY		**No of Competencies:4**							
NP 1.1	Overview of the basic anatomy of the brain and spinal cord	K	K	Y	Small group Discussion, Lecture	Written		Applied Anatomy, anatomy	

NP 1.2	Understand Blood supply of the brain and spinal cord,	K	K	N	Small group Discussion, Lecture	Written		Applied Anatomy, anatomy	
NP 1.3	Explain anatomy of the visual pathway,	K	K	N	Small group Discussion, Lecture	Written		Applied Anatomy, anatomy	
NP 1.4	Understand connections of the cerebellum and extrapyramidal system,	k	K	Y	Small group Discussion, Lecture	Written		Applied Anatomy, Anatomy, OT In Neurology	General medicine
Topic: NEUROPHYSIOLOGY		**No of Competencies: 1**							
NP 2.1	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	K	K	Y	Small group Discussion, Lecture	Written		Applied Physiology, Physiology	General medicine
Topic: Extra Pyramidal lesions		**No of Competencies: 1**							
NP 3.1	Describe the cause, clinical features, and management of Parkinson's disease, Athetosis, Chorea, Dystonia, Wilson's disease	K	K, KH	Y	Small group Discussion, Lecture	Written			
Topic Diseases of the muscle		**No of Competencies: 1**							
NP 4.1	Define, Classify & Explain the causes Clinical features investigation,	K	K, KH	Y	Small group Discussion, Lecture	Written		OT in Neurology	

	management of Myopathy, (DMD, Becker's, fascio scapular)								
Topic Neuromuscular disorders No of Competencies: 1									
NP 5.1	Define, Classify & Explain the causes Clinical features investigation, management of Myasthenia Gravis , Motor Neuron Diseases.	K	K	Y	Small group Discussion, Lecture	Written		OT In Neurology	General medicine
Topic Diseases of the peripheral nerves No of Competencies: 2									
NP 6.1	Enumerate the types and sequelae of polyneuropathies	K	K	Y	Small group Discussion, Lecture	Written		OT in Neurology	General Medicine
NP 6.2	Explain prognosis and management of Polyneuropathies	K	K	Y	Small group Discussion, Lecture	Written		OT in Neurology	
Topic Cerebellar disorders No of Competencies: 2									
NP 7.1	Define and classify Ataxia	K	K	Y	Small group Discussion, Lecture	Written		OT in Neurology	
NP 7.2	Describe the Diagnosis, Prognosis and management of Ataxias	K	K	Y	Small group Discussion, Lecture	Written		OT in Neurology	
Topic Disorders of cranial nerves No of Competencies: 2									
NP 8.1	Enumerate the clinical features and explain the causes of each cranial nerve affectation	K	K	Y	Demonstration Small group Discussion, Lecture	Written, Skill assessment		OT in Neurology	
NP 8.2	Explain the prognosis & management of each cranial nerve affectation	K	K		Small group Discussion, Lecture	Written			
Topic Degenerative Diseases No of Competencies: 2									
NP 9.1	Describe cause clinical	K	K	Y	Small group	Written		OT in Neurology	

	features of various degenerative diseases, diagnosis and treatment				Discussion, Lecture				
NP 9.2	Describe the diagnosis and management of degenerative diseases	K	KH		Small group Discussion, Lecture	Written		OT in Neurology	
Topic	**Infections of the nervous system**		**No of Competencies: 1**						
NP 10.1	Describe cause, clinical features, diagnosis and treatment of Encephalitis, Neurosyphilis, Herpes, Meningitis, Tetanus and involvement of Nervous system in H.I.V.	K	K	Y	Small group Discussion, Lecture	Written		OT in Neurology	General medicine
Topic	**Disorders of Spinal cord**		**No of Competencies: 1**						
NP 11.1	Describe cause, clinical features, diagnosis and treatment of Syringomyelia, Tabes Dorsalis, Cauda equina syndrome.	k	K	Y	Small group Discussion, Lecture	Written		OT in Neurology	General medicine
Topic:	**Headache**			**No of Competencies: 2**					
NP 12.1	Enumerate Types of headache and describe its management,	K	K	N	Small group Discussion, Lecture	Written			General medicine
NP 12.2	Explain causes clinical features and management of Migraine	K	K	N	Small group Discussion, Lecture	Written			
Topic:	**Epilepsy No of Competencies: 3**								
NP 13.1	Define and Classify epilepsy	K	K	Y	Small group Discussion, Lecture	Written			General Medicine
NP 13.2	Enumerate the complications of epilepsy	K	K	Y	Small group Discussion, Lecture	Written			General medicine

NP 13.3	Describe management of epilepsy	K	K	N	Small group Discussion, Lecture	Written			General medicine
PEADIATRICS									
Topic	**Growth and development**	**No of Competencies: 8**							
NP 14.1	Overview for Normal intra-uterine development of foetus with special reference to Central Nervous System, Neuromuscular System, Cardiovascular Respiratory System Normal development & growth	k	K	N	Small group Discussion, Lecture	Written		OT in paediatric	General medicine
NP 14.2	Describe normal/abnormal growth and development of a child	K	K		Small group Discussion, Lecture	Written/ Viva voce		OT in paediatric	
NP 14.3	Understand Immunization and breast-feeding	K	K		Lecture	Written			General medicine
NP 14.4	Enumerate the pre-natal, peri natal and post-natal causes	K	K/KH		Small group Discussion, Lecture,	Written,		OT in paediatric	General medicine
NP 14.5	Classification of Cerebral Palsy. Describe the Clinical features of different types	K	K/KH		Small group Discussion, Lecture,			OT in paediatric	General medicine
NP 14.6	Describe Medical Management including early intervention in cerebral palsy	K	K/KH		Small group Discussion, Lecture	Written		OT in paediatric	General medicine
NP 14.7	Enumerate the causes, clinical features, Classification and	K	K/KH		Small group Discussion, Lecture	Written		OT in paediatric	General medicine, Pharmacology

	management of Epilepsy								
NP 14.8	Describe the causes, clinical features, Classification and management of Mental Retardation.	K	K/KH		Small group Discussion, Lecture	Written		OT in paediatric	
Topic Developmental disorders associated with spinal cord No of Competencies: 1									
NP 15.1	Enumerate various neural tube defects- and describe clinical features their management	K	K/KH		Small group Discussion, Lecture,	Written			General medicine
Topic: Common infection No of Competencies: 2									
NP 16.1	Enumerate & describe Infections of Central Nervous System & Peripheral Nervous System.	K	K, KH		Small group Discussion, Lecture	Written		OT in Pediatrics, OT Neurology	General medicine, neurology
NP 16.2	Describe the clinical symptoms and Treatment of Typhoid, Rubella, Mumps, Measles, Diphtheria, Chicken gunia, Malaria, Leptospirosis	K	K		Small group Discussion, Lecture	Written		Pathology	General medicine
Topic: Common diseases of the Respiratory system No of Competencies: 3									
NP 17.1	Describe clinical features, investigations and management of Common diseases of the Respiratory system	K	K	N	Lecture	Written			General medicine

NP 17.2	Understand Respiratory distress in neonate.	K	K	Y	Lecture	Written			General medicine
NP 17.3	Understand Aspiration, GERD	K	K	N	Lecture	Written		OT In Paediatrics	General medicine
Topic	**Rheumatology**	**No of Competencies: 2**							
NP 18.1	Describe clinical features, investigations and management of Juvenile R. A. Musculoskeletal system. Describe clinical features, complications	K	K	Y	Small group Discussion, Lecture	Written		OT in pediatrics	General medicine
NP 18.2.	Describe systemic lupus erythematosus	K	K	Y	Small group Discussion, Lecture	Written		OT In PAEDS	general medicine
Topic	**Nutritional disorders**	**No of Competencies: 1**							
NP 19.1	Define Malnutrition and enumerate the symptoms of Vitamin deficiency conditions and the treatment for the same	k	K	N	Small group Discussion, Lecture	Written		Community medicine	General medicine
Topic	**Genetic & congenital disorders**	**No of Competencies: 2**							
NP 20.1	Explain the cause, clinical symptoms and treatment for Chromosomal disorders and genetically transmitted neuromuscular conditions and describe the clinical feature and management	K	K	Y	Small group Discussion, Lecture	Written		OT pediatrics	General medicine
NP 20.2	Enumerate the paediatric congenital heart diseases and its clinical symptoms Describe the medical and	K	K		Small group Discussion, Lecture	Written		OT Paediatrics	General medicine, Cardiology

	surgical management for the same								

Recommended Books

1) Occupational Therapy – Willard & Spackman's
2) O.T. Practice Skills for Physical Dysfunction – Pedretti
3) O.T. in physical Dysfunction – Trombly& Scott
4) Therapeutic Exercise – Kisner
5) Therapeutic Exercise Basmajian
6) Rehab Medicine – Goodgold
7) Hand splitting – Fess, Gettle& Strickland.
8) Pulmonary rehabilitation, guidelines to success – Hodgkin T.E.
9) Physical rehabilitation, assessment, treatment – O'Sullivan

WORK PHYSIOLOGY

COUSE RDESCRIPTION: The student will demonstrate knowledge and ability of work physiology and its application and scope in Occupational Therapy. The course makes the student cognizant about evaluation and assessment of physical capacity and fitness, aerobic and anaerobic performance. The course offers know how of appropriate use of training equipment and protocols, test performance for work fitness, indications, contraindications for registering in exercise training and discharge programs.

OBJECTIVES

A. KNOWLEDGE

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

1) Identify and understand the physiology of the aerobic and anaerobic exercises, aerobic & anaerobic process & various test used.
2) Understand the concept of energy expenditure at work, rest and leisure
3) Recognize the role of various factors on physical performance
4) Provide training based on aerobic and anaerobic capacity.
5) Recognize physical health, capacity and longevity in aged.

Scheme of Examination:

Written		**Eligibility/Passing Marks**		**Practicals**		**Eligibility/Passing Marks**		**Total Marks**
Internal Assessment	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	
25	50	13	25	-	-	-	-	50

The internal assessment will be based on the following criteria -

Subject	**Theory**			**Practical/Viva**		
Work physiology	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
50 marks	15	10	25	--	--	--

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Scheme of Marks for University Theory exam

MCQs,Short answer questions ,Brief answer questions

Examination scheme

Semester pattern

For 50 marks-

In semester pattern 2 periodicals of minimum 10 marks each and 1 Prelim/ model paper of theory of 50 marks.

Annual pattern

For 50 marks-

2 periodicals of minimum 10 marks each and 1 midterm exam of theory of 25 marks and 1 Prelim/ model paper of theory

COURSE CONTENT

Code No.	Competency: Student should be able to	Domains K/S/A/C	Levels K/KH/SH/P	Core Y/N	Teaching Leaning Method	Assessment method	Vertical Integration	Horizontal Integration
Work Physiology								
Topic: Concepts of Physical Performance No of Competencies: 3								
WP 1.1	Describe physiology of the aerobic and anaerobic exercises on various systems.	K	KH	Y	Lectures Seminars	Written	Physiology,	Medicine
WP 1.2	Describe the physiology of physical performance with respect to aerobic and anaerobic power, and explain the factors that affect physical performance.	K	KH	Y	Lectures Seminars	Written	Physiology,	Medicine
WP 1.3	Enumerate basic principles of strength and aerobic training, and its physiologic effects	K	K	Y	Lectures Seminars	Written	Physiology,	Medicine
Topic: Evaluation of Physical Performance and fitness test No of Competencies: 6								
WP 2.1	Explain aerobic process related to Intensity and duration of exercise and recovery.	K	KH	Y	Lectures Seminars	Written	Physiology	
WP 2.2	Explain anaerobic process related to power and capacity for high energy phosphate level and glycogen breakdown	K	KH	Y	Lectures Seminars	Written	physiology	

WP 2.3	Explain the role of lactate production, distribution and disappearance	K	KH	Y	Lectures Seminars	Written	physiology	
WP 2.4	Describe various tests for Aerobic and Anaerobic capacity	K	KH	Y	Lectures Seminars	Written		OT Application in Medical Condition
WP 2.5	Explain the Protocols & Methods for: Parameters of evaluation. Measurement of oxygen uptake.	K/S	KH/SH	Y	Lectures Seminars	Written		
WP 2.6	Explain principles and methods of Physical Training.	K/S	KH/SH	Y	Lectures Seminars	Written Skill Assessment		
Topic: Physiological considerations and requirements of Physical Performance Capacity **No of Competencies: 2**								
WP 3.1	Understand the role of nutrition on Physical Performance	K	KH	Y	Lectures Seminars	Written		
WP 3.2	Explain mechanism of Temperature Regulation and its effects Physical Performance	K	KH	Y	Lectures Seminars	Written	Physiology	
Topic: Factors affecting Physical Performance No of Competencies: 2								
WP 4.1	Describe the effects of various factors on physical performance	K	KH	Y	Lectures Seminars	Written		
WP 4.2	Describe effects of Acclimatization, effects of altitude, season, smoking, temperature, de conditioning on physical performance	K	KH	Y	Lectures Seminars	Written		
Topic: Applied Work Physiology No of Competencies: 4								
WP 5.1	Describe training principles and physiologic consequence on aerobic and anaerobic system	K	KH	Y	Lectures,	Written		
WP 5.2	List the factors that affect the aerobic training response	K	K	Y	Lectures	Written/ Viva		

WP 5.3	understand the concept of energy expenditure at work, rest and leisure	K	KH/SH	Y	Lectures, Group Discussions	Written, Viva		Ergonomics
WP 5.4	Apply the WP principles to Cardio- Pulmonary Rehabilitation	S	SH/P	Y	DOAP	Skill assessment, Viva, OSPE		Medicine
Topic	**Physical Activity – Health and Aging**	**No of Competencies: 3**						
WP 6. 1	Explain Physical Activity Epidemiology	K	K	N	Lectures	Written		OT Application in Medical Conditions
WP 6. 2	Describe Aging Process and Physiologic function	K	K	Y	Lectures Seminars	Written		OT Application
WP 6. 3	Discuss Physical Activity Health and Longevity	K	KH	Y	Lectures	Written		

Recommended Books

1) Astrand PA, Rodahe K: Textbook of Work Physiology
2) Fitts PM & Posner MI: Human Performance
3) McArdle: Exercise Physiology

VI SEMESTER

VI SEMESTER										
Sr.no.	**Course code**	**Subject**	**Total Teaching Hours/Semester**			**Credits**				**Marks**
			Theory	**Practical/Demo/ Lab work**	**Clinical**	**Theory**	**Practical/Demo/ Lab work**	**Clinical**		**Total**
1	SO	Surgery & Orthopaedics (170)	**90**	**30**	50	6	1	1.1	**8.1**	**Theory-100**
2	PS	Psychiatry (80)	50	10	20	3.3	0.3	0.4	**4**	**Theory-50**

3	OTSC	Occupational Therapy in Surgical conditions (400)	**90**	**70**	220+20(visits)	6	2.3	5.3	**13.6**	**Theory-100 Practical - 100**
4	ERG	Ergonomics (65)	50	**15**	–	3.3	0.5		3.8	Theory – 50
5	RMB	Research Methodology & Biostatistics (65)	**50**	15	—-	3.3	0.5		3.8	Theory -50
6		Supervised Clinical training /Field work			**310**					
Total Hours					780					
Total no. of Credits as per heads						21.9	4.6	6.8		
Total Credits									33.3	
Total no of marks for Examination/semester						450				

SURGERY & ORTHOPAEDICS

COURSE DESCRIPTION: This course intends to familiarize students with principles of orthopaedic surgery along with terminology and abbreviations used in Orthopaedics for efficient and effective clinical understanding and documentation. It also explores various orthopaedic conditions focusing on epidemiology, pathology, primary and secondary clinical characteristics, conservative and surgical management.

This course intends to familiarize students with principles of General surgery, speciality surgeries like cardiovascular, thoracic, neurosurgery and plastic surgery. It familiarizes the students with appropriate terminology and abbreviations for efficient and effective chart reviewing and documentation. It explores various conditions needing attention to pathology, and their surgical and medical management. The course highlights awareness of various general and speciality surgeries for effective and safe decision making in therapeutic

OBJECTIVES:

N. KNOWLEDGE:

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

xxviii. Understand the process of fracture healing along with the complications of fractures and management of fracture, dislocation, congenital and acquired deformities of UE, LE, spine.

xxix. Classify clinical symptoms of degenerative and inflammatory conditions of joints, and metabolic disorders with special emphasis management of it.

xxx. Understand the aetiology of work-related musculoskeletal injuries and tumour of musculoskeletal system

xxxi. Understand concepts of biomechanics in overuse injuries in sports.

xxxii. Understand aetiology, pathophysiology, principles of diagnosis and management of common surgical problems including emergencies in adult and children.

xxxiii. Understand aetiology, pathophysiology, principles of diagnosis and management of cardiac and neuro surgery conditions

xxxiv. Define indications and methods for fluid and electrolytes replacement therapy including blood transfusion.

xxxv. Describe common malignancies in the country and their management including prevention.

xxxvi. Describe the basic pathophysiology of common Ear, Nose & Throat (ENT) diseases

xxxvii. Identify common gynecological diseases and management.

O. SKILL

1. Develop clinical skills (history taking, clinical examination and other instruments of examination of various common surgical disorders and emergencies
2. Refer a patient to secondary and/or tertiary level of health care after screening if needed;
3. Perform simple routine evaluations related to OT
4. Assist the common clinical assessment procedures related to surgical conditions.

P. ATTITUDE:

n. The teaching orthopaedics must aim at developing the attitude in students to apply the knowledge he/she acquires for benefit and welfare of the patients.

o. It is necessary to develop in students a sense of responsibility towards holistic patient care

p. Students should develop behavioural skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- professionals.

q. The teaching and training in clinical subjects like paediatrics and neurology must aim at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.

r. It is necessary to develop in students a sense of responsibility towards holistic patient care & prognostic outcomes related to OT.

s. Students should develop behavioural skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- professionals

Scheme of Examination:

Written		**Eligibility/Passing Marks**		**Practical**		**Eligibility/Passing Marks**		**Total Marks**
Internal Assessment	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	
50	100	25	50	--	--	25	50	100

The internal assessment will be based on the following criteria -

Subject	**Theory**			**Practical/Viva**		
General Surgery & Orthopedics	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
100 marks (General Surgery-50 Orthopedics- 50)	30	20	50	--	--	--

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

<u>Scheme of Marks for University Theory exam</u>

MCQs, Short answer questions, Brief answer questions and Long answer Questions

Semester pattern

For 100 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory of 100 marks.

Annual pattern

For 100 marks-

2 periodicals of minimum 20 marks each and 1 midterm exam of theory of 50 marks and 1 Prelim/ model paper of theory of 100 marks

COURSE CONTENT

Code No.	Competency: Student should be able to	Domains K/S/A/C	Levels K/KH/SH/P	Core Y/N	Teaching Leaning Method	Assessment method	Vertical	Horizontal
General Surgery								
Topic	**General Surgery**	**No of Competencies: 11**						
SO 1.1	Describe classification of wound, stages of healing and their treatment.	K	KH	Y	Lecture, Bed side clinic, small group discussion	Written		
SO 1.2	Describe importance of water- electrolyte balance in shock and hemorrhage and describe classification of shock in brief	K	KH	Y	Lecture, Bed side clinic, small group discussion	Written		
SO 1.3	Describe acute and chronic infections of wound, ulcers, cysts and abscesses, their clinical features and complications with brief knowledge of their management.	K	KH	Y	Lecture, Bed side clinic, small group discussion	Written		
SO 1.4	Describe in brief various surgeries of head and neck, their indications and complications	K	KH	Y	Lecture, Bed side clinic, small group discussion	Written		
SO 1.5	Explain indications for various surgeries of alimentary system and their postoperative management.	K	KH	Y	Lecture, Small group discussion Bedside clinics	Written		
SO 1.6	Explain causes of burns, various classification, their medical and surgical management with role of burns	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written		OT in surgical conditions

	rehabilitation team							
SO 1.7	Describe indications and causes of amputation, criteria for selection of site of amputation and pre and postoperative management	K	KH	Y	Lecture, Small group discussion Bedside clinics	Written	Orthopaedics	OT in surgical conditions
SO 1.8	Explain in brief classification of tumours, clinical features and their pre and post-operative management.	K	KH	Y	Lecture, Small group discussion	Written		
SO 1.9	Etiology and management of surgical incontinence and prolapse rectum	K	KH	Y	Lecture, Small group discussion	Written		
SO 1.10	Hernia- definition, causes, types and management	K	KH	N	Lecture, Small group discussion	Written		
SO 1.11	Describe postoperative complications of abdominal surgery	K	KH	Y	Lecture, Small group discussion	Written		
Topic: Plastic Surgery No of Competencies: 5								
SO 2.1	Describe various Hand injuries, their surgical and post-operative management with complications (including tendon injuries and nerve injuries, tendon transfers)	K	KH	Y	Lecture, Small group discussion Bedside clinics	Written	Plastic surgery	OT in surgical conditions
SO 2.2	Explain various skin grafts and flaps, their classification, criteria for selection and postoperative management	K	KH	Y	Lecture, Small group discussion Bedside clinics	Written	Plastic surgery	OT in surgical conditions
SO 2.3	Explain in brief various indications for cosmetic surgery, keloid and hypertrophic scar, their preoperative surgical and postoperative management.	K	KH	Y	Lecture, Small group discussion	Written	Plastic surgery	OT in surgical conditions
SO 2.4	Describe in brief new techniques in microvascular surgeries, their advantages and management.	K	KH	Y	Lecture, Small group discussion Bedside clinics	Written	Plastic surgery	OT in surgical conditions
SO 2.5	Explain pressure sores management	K/S	KH	Y	Lecture, Small group discussion Bedside	Written	Plastic surgery	OT in surgical conditions

					clinics			
Topic:	**Neurosurgery**	**No of Competencies: 7**						
SO 3.1	Describe common congenital and childhood disorders such as hydrocephalus, spina bifida, their clinical features, complications and their surgical management with postoperative care.	K	KH	Y	Lecture, Small group discussion Bedside clinics	Written	Clinical Paediatrics medicine and paediatric surgery	
SO 3.2	Describe first aid management of spinal cord injury and its importance and implications	K	KH	Y	Lecture, Small group discussion	Written	Orthopaedics	
SO 3.3	Classify and describe signs and symptoms of spinal and intra-cranial tumors	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written	Orthopaedics	
SO 3.4	Explain Head injury, causes and mechanism of injury, subdural, epidural and intracranial bleeding, pharmacology of drugs used, management in acute stage, types of neurological disorders following Head injury	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written	Pharmacology	
SO 3.5	Describe Neurogenic bladder and its classification and management	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written		
SO 3.6	Explain clinical features and management of Meningocele, Meningomyelocele, Spinal tumors	K	KH	Y	Lecture, Small group discussion	Written	Clinical Paediatric surgery	
SO 3.7	Describe Surgical management of brain disease and CVA	K	KH	Y	Lecture, Small group discussion,	Written		OT in neurological conditions
Topic:	**Cardiovascular and Thoracic Surgery**		**No of Competencies: 2**					
SO 4.1	Describe brief pathology, clinical features, indications, various operative procedures of surgery of cardiac and respiratory	K	KH	Y	Lecture, Bed side clinic, small group discussion	Written	Cardiovascular surgery	

	conditions							
SO 4.2	Explain pre- and post-surgical management such as Congenital cardiac problems, Coronary artery disease, Peripheral vascular disease	K	KH	Y	Lecture, Small group discussion	Written	Paediatrics	
Topic: ENT **No of Competencies: 7**								
SO 5.1	Describe problems of ear, nose throat and their management in brief U.R.T infections	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written	Clinical ENT	
SO 5.2	Enumerate the indications for and Tracheostomy procedure	K	KH	N	Lectures, Small group discussion	Written/ Viva voce		
SO 5.3	Describe the etiopathogenesis, clinical features and principles of management of Vertigo	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written		
SO 5.4	Describe the etiopathogenesis, clinical features and principles of management of Dysphagia,	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written		
SO 5.5	Describe the etiopathogenesis, clinical features and principles of management of Otitis media, vestibular disorders.	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written		
SO 5.6	Describe the etiopathogenesis, clinical features and principles of management of Otosclerosis,	K	KH	N	Lecture, Small group discussion, Bedside clinics	Written		
SO 5.7	Describe the etiopathogenesis, clinical features and principles of management of Functional Achonia and Deafness	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written		
Topic: Ophthalmology **No of Competencies: 7**								
SO 6.1	Describe and discuss common ophthalmological condition in brief and their management (diseases of conjunctiva, cataract)	K	KH	Y	Lecture, Small group discussion, Bedside clinics	Written	Clinical ophthalmology	

SO 6.2	Describe the etiopathogenesis, clinical features and principles of management of Optic nerve tumor	K	KH	Y	Lecture, Small group discussioh, Bedside clinics	Written		
SO 6.3	Describe the etiopathogenesis, clinical features and principles of management of Keratoplasty	K	KH	N	Lecture, Small group discussion	Written		
SO 6.4	Explain the Principles of eye donation. Enumerate Indications, describe surgical principles, management of eye donation	K	KH	N	Lecture, Small group discussion	Written		
SO 6.5	Describe the etiopathogenesis, clinical features and principles of management of Diabetic retinopathy	K	KH	Y	Lecture, Small group discussion,	Written		
SO 6.6	Describe the etiopathogenesis, clinical features and principles of management of Glaucoma, Corneal ulcer, iritis, retinitis, detachment of retina, ptosis & Defects of extraocular muscles	K	KH	N	Lecture, Small group discussion, DOAP, Bedside clinics	Written/ Viva voce		
SO 6.7	Explain and demonstrate the Visual acuity, visual field and refraction testing	K/S	KH/SH	Y	Lecture, Small group discussion, Demonstration	Written/ Viva voce/ Skill assessment		
Topic: Obstetrical and Gynecology		**No of Competencies: 9**						
SO 7.1	Describe common obstetrical and gynecological conditions and their management in brief.	K	KH	Y	Lecture, Small group discussion	Written	Clinical Gynaecology and obstetrics	
SO 7.2	Describe the Physiology of menstruation and its disorders	K	KH	N	Lecture, Small group discussion	Written	Physiology	
SO 7.3	Enumerate and describe Hormonal disorders in females,	K	KH	N	Lecture, Small group discussion	Written	Endocrinology	
SO 7.4	Describe Cancer of reproductive organs and management	K	KH	Y	Lecture, Small group discussion	Written	Oncology	
SO 7.5	Describe brief pathology, clinical features, indications, and principles of management of various Infections and STDs in females	K	KH	N	Lecture, Small group discussion	Written	Community medicine	General medicine

SO 7.6	Describe the maternal physiology in pregnancy, Musculoskeletal disorders during pregnancy	K	KH	Y	Lecture, Small group discussion	Written		
SO 7.7	Explain common obstetrical and gynaecological surgeries including postoperative care, prenatal complications investigations and management	K	KH	Y	Lecture, Small group discussion	Written		
SO 7.8	Explain lactation management. Describe Methods of birth control- merits/demerits.	K	KH	Y	Lecture, Small group discussion	Written		
SO 7.9	Describe complications of multiple childbirths	K	KH	N	Lecture, Small group discussion	Written	Pediatrics	
Topic:	**Surgical Oncology**	**No of Competencies: 4**						
SO 8.1	Describe Palliative and reconstructive surgeries in head and neck cancer,	K/A/S	K/KH	Y	Lecture, Group discussion	Written/ Viva voce		
SO 8.2	Enumerate Surgical indications for procedures like FND, and describe excision and flap reconstruction- postoperative management and complications	K	KH	Y	Lecture, Small group discussion, DOAP, Bedside clinics	Written/ Viva voce		
SO 8.3	Enumerate indications for Radical mastectomy and describe procedure, postoperative management and complications	K	KH	Y	Lecture, Small group discussion	Written		OT in surgery
SO 8.4	Describe surgical management of Cancer of GI tract	K	KH	Y	Lecture, Small group discussion	Written		
ORTHOPAEDICS								
Topic	**Fractures or injury to the bone**	**No of Competencies: 06**						
SO 9.1	Define and classify fractures	K	k	Y	Lecture	Written		

SO 9.2	Enumerate the causes, clinical features &healing of fractures & its complications.	k	K/KH	Y	Lecture	Written		
SO 9.3	Describe general principles of management of Fractures of the Upper Extremity,	k	KH	Y	Lecture	Written	OT in Orthopaedic conditions	
SO 9.4	Describe general principles of management of Fractures of the Lower Extremity and pelvis,	K	KH	Y	Lecture	Written	OT in Orthopaedic conditions	
SO 9.5	Describe general principles of management of fractures of vertebral column	K	KH	Y	Lecture	Written	OT in Orthopaedic conditions	
SO 9.6	Explain the terms trauma care & First Aid	K	KH	Y	Lecture	Written		
Topic	**Dislocations & Subluxations**	**No of Competencies: 02**						
SO 10.1	Explain clinical features and causes of traumatic dislocation and subluxation of Shoulder, Elbow, Hip and Knee Joint.	K	KH	Y	Lecture	Written		
SO 10.2	Explain principles of management of traumatic dislocation and subluxation of shoulder, elbow, Hip and Knee Joint	K	KH	Y	Lecture	Written		
Topic	**Soft Tissue and Traumatic Injuries**	**No of Competencies: 03**						
SO 11.1	Describe different types and grades of soft tissue injures	K	KH	Y	Lecture	Written	Clinical plastic surgery	
SO 11.2	Describe the pathology, clinical manifestations of injuries of joints & soft tissues (Ligaments, bursae, fascia, muscles and tendons) of upper and lower extremities & spine.	K	KH	Y	Lecture	Written		
SO 11.3	Describe the management of injuries of joints & soft tissues (Ligaments, bursae, fascia, muscles and tendons) of upper and lower extremities & spine.	K	KH	Y	Lecture	Written		
Topic	**Deformities and Anomalies**	**No of Competencies: 05**						
SO	Define and classify congenital and	K	K	Y	Lecture	Written	Clinical paediatrics	

12.1	acquired deformities							
SO 13.2	Describe clinical & radiological features of various deformities of spine and extremities,	K	KH	Y	Lecture	Written		
SO 14.3	Describe medical and surgical management with postoperative care for deformities of spine and extremities	K	KH	Y	Lecture	Written		
SO 14.4	Describe different types of congenital anomalies	K	K	Y	Lecture	Written		
SO 14.5	Describe conservative and surgical management for congenital anomalies.	K	KH	Y	Lecture	Written	OT in Orthopaedic conditions	
Topic	**Degenerative and Inflammatory Conditions No of Competencies: 02**							
SO 15.1	Describe pathology & clinical manifestations of Degenerative and Inflammatory Conditions	K	KH	Y	Lecture	Written	Pathology	
SO 15.2	Describe management of Degenerative and Inflammatory Conditions	K	KH	Y	Lecture	Written	OT in Orthopaedic conditions	
Topic	**Metabolic Disorders No of Competencies: 02**							
SO 16.1	Describe clinical features & management of Osteoporosis. Osteomalacia & Rickets	K	K	Y	Lecture	Written		Medicine
SO 16.2	Describe management of Osteoporosis Osteomalacia & Rickets	K	K	Y	Lecture	Written	Clinical Endocrinology	
Topic	**General Orthopaedic Disorders No of Competencies: 07**							
SO 17.1	Explain the etiology & clinical features of Entrapment nerve injuries & Compartment syndrome,	K	K	Y	Lecture	Written	Clinical Plastic surgery	
SO 17.2	Explain the etiology & clinical features of Avascular necrosis of bone in adult and children,	K	K	Y	Lecture	Written		
SO 17.3	Explain the etiology & clinical features Backache / Prolapsed Intervertebral Disc	K	K	Y	Lecture	Written		
SO	Explain the etiology & clinical features	K	K	Y	Lecture	Written	OT in Orthopaedic	

17.4	Work related musculoskeletal disorders.						conditions	
SO 17.5	Describe management for Entrapment nerve injuries & Compartment syndrome,	K	K	Y	Lecture	Written		
SO 17.6	Describe management for Backache /Prolapsed Intervertebral Disc	K	K	Y	Lecture	Written	OT in Orthopaedic conditions	
SO 17.7	Describe management for Work related musculoskeletal disorders	K	K	Y	Lecture	Written	OT in Orthopaedic conditions	
Topic	**Tumours of The Musculoskeletal System No of Competencies: 02**							
SO 18.1	Define & Classify types of tumours of The Musculoskeletal System	K	K	Y	Lecture	Written		
SO 18.2	Describe general principles of management of tumours of musculoskeletal system.	K	K	Y	Lecture	Written		
Topic	**Sports Injuries No Of Competencies: 02**							
SO 19.1	Enumerate upper & lower extremities sports injuries	K	K	Y	Lecture	Written		
SO 19.2	Explain Management of Ligament and Meniscal injuries of in sports	K	KH	Y	Lecture	Written	OT in Orthopaedic conditions	

Recommended Books

1. Short practice of surgery-- Bailey and Love.
2. Textbook of Surgery – Das.
3. Undergraduate surgery - AK Nan.
4. Outline of Fractures –Adams.
5. Outline of Orthopaedics. --Adams.
6. Apley's systems of orthopaedics and fractures by Louis Solomon, 9th edition.
7. Orthopaedics by Dr. Maheshwari

PSYCHIATRY

COURSE DESCRIPTION: At the end of the course student will attained knowledge regarding the scientific principles underlying modern psychiatry theory and practice, skills in order to apply this knowledge to clinical situations and attitudes necessary to identify and respond appropriately to psychological distress and disorder, not only in psychiatric settings but also throughout all areas

of medicine.

COURSE OBJECTIVES:

A. KNOWLEDGE

List the general causes and preventive measure in psychiatric disorders
Classify various psychiatric conditions and understand the general treatment protocols
Gain the knowledge regarding the clinical features, causes, ant management of various psychiatric conditions
Appreciate legal aspects of psychiatric illness and psychiatric management.

B. SKILL

Conduct a full psychiatric history and carry out a mental state examination, including cognitive assessment.
Explain how different biological, psychological and social factors may combine to precipitate psychiatric disorder.
Explain to patients and their relatives the nature of their condition, its management
Use an interviewing style that is empathic and adaptable to specific situations.

C. ATTITUDE

Respond empathically to mental illness and psychological distress in all medical and broader settings.
Understand that psychiatric illness creates problems with stigma, how this affects patients and their families.
Treat patients and their care givers with professionalism and confidentiality

Scheme of Examination:

Written		**Eligibility/Passing Marks**		**Practicals**		**Eligibility/Passing Marks**		**Total Marks**
Internal Assessment	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	
25	50	13	25	-	-	-	-	50

The internal assessment will be based on the following criteria -

Subject	**Theory**	**Practical/Viva**

Psychiatry	Written	Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc	Total	Practical	Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc	Total
50 marks	15	10	25	--	--	--

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Scheme of Marks for University Theory exam

MCQs, Short answer questions, Brief answer questions

Examination scheme

Semester pattern

For 50 marks-

In semester pattern 2 periodicals of minimum 10 marks each and 1 Prelim/ model paper of theory of 50 marks.

Annual pattern

For 50 marks-

2 periodicals of minimum 10 marks each and 1 midterm exam of theory of 25 marks and 1 Prelim/ model paper of theory

Course Learning Outcomes

Code No.	Competency: Student should be able to	Domains K/S/A/C	Levels K/KH/SH/P	Core Y/N	Teaching Leaning Method	Assessment method		
Psychiatry								
Topic Introduction to clinical psychiatry No of Competencies: 1								
PS 1.1	Give brief outline of psychiatry History taking including mental status examination and assessment	K/S/C	KH /SH/P	Y	Lecture, Case study, Demonstration	Practical Viva		
Topic: Causes of mental disturbances No of Competencies: 2								

PS 2.1	Enumerate the causes of mental illness.	K	K	Y	Lecture	Written		
PS 2.2	Explain the various factors related to mental illness	K	KH	Y	Lecture	Written, Viva		
Topic: Preventive measures No of Competencies: 1								
PS 3.1	Explain in relation to consanguineous marriages, adequate ante-natal care, obstetric care, mother and child services, psychological services (e.g., child guidance, counselling services)	K/S	KH/SH	Y	DOAP, Lecture	DOP, Skill Assessment		
Topic: Symptoms of mental illness No of Competencies: 1								
PS 4.1	Describe disturbances of consciousness, reasoning and judgment, memory, thought and perception, volition, motor behavior, speech, affect	K	K	Y	Lectures	Written		
Topic: Methods of treatment No of Competencies: 3								
PS 5.1	Enumerate and explain methods of treatment in mental disorders Individual and group psychotherapy Physical Methods: ECT and related side effects, Psychosurgery, Cognitive Behaviour Therapy	K	KH	Y	Lectures	Written		
PS 5.2	Describe Psychopharmacology and related side effects	K	K	Y	Lectures	Written	Pharmacology	
PS 5.3	Understand Other policies related to PWD- Right to education, right to health.	K	K	N	Lectures	Written	Community Medicine	
Topic: Criteria for classification and definition of psychiatric illness. No of Competencies: 1								

PS 6.1	Understand DSM-V- (Text Revision, 2000) & the International Classification of Diseases (ICD)	K	K	N	Lectures Case study, Clinical presentation	Written		
Topic: Psychiatric Conditions No of Competencies: 19								
	Schizophrenic and other Psychotic disorders							
PS 7.1	Define Schizophrenia & enumerate its types,	K	K	Y	Lectures	Written		
PS 7.2	Explain onset, clinical Features, course, treatment and prognosis in schizophrenia	K	KH	Y	Lectures, Seminars	Written, Viva,		
	Mood disorder							
PS 7.3	Define Mood Disorder & Explain the terms Maniac episode, Major depressive episode, Mixed episode. Hypomaniac episode	K	K	Y	Lectures	Written, Viva		
PS 7.4	Explain Onset, etiology, clinical features, course, treatment and prognosis of Mood disorder	K	KH	Y	Lectures	Written		
	Organic brain disorders							
PS 7.5	Explain the terms Delirium, Dementia, Amnestic syndromes, Organic personality disorder	K	K	Y	Lectures	Written		
PS 7.6	Describe clinical features, treatment & prognosis of organic brain disorders	K	KH	Y	Lectures	Written		
	Anxiety disorders							
PS 7.7	Explain the terms Panic attacks, phobia, Obsessive Compulsive Disorder, Panic disorder, Post traumatic stress disorder, Acute stress disorder and generalized anxiety disorder.	K	K	Y	Lectures	Written		
PS 7.8	Describe clinical features, treatment & prognosis of various anxiety disorders	K	KH	Y	Lectures	Written		
	Personality disorder							
PS 7.9	Classify personality disorders	K	K	Y	Lectures	Written		

PS 7.10	Describe the diagnostic criterion and prognosis.	K	KH	Y	Lectures	Written		
	Somatoform disorders							
PS 7.11	Explain Somatoform disorder, Conversion disorder, Pain disorder, Hypochondriasis, Body dysmorphic disorder.	K	K	Y	Lectures	Written		
	Psychiatric disorders of childhood and adolescence							
PS 7.12	Define and enumerate the clinical features of Attention Deficit, Hyperactivity Disorder, Mental Retardation. Conduct disorder Pervasive developmental disorder, Enuresis, Communication disorder, Learning disorder and Motor skill disorder.	K	K	Y	Lectures	Written		
PS 7.13	Describe Medical and Psychological treatment for the childhood disorders	K	KH	Y	Lectures	Written		
	Substance related disorder							
PS 7.14	Describe clinical manifestations in substance abuse	K	KH	Y	Lectures	Written		
PS 7.15	Describe Impact on function with respect to medical management in substances abuse	K/S	KH	Y	Lectures	Written Skill Assessment		
	Eating disorder							
PS 7.16	Describe Diagnostic criterion, impact on function with respect to medical management of Anorexia Nervosa Bulimia Nervosa	K	K	Y	Lectures	Written		
	Cognitive disorder							
PS 7.17	Explain the terms Dementia, Alzheimer's, Pick's disease, Amnestic disorder.	K	K	Y	Lectures	Written		
PS 7.18	Describe management of Cognitive disorders.	K	KH	Y	Lectures	Written		
PS 7.19	Explain impact of each disorder on function	K/S	KH	Y	Lectures	Written, Viva		
Topic: Legal aspects related to psychiatric patients		**No of Competencies: 1**						
PS 8.1	Understand Civil responsibility. Criminal responsibility. Testamentary capacity	K	K	Y	Lectures	Written Seminar Group Discussion		

Reference Books:

1) Ahuja N.– A Short Textbook of Psychiatry (latest edn.) Jaypee Brothers, Medical Publishers.
2) Shah L.P.: Handbook of Psychiatry.
3) Gandhi & Gandhi – Short Text book of Psychiatry.
4) Synopsis of psychiatry- Kaplan.
5) Diagnostic criterion - DSM V.

OCCUPATIONAL THERAPY IN SURGICAL CONDITIONS

COURSE DESCRIPTION: This course intends to familiarize students with principles of rehabilitation in clients with burns, amputation, cancer, traumatic hand injuries and peripheral vascular disease. Familiarizes the students with terminology and abbreviations for efficient and effective chart review and documentation. It explores various conditions needing attention, focusing on pathology, as well as primary and secondary clinical character.

GOAL: The broad goal to teach the undergraduate students OT Application in Surgical Conditions is to have the knowledge, skills and behavioural attributes to function effectively as a occupational therapist and use purposeful activities to promote health and well-being and subsequently improve functional independence and Quality of Life of the patient.

OBJECTIVES

A. KNOWLEDGE

1. Demonstrate knowledge and understanding of common surgical problems in amputation, burns, PVD, hand injuries and cancer.
2. Acquire knowledge of functional limitations in blind deaf and dump.
3. Understand various surgical treatments and become familiar with various surgical procedures
4. To become familiar with various occupational therapy protocols for surgical conditions and know their expected outcomes
5. To provide treatment of occupational performance in the areas of independent living/daily living skills, pre-vocational/work adjustment skills, play/leisure skills, and social skills

B. SKILL

1. Evaluate and assess patients with surgical Conditions
2. Understand and possibly perform various basic procedures, such as edema assessment, need for splinting and compression garment.
3. Develop specific motor skills utilized in surgical conditions for applying various protocols and planning need for orthosis, compression garments and prosthesis
4. Evaluate environmental barriers to facilitate environmental support.

C. ATTITUDE

1. Acquire a caring and sympathetic attitude appropriate for dealing with patients with surgical conditions
2. Realize the scope of responsibility you assume as an occupational therapist and to that of the family
3. Demonstrate an openness to receive constructive criticism
4. To develop, restore, or improve required skills, habits, and roles for independent, meaningful, and productive living
5. Students should develop behavioural skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- professionals

Scheme of Examination:

Written		**Eligibility/Passing Marks**		**Practicals**		**Eligibility/Passing Marks**		**Total Marks**
Internal Assessment	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	
50	100	25	50	50	100	25	50	200

The internal assessment will be based on the following criteria -

Subject	**Theory**			**Practical/Viva**		
Occupational Therapy in Surgical conditions	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
100 marks	30	20	50	30	20	50

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs,Short answer questions ,Brief answer questions and Long answer Questions

Scheme of examination for University Practical exam

Long Case & viva voce	Short case (Assessment / Intervention Approaches) & viva voce	Presentation & Communication skills	Total
50marks	**30 marks**	**20 marks**	**100 marks**

Semester pattern

For 100 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

Annual pattern

For 100 marks-

2 periodicals of 20 marks each and 1 midterm exam of theory and practical of 50 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

COURSE CONTENT

Code No.	Competency: Student should be able to	Domains K/S/A/C	Levels K/KH/SH/P	Core Y/N	Teaching Leaning Method	Assessment method	Vertical Integration	Horizontal Integration
Occupational Therapy In Surgical Conditions								
Topic: Burns and Burns Rehabilitation No of Competencies: 6								
OTS 1.1	Explain Epidemiology of Burn Injuries	K	K	Y	Lecture	written	Anatomy	General Surgery,
OTS 1.2	Enumerate Classification & Types of Burn Injury	K	K	Y	Lecture, Bed side clinic, small group discussion	Written /viva voice	Anatomy	General Surgery
OTS 1.3	Describe clinical features, extent of burns, & Phases of burn wound healing	K/S	K/ SH	Y	Lecture	Written /viva voice	Anatomy	General Surgery
OTS 1.4	Discuss Associated problems and complications of burns	K/S/A/C	K/SH/P	Y	Lecture, Small	Written /viva		General

	injury				group discussion, DOAP	voice		Surgery/ plastic surgery
OTS 1.5	Discuss goals of burns Rehabilitation	K/S/C	K/SH/P	Y	Lecture, Small group discussion, DOAP	Written /viva voice		
OTS 1.6	Explain OT intervention in each phase of recovery	K/S/C	K/SH/P	Y	Lecture, Small group discussion, DOAP	Written /viva voice		
Topic: Amputation & Prosthetics No of Competencies: 9								
OTS 2.1	Define & explain Causes of amputation	K	K	Y	Lecture	Written /viva voice		Orthopedics, general surgery
OTS 2.2	Explain Surgical management and levels of amputation	K	K	Y	Lecture	Written /viva voice		Orthopedics, general surgery
OTS 2.3	Evaluate ideal Stump and its complications	K/S	K/SH	Y	Lecture, Small group discussion, DOAP	Written /viva voice	Anatomy	Orthopedics, general surgery
OTS 2.4	Demonstrate Stump bandaging and conditioning	K/S/C	K/SH	Y	Lecture, Small group discussion, DOAP	Written /viva voice		
OTS 2.5	Discuss Pre & post-prosthetic Training and rehabilitation	K/S/A/C	K/SH/P	Y	Lecture, DOAP	Written /viva voice		
OTS 2.6	Demonstrate gait training with pylon and prosthesis, Mirror therapy	K/S/A/C	K/SH/P	Y	Lecture, Small group discussion, DOAP	Written /viva voice		
OTS 2.7	Explain check out of prosthesis, Donning and doffing of prosthesis	K/S/A/C	K/SH/P	Y	Lecture, Small group discussion, DOAP	Written /viva voice		
OTS 2.8	Identify factors that interfere with prosthetic fitting	K/S/C	K	Y	Lecture, Small group discussion	Written /viva voice		
OTS 2.9	Discuss Psychological implication of amputation. Evaluate for Wheelchair prescription for amputee	K/S/C	K/P	Y	Lecture, Small group discussion	Written /viva voice		
Topic: Tendon Injuries No of Competencies: 6								

OTS 3.1	Enumerate Tendon injuries in upper limb	K	K	Y	Lecture, Small group Discussion	Written. Viva	Anatomy	Plastic Surgery
OTS 3.2	Explain etiology of Flexor and extensor tendon injuries	K	KH	Y	Class room, small group Discussion	Written. Viva	Anatomy	Plastic Surgery
OTS 3.3	Identify Zones of tendon injury	S	SH	Y	Demonstrate. Practical, Small group Discussion,	Viva, Skill Assessment	Anatomy	Plastic Surgery
OTS 3.4	Evaluate & demonstrate hand function, edema, sensations	S	SH	Y	Demonstrate. Practical, Small group Discussion, DOAP	Written. Viva, Skill Assessment	-	-
OTS 3.5	Describe Protocols for tendon injury intervention	K	KH	Y	Lecture, Small group Discussion	Written, Viva	-	Plastic Surgery
OTS 3.6	Discuss Training for functional, vocational & leisure activities	K	KH/SH	Y	Lecture, Small group Discussion	Written, Viva	-	-
Topic: Traumatic Disorders of upper extremity No of Competencies: 9								
OTS 4.1	Enumerate the Causes and classify traumatic disorders of UE	K	K	Y	Lecture, Small group Discussion,	Written, Viva		General Surgery, Plastic Surgery
OTS 4.2	List the clinical implications in traumatic injuries	K	K	Y	Lecture, Small group Discussion	Written. Viva		General Surgery, Plastic Surgery
OTS 4.3	Explain Mutilating injuries & Revascularization of the hand	K	KH	N	Lecture, Small group Discussion	Written. Viva		General Surgery, Plastic Surgery
OTS 4.4	Evaluate & demonstrate hand function, edema, sensation, functional assessments	K/S	KH/SH	Y	Demonstrate. Practical, Bed Side clinic, small group Discussion, DOAP	Written. Viva, Skill Assessment, OSCE		General Surgery
OTS 4.5	Explain Pre & post-operative management in O.T. & splinting	K	KH	Y	Lecture, Small group Discussion	Written. Viva		
OTS 4.6	Describe & assess Compartment syndrome of the Upper	K/S	KH/SH	Y	Demonstrate.	Written. Viva,		Orthopedics

	limb and explain OT management				Practical, Lecture, Small group Discussion, DOAP	Skill Assessment, OSCE, DOP		
OTS 4.7	Describe Digital Replantation surgery and OT management	K	KH	Y	Lecture, Small group Discussion	Written. Viva		Plastic Surgery
OTS 4.8	Enumerate Causes of stiff hand and explain its management	K/S	KH	Y	Lecture, Small group Discussion	Written. Viva		Plastic Surgery
OTS 4.9	Discuss Training for functional, vocational & leisure activities	K/S	KH/SH	Y	Lecture, Small group Discussion, Practical	Written. Viva Skill Assessment DOP	-	-
Topic: Brachial plexus & Peripheral nerve injuries No of Competencies: 7								
OTS 5.1	Describe Anatomy & pathomechanics of BPI	K	K	N	Lecture, Small group Discussion	Written. Viva	Anatomy	
OTS 5.2	Enumerate Classification of nerve injuries	K	K	N	Lecture, Small group Discussion	Written. Viva	Anatomy	
OTS 5.3	Enumerate clinical manifestations of brachial plexus and peripheral nerve injuries	K	K	Y	Lecture, Small group Discussion	Written. Viva		Plastic Surgery, Orthopaedics
OTS 5.4	Discuss assessment and treatment specific to BPI and PNI.	K/S	KH/SH	Y	Lecture, Small group Discussion	Written. Viva		Plastic Surgery
OTS 5.5	Explain hand function & Sensory assessment	K/S	KH/SH	Y	Lecture, Small group Discussion, Practical	Written. Viva Skill Assessment DOP	-	-
OTS 5.6	Discuss Functional impact and implications	K	KH	Y	Lecture, Small group Discussion	Written. Viva	-	-
OTS 5.7	Identify Therapeutic techniques, splints and adaptations in management of BPI and PNI.	K/S	SH	Y	Demonstrate. Practical, Lecture, Small group Discussion,	Written. Viva, Skill Assessment	OT Diagnostic II	-
Topic: Cancer and Oncology Rehabilitation No of Competencies: 9								

OTS 6.1	Understand Pathology & clinical features of Head, neck, face & breast cancer	K	K	N	Lecture, Small group Discussion	Written. Viva	Pathology	Oncology. Surgery
OTS 6.2	Explain medical & surgical management of head, neck, face & breast cancer	K	KH	N	Lecture, Small group Discussion	Written. Viva		Surgery, Oncology
OTS 6.3	Discuss OT Management for Modified Radical Mastectomy, Cosmetic prosthesis	K/S/C	SH/S	Y	Demonstrate. Practical, Lecture, Small group Discussion,	Written. Viva, Skill Assessment		
OTS 6.4	Discuss Psychological & emotional aspects of living with cancer.	K/S/A	SH/S	Y	Demonstrate. Practical, Lecture, Small group Discussion,	Written. Viva, Skill Assessment		
OTS 6.5	Discuss Physical dysfunction issues from cancer- Dysphagia & Lymphedema management	K/A	KH/SH	Y	Demonstrate. Practical, Lecture, Small group Discussion,	Written. Viva		Oncology. Surgery
OTS 6.6	Discuss role of OT in rehabilitation of cancer patients (Preventive, restorative, supportive).	K	K	Y	Lecture. Small group Discussion,	Written. Viva		
OTS 6.7	Explain Hospice (palliative aspects), family systems- as the unit of care, Support Groups.	K/A/C	K/KH	Y	DOAP	Skill assessment		
OTS 6.8	Demonstrate Postural exercises and body image adjustment training	K/S	KH	Y	Bed Side clinic Demonstration	Skill Assessment, OSCE		
OTS 6.9	Counsel the patient regarding malignant conditions of the breast & body image problem	A/ C	SH	Y	DOAP	Skill assessment	Psychology	
Topic: Vascular Conditions No of Competencies: 8								
OTS 7.1	Define Vascular, Lymphatic & Integumentary disorders & its risk factors	K	K	Y	Lecture	Witten		General surgery
OTS 7.2	Describe clinical features and correct examination of occlusive arterial, vascular, lymphatic disease	K/S	K/KH	Y	Lecture/ Small group discussion	Written		General surgery
OTS 7.3	Classify wound. Explain wound healing, & OT intervention	K/S/C	K/SH	Y	Lecture/ Small group discussion	Written/Viva voice		General surgery

OTS 7.4	Identify Indications and contraindications for exercises	K/S	K	Y	Lecture	written		
OTS 7.5	Describe pathophysiology, clinical features, Investigations and principles of management of DVT and Varicose veins	K	KH	Y	Lecture/ Small group discussion/DOAP	Written/ Viva voice		General surgery
OTS 7.6	Demonstrate Exercises for arterial & venous insufficiency.	K/S/A/C	K/KH/SH	Y	Lecture/DOAP	Written/ Viva voice		
OTS 7.7	Explain & demonstrate Manual Lymphatic Drainage (MLD)	K/S/A/C	K/KH/SH	Y	Lecture/ Small group discussion/DOAP	Written/ Viva voice/skill assessment		
OTS 7.8	Demonstrate Compression Therapy, Orthotics, supportive & pressure redistributing devices	K/S/A/C	K/KH/SH	Y	Lecture/ Small group discussion/DOAP	Written/Viva voice/skill assessment		
Topic: Occupational Therapy in Visual Impairments No of Competencies: 6								
OTS 8. 1	Definition and Classification of visual Impairments	K	K	Y	Lecture, Small group Discussion	Written. Viva		Ophthalmology
OTS 8. 2	Identify Causes of Visual impairment & OT management	K	KH	Y	Lecture, Small group Discussion	Written. Viva		Ophthalmology
OTS 8. 3	Explain mobility techniques, Communication skills, Sensory re-education, Mobility training in blind	K	KH	Y	Lecture, Small group Discussion	Written. Viva	-	-
OTS 8. 4	Demonstrate mobility techniques, sensory re- education in visual Impairment	S	SH	Y	DOAP, Practical	Skill Assessment	-	-
OTS 8. 5	Discuss Intervention for Low vision	K	KH	Y	Lecture, Small group Discussion	Written. Viva	-	-
OTS 8. 6	Discuss Emotional and psychological aspects for visual impairment	K	KH	Y	Lecture	Written. Viva	-	-
Topic: Occupational Therapy in deaf, dumb No of Competencies: 6								
OTS 9.1	Definition and classification of speech impairment	K	K	Y	Lecture,	Written. Viva	-	ENT
	Demonstrate communication skills: Types and uses of	K/S	SH	Y	Demonstration	Practical, Skill	-	ENT

OTS 9.2	hearing aids					Assessment		
OTS 9.3	Discuss Emotional and psychological aspects in Deaf & Dumb						-	-
OTS 9.4	Describe Approaches in deaf and dumb rehabilitation	K	K	Y	Lecture,	Written. Viva	-	-
OTS 9.5	Explain Vestibular affectations and re-training						-	ENT
OTS 9.6	Cognitive assessment and retraining in congenitally deaf and post cochlear implants	S/C	SH	Y	Demonstration, DOAP	DOP, Skill Assessment	-	-
Topic: Occupational Therapy in Obstetrics and Gynecology No of Competencies: 7								
OTS 10.1	Enumerate Complications related to Pregnancy	K	K	Y	Lecture,	Written. Viva	-	Gynac
OTS 10.2	Discuss Effects of aerobic exercises in Antenatal, prenatal, postnatal & during pregnancy	K	KH	Y	Lecture,	Written. Viva	-	
OTS 10.3	Discuss role of Occupational therapy management during pregnancy and post-partum, caesarean child birth and high-risk pregnancy.	K	KH	Y	Lecture,	Written. Viva	-	Gynac
OTS 10.4	Demonstrate floor strengthening, Kegel's exercises	S	SH	Y	DOAP, Demonstration	Skill Assessment		
OTS 10.5	Discuss Mother & child care	K/S	K	Y	Lecture,	Written. Viva		
OTS 10.6	Identify Indications and contraindications to exercises in pregnancy	S	SH	Y	Demonstration, Bed side clinic	Practical, Skill Assessment		
OTS 10.7	Explain Back care: Ergonomic education	K/C	KH	Y	Lecture,	Written. Viva		

Recommended Books

1) Occupational Therapy – Willard &Spackman
2) O.T. Practice Skills for Physical Dysfunction – Pedretti.
3) O.T. in Physical Dysfunction – Trombley
4) Therapeutic Exercise – Basmajian.
5) Rehab Medicine – Good gold.
6) Rehabilitation of Hand – Wynn & Parry.
7) Hand – Hunter.
8) Hand splinting – Fess
9) Therapeutic exercise – Kisner.

10) Physical rehabilitation, assessment & treatment – Suzan O' Sullivan

ERGONOMICS

COURSE DESCRIPTION: The student will demonstrate knowledge and ability of ergonomics and its application and scope in Occupational Therapy and Industry. The course offers opportunity to learn basics of ergonomics in industry, the prevention of cumulative trauma disorders and joint pathologies and other conditions as applicable. It covers aspects of mental ergonomics, management of anxiety and stress in industry and work place

OBJECTIVES: at the end of the course student will be able to

A. KNOWLEDGE

1. Understand anthropometry, Environmental physiology, Occupational psychology and its role in ergonomics.
2. Understand use of ergonomic principles at office and industry
3. Define what work-related musculoskeletal disorders (WRMSDs) are and the importance of reducing these.
4. optimize the integration of man and machine so as to improve the production of work and accuracy

B. SKILL

1. Apply principles of biomechanics and work physiology in OT
2. Demonstrate and assess work place layout

Scheme of Examination:

Written		Eligibility/Passing Marks		Practicals		Eligibility/Passing Marks		Total Marks
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
25	50	13	25	-	-	-	-	50

Scheme of Marks for University Theory exam

MCQs,Short answer questions ,Brief answer questions

Examination scheme

Semester pattern

For 50 marks-

In semester pattern 2 periodicals of minimum 10 marks each and 1 Prelim/ model paper of theory of 50 marks.

Annual pattern

For 50 marks-

2 periodicals of minimum 10 marks each and 1 midterm exam of theory of 25 marks and 1 Prelim/ model paper of theory

COURSE CONTENT

Code No.	Competency: Student should be able to	Domains K/S/A/C	Levels K/KH/SH/P	Core Y/N	Teaching Learning Method	Assessment method	Vertical Integration	Horizontal Integration
Ergonomics THIRD (BOT)								
Topic: Introduction to Ergonomics No of Competencies: 2								
ERG 1.1	Define Ergonomics & give an overview of Historical Background	K	K	Y	Lectures	Written, viva	-	-
ERG 1.2	Enumerate & explain the areas and branches of Ergonomics	K	K	Y	Lectures	Written, viva	-	-
Topic: Client Centre Framework for therapist in Ergonomics No of Competencies: 4								
ERG 2.1	Discuss theoretical Framework	K	KH	Y	Lectures	Written, viva	-	-
ERG 2.2	Discuss ergonomic approaches	K	KH	Y	Lectures	Written, viva	-	-
ERG 2.3	Explain the role of client centred Practice and ethics	K	K	Y	Lectures, Small Group Discussions	Written, viva	-	-
ERG 2.4	Describe application of various models to Ergonomic practice	K	KH	Y	Lectures, Small Group Discussions	Written, viva	OTDP I	-
Topic: Branches of Ergonomics No of Competencies: 15								

	Branches of Ergonomics Anthropometry-							
ERG 3.1	Enumerate & explain facets- static and dynamic anthropometry.	K	K	Y	Lectures	Written, viva		
ERG 3.2	Explain Measurements, concepts of 5^{th}, 50^{th} and 95^{th} percentile	K	K	Y	Lectures, Small Group Discussions	Written, viva		
ERG 3.3	Enumerate & explain the factors affecting the anthropometric data	K	K	Y	Lectures, Small Group Discussions	Written, viva	OTDP I	
	Biomechanics-							
ERG 3.4	Overview of Biomechanics and its principals	K	K	N	Lectures	Written	Anatomy	
ERG 3.5	Apply the Biomechanical principles to improve production of work	K	SH	Y	Lectures	Written	OTDP I	
ERG 3.6	Apply biomechanical principles in OT	K S	SH	N	Lectures, Demonstration	Written	OTDP I	
	Environmental Physiology							
ERG 3.7	Define & classify the types of environments.	K	K	Y	Lectures, Small Group Discussions	Written, viva		
ERG 3.8	Outline the effects of environmental factors such as temperature, humidity noise, vibration, visual environmental pollution on human body.	K	K	Y	Lectures, Small Group Discussions	Written, viva		
ERG 3.9	Explain the safety factors, accidents and their prevention	K	K	Y	Lectures, Small Group Discussions	Written, viva		
	Skill psychology -							
ERG 3.10	Explain skill learning with emphasis on a. Phases of skill learning b. Characteristics of well learnt task.	K	K	Y	Lectures, Small Group Discussions	Written, viva		
ERG 3.11	Describe Input verses out and functioning of man- machine system	K	K	Y	Lectures, Small Group Discussions	Written, viva		
ERG 3.12	Describe Information processing theory and the process.	K	KH	Y	Lectures, Small Group Discussions	Written, viva	psychology	
ERG 3.13	Enumerate the Factors affecting man	K	K	Y	Lectures, Small Group	Written, viva		

	machine system i) Design Factor ii) Environmental Factors iii) Organizational factors				Discussions			
	Work Physiology-							
ERG 3.14	Overview of work Physiology principles	K	K	N	Lectures	Written	Physiology	
ERG 3.15	Application of principles of work physiology in Occupational Therapy.	K	K	Y	Lectures, Small Group Discussions	Written, viva	Workphysiology	
Topic: Ergonomic considerations at Work No of Competencies: 4								
ERG 4.1	Explain layout of equipment design of seating.	K	K	Y	Lectures,	Written, viva		
ERG 4.2	Explain the design of work space	K	K	Y	Lectures, Demonstration	Written, viva		
ERG 4.3	Explain role of human compatibility and use of displays and controls in industrial set up	K	K	Y	Lectures, Small Group Discussions	Written, viva		
ERG 4.4	Analyze work place	K/S	K	Y	Lectures, Small Group Discussions	Written, viva		
Topic: Psychosocial Factors No of Competencies: 2								
ERG 5.1	Define psychosocial factors	K	K	Y	Lectures,	Written		
ERG 5.2	Theories explaining relationship between psychosocial factors and work-related musculoskeletal disorders	K	KH	Y	Lectures,	Written		
Topic Cognitive Workload & Organization of Mental Space No of Competencies: 2								
ERG 6. 1	Explain the concept of cognitive workload, its advantages and	K	KH	Y	Lectures,	Written		

	organization of mental space.							
ERG 6. 2	Understand the effects of cognitive overload	K	K	Y	Lectures, Small Group Discussions	Written		
Topic: Time and Motion Study in Ergonomics No of Competencies: 3								
ERG 7.1	Define and underline the assumptions of Time and Motion study.	K	KH	Y	Lectures,	Written		
ERG 7.2	Explain the cycle of managerial control and its application	K	KH	Y	Lectures,	Written		
ERG 7.3	Explain Scientific method of time and motion study	K	KH	Y	Lectures,	Written		
Topic: Application of Ergonomics in School Industry, Hospital and Office No of Competencies: 2								
ERG 8. 1	Discuss the Scope of ergonomics in modern society.	K	KH	Y	Lectures,	Written		
ERG 8.2	Apply the Ergonomic principles in Occupational Therapy Practice related to: i) Lifting analysis ii) Seating analysis iii) Computer and assistive technology	K/S	KH/SH	Y	Lectures, Demonstration,	Written, Skill assessment		

Recommended Books

1) Karen Jacobs: Ergonomics for Therapists
2) Mural KF: Ergonomics – Man in his working environment
3) Mundel: Time and motion study

RESEARCH METHODOLOGY & BIOSTATISTICS

Course Description: Research Methodology and Biostatistics: The student should acquire knowledge of principles in 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 Objectives: This course will provide more knowledge on action of Research Methods & Biostatistical concepts, to understand the role of the theory in research, Stages of research process, steps to follow during research process, to aware the appropriate ways to search and review the literature, types of data collections, variability, sampling techniques etc.,

1. Select a relevant research topic based on contemporary literature and apply Biostatistics concepts.
2. Compare basic quantitative (observational and experimental) study designs, understand their advantages, disadvantages and select the best for a specific research question.
3. Compute, apply and interpret results based on findings.
4. Test the hypothesis and apply research questions to interpret the results
5. Identify different clinical study designs
6. Understand the importance of computers in Community

Course Learning Outcomes

At the end of this course, students will be able to: Describe the research methods, types of research process, study designs. Discuss the Level of evidences, ethical guidelines and methods of writing references. They can able to appreciate the sources and types of data collections, Measures of central tendency, Variability, Probability, Sampling, significances. They can be able to brief out the demography and vital statistics etc.,

At completion of this course, it is expected that the students will be able to

1. Choose the appropriate research design and develop appropriate research hypothesis for a project
2. Develop an appropriate framework for research studies
3. Know the various statistical methods to solve different types of problems
4. Appreciate the importance of Computer in hospital

Scheme of Examination:

Written		Eligibility/Passing Marks		Practical's		Eligibility/Passing Marks		Total Marks
Internal Assessment	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	**Internal Assessment**	**University exam**	
25	50	13	25	--	--	--	--	50

The internal assessment will be based on the following criteria -

Subject	Theory			Practical/Viva		
Research Methodology & Biostatistics	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
50 marks	15	10	25	--	--	50

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs, Short answer questions, Brief answer questions and long answer Questions

Semester pattern

For 50 marks-

In semester pattern 2 periodicals of minimum 10 marks each and 1 Prelim/ model paper of theory and practical of 50 marks each

Annual pattern

For 50 marks-

2 periodicals of 10 marks each and 1 midterm exam of theory and practical of 25 marks each and 1 Prelim/ model paper of theory and practical of 50 marks each.

Competency Table Topic wise:

Total no of Competencies: 30

Code No.	Competency: Student should be able to	Domains K/S/A/C	Levels K/KH/SH/P	Core Y/N	Teaching Leaning Method	Assessment method	Vertical Integration	Horizontal Integration
RESEARCH METHODOLOGY								
Topic: Stages of research process No of Competencies: 1								
RMB 1.1	Formulate a research question for a study	K	KH	Y	Lecture, Group Discussions	Written	-	-
Topic: Types of Research No of Competencies: 2								
RMB 2.1	Describe the types of research – Qualitative & Quantitative	K	KH	Y	Lecture	Written	-	-
RMB 2.2	Describe and discuss the principles and the methods of collection, classification, analysis, interpretation and presentation of statistical data	K	KH	Y	Lecture	Written		
Topic: Algorithm of Study Designs and Level of Evidence No of Competencies: 2								
RMB 3.1	Enumerate, Describe and demonstrate the application of elementary statistical methods including test of significance in various study designs	K /A/S	KH/SH	Y	Lecture, Seminar	Written		

RMB 3.2	Identify and explain the Five levels of evidence. (Systematic review or Meta- analysis, Randomized control trials Quasi-Experimental, Non-Experimental	K	KH	Y	Lecture	Written		
Topic: Review of Literature No of Competencies: 1								
RMB 4.1	Enumerate Various sources of references and Acknowledgement of sources	K	K	Y	Lecture, Small group Discussions	Written		
Topic: Reliability & Validity No of Competencies: 2								
RMB 5.1	Describe reliability and Validity	K	K/KH	Y	Lecture	Written		
RMB 5.2	Enumerate the types and explain the difference between reliability and Validity	K	K/KH	Y	Lecture	Written		
Topic: Ethical Guidelines No of Competencies: 2								
RMB 6.1	Discuss the historical background in evolution of ethical guidelines.	K	K/KH	Y	Lecture	Written		
RMB 6.2	Describe the Ethical Guidelines for Biomedical Research in Human Participants	K	K	Y	Lecture	Written		
Topic: Protocol Writing No of Competencies: 1								

RMB 7.1	Understand Protocol Writing for Submission to Institutional Review Board/Institutional Ethics Committee (IRB/IEC).	K/S/A/C	K/KH/SH	Y	Lecture, Group discussion, Seminar	Written, Skill Assessment		
Topic	**Methods of Writing References. No of Competencies: 1**							
RMB 8.1	Enumerate & understand different methods in research	K/S	K/KH /SH	Y	Lecture, DOAP	Written, Skill Assessment		
			BIOSTATISTICS					
Topic	**Introduction to Statistics &Common Statistical Terminologies No of Competencies: 2**							
RMB 9.1	Define and describe common terminologies (Population, Sample, Constant, Variable)	K	KH	Y	Lecture	Written		
RMB 9.2	Understand its scope and limitation	K	KH	Y	Lecture	Written		
Topic	**Sources & Types of Data, Data Collection & Presentation**		**No of Competencies: 2**					

RMB 10.1	Enumerate & explain the types and sources of data (Primary & Secondary Source Ordinal, Nominal, Ratio Interval Quantitative & Qualitative)	K	K/KH	Y	Lecture, Small Group discussion	Written		
RMB 10.2	Describe the Scales of measurement of data, Surveys, Records, Tabulation & Graphs.	K	K/KH	Y	Lectures, Small Group discussion	Written		
Topic Measures of Central tendency & Location. No of Competencies: 2								
RMB 11.1	Enumerate and demonstrate Common sampling techniques, simple statistical methods, frequency distribution,	K/S	K/KH/SH	Y	Lecture, small Group discussion	Written		
RMB 11.2	Understand the Measures of central tendency and dispersion	K	K/KH	Y	Lecture, small Group discussion	Written		
Topic Variability & its Measures Errors in measurement and their control No of Competencies: 1								
RMB 12.1	Understand the terms Range, Quartile deviation, Mean deviation, Standard deviation, Coefficient of variation, SEM, SEP.	K	K/KH	Y	Lecture, Small Group discussion	Written		
Topic Probability No of Competencies: 2								
RMB 13.1	Define & understand Addition theorem of probability, Multiplication theorem of probability.	K	K	Y	Lecture	Written		
RMB 13.2	Understand Probability and Non-Probability distribution	K	K	Y	Lecture	Written		
Topic Normal Distribution & Normal Curve No of Competencies: 1								
RMB 14.1	Define Construction, Properties, Use & significance, Skewness in distribution.	K	K	Y	Lecture	Written		
Topic Sampling, Sampling Variability & its Significance. No of Competencies: 1								

RMB 15.1	Enumerate and describe the Methods of sampling, Explain Errors in sampling	K	KH	Y	Lecture	Written		
Topic Sample Size Calculation No of Competencies: 1								
RMB 16.1	Enumerate and demonstrate the Quantitative: finite & infinite population Qualitative: finite & infinite population	K	K/KH	Y	Lecture, DOAP	Written		
Topic Tests of Significance I No. of Competencies: 1								
RMB 17.1	Describe the Significance of Difference in Means: Z test t test: paired & unpaired	K	K/KH	Y	Lecture, Small group Discussion	Written		
Topic Tests of Significance – II. No of Competencies: 1								
RMB 18.1	Explain the Chi - Square Test, Goodness of fit & Test of association.	K	K/KH	Y	Lecture,	Written		
Topic Correlation & Regression. No of Competencies: 2								
RMB 19.1	Define & enumerate types of correlation	K	K	Y	Lecture	Written		
RMB 19.2	Understand the Calculation of Pearson's correlation coefficient (r) and Simple linear regression.	K	K/KH	Y	Lecture, Small group discussion	Written		
Topic Demography & Vital Statistics No of Competencies: 1								
RMB 20.1	Define and explain Indicators of health & their uses.	K	K	Y	Lecture	Written		
Topic Use of Computers in Biostatistics No of Competencies: 2								
RMB 21.1	Describe the basics and demonstrate Windows Excel Data Analysis in bio-statistical analysis.	K/S	KH/SH	Y	Lecture, DOAP, Seminar/ webinar	Written Skill Assessment		
RMB 21.2	Enumerate the Names of various statistical tools and software	K	K	Y	Lecture	Written		

Recommended Books

1. Methods in Biostatistics: For Medical Students & Research Workers by B. K. Mahajan. Published by Jaypee Brothers

2. A Practical Approach to PG dissertation by R. Raveendran& B. Gitanjali. Jaypee Brothers
3. Fundamentals of Biostatistics by Veer BalaRastogi. Published by Ane Books Pvt. Ltd
4. Research Methods for Clinical Therapist: Applied project design and analysis by Carolyn Hicks. Published by Churchill Livingstone
5. Research in Occupational therapy Methods of Inquiry for enhancing Practice by Gaer Keilhofner, Published by F A Davis Company

IV BOT (Annual Pattern)

Sr. No.	Course Code	Subjects	Total Teaching Hours/Semester			Credits			Total Credits	Marks Disribution
			Theory	Practical/ Demo/ Lab work	Clinical	Theory	Practical/ Demo/ Lab work	Clinical		Total
1	OTOC	Occupational Therapy in Orthopaedic Conditions	**75**	**30**	**180**	**5**	**1**	**4**	**10**	**Theory-100** **Practicals -100**
2	OTSM	OT services & management	**45**	**--**	**--**	**3**	**--**	**--**	**3**	**Theory- 50**
3	CMS	Community Medicine & public Health, Sociology	**45**	**--**	**--**	**3**	**--**	**--**	**3**	**Theory- 50**
4	OTNC	Occupational Therapy in Neurological conditions	**75**	**30**	**180**	**5**	**1**	**4**	**10**	**Theory- 100** **Practicals -100**
5	COTR	Community occupational Therapy & Rehabilitation	**60**	**30**	**--**	**4**	**1**	**--**	**5**	**Theory-100**
6	OTPS	Occupational Therapy in Psychiatry	**75**	**30**	**180**	**5**	**1**	**4**	**10**	**Theory 100** **Practicals -100**
7	OTPC	Occupational Therapy in Paediatrics conditions	**75**	**30**	**180**	**5**	**1**	**4**	**10**	**Theory-100** **Practicals -100**
		Project Work	**--**	**60**	**--**	**--**	**2**		**2**	**NUE- 50 marks**
		Elective Cinical			**180**			**4**		
		Supervised Clinical training/Field work Including elective	**--**	**--**	**900**	**--**	**--**	**20**		**--**

	clinical								
Total no. of hours = 1560									
Total no. of Credits					**30**	**7**	**20**	**57**	
Total no of marks for University Examination									**1000**

Semester Pattern:

SEMESTER VII										
Sr. No.	**Course Code**	**Subjects**	**Total Teaching Hours/Semester**			**Credits**			**Total Credits**	**Marks Disribution**
			Theory	**Practical/Demo/ Lab work**	**Clinical**	**Theory**	**Practical/Demo/ Lab work**	**Clinical**		**Total**
1	OTOC	Occupational Therapy in Orthopaedic Conditions	**75**	**30**	**180**	**5**	**1**	**4**	**10**	**Theory-100** **Practical-100**
2	OTSM	OT services & management	**45**	**--**	**--**	**3**	**--**	**--**	**3**	**Theory- 50**
3	CMS	Community Medicine & public Health, Sociology	**45**	**--**	**--**	**3**	**--**	**--**	**3**	**Theory- 50**
4	OTNC	Occupational Therapy in Neurological conditions	**75**	**30**	**180**	**5**	**1**	**4**	**10**	**Theory- 100** **Practicals- 100**
	Project Work		**--**	**30**	**--**	**--**	**1**	**--**	**01**	**NUE- 50**
	Elective Clinical		**--**	**--**	**90**	**--**	**--**	**2**	**2**	**--**

Total no. of hours / semester = 780					
Total no. of Credits				**29**	
Total no of marks for University Examination/semester					**500**

NUE- Non university Examination

OCCUPATIONAL THERAPY IN ORTHOPEDIC CONDITIONS

Course Description: This course involves a better understanding of the Occupational Therapy role in various Orthopedic conditions. It includes Occupational Therapy evaluations, identifying occupation-based problem statements and using appropriate Models/ Frames of references/ Approaches for Occupational Therapy intervention. This course also covers the application and fabrication of various orthoses in Orthopedic conditions.

Goal: The broad goal of the subject Occupational Therapy in Orthopedic conditions, is to enable the undergraduate student, to be an active participant in learning the knowledge, skills, behavioural, and attitudinal attributes, for assessing and providing occupational therapy intervention in various Orthopedic conditions.

Course Objectives:

A. **Knowledge**:

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

1. Understand Occupational Therapy evaluation and problem identification in Orthopedic conditions
2. Understand the use of appropriate Models/ Frames of references/ approaches in Occupational Therapy intervention in Orthopedic conditions
3. Understand the application and fabrication of orthoses-related Orthopedic conditions
4. Understand the Occupational Therapy assessment and intervention for injuries, fractures and arthritic conditions of upper extremity, lower extremity and spine
5. Understand the Occupational Therapy assessment and intervention for metabolic bone disorders and repetitive stress syndrome

6. Understand the Occupational Therapy assessment and intervention for congenital Orthopedic deformities
7. Understand the Occupational Therapy assessment and intervention for neuromuscular deformities in cerebral palsy
8. Understand the role of Occupational Therapy in Sports Medicine

B. Skills:

1. Select and perform the various evaluations and assessments used in Occupational Therapy in Orthopedic conditions
2. Document occupational therapy assessment and intervention based on the Occupational therapy practice framework.
3. Develop clinical skills to apply therapeutic use of self, activity prescription and grading, and environmental modifications.

C. Attitude:

1. Develop an empathetic and humanitarian approach.
2. Value confidentiality and priorities of the service seeker.
3. Respect towards the service seeker.

Course Outcome

8. State the role of Occupational Therapy in the rehabilitation of Orthopedic conditions
9. Describe various Orthopedic conditions and Occupational Therapy intervention for the same
10. Demonstrate the application and fabrication of various orthoses and splints for Orthopedic conditions

Examination scheme

Scheme of Marks for University Theory exam : 100 Marks

MCQs, Short answer questions, Brief answer questions and Long answer Questions

Scheme of examination for University Practical exam: 100 Marks

Short case	Long Case	Viva voce	Communication skills	Total
25 marks	50marks	20 marks	5 marks	100 marks

COMPETENCIES TABLE: OCCUPATIONAL THERAPY IN ORTHOPEDIC CONDITIONS

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Teaching- Learning Methods	Assessment Methods	Number required to certify P	Vertical Integration	Horizontal Integration
OCCUPATIONAL THERAPY IN ORTHOPEDIC CONDITIONS									
Topic: Occupational Therapy Evaluation and interventions in musculoskeletal conditions **No of competencies: 4** **Number of procedures for certification: 7**									
OTOC 1.1	Demonstrate the evaluation of occupational performances, performance skills, performance patterns, contexts and client factors in musculoskeletal conditions using informal and formal Occupational Therapy tools/scales	K, S, A, C	SH/P	Y	DOAP	Viva, OSCE, Practical	7	FOT 1 and OTDP I and OTDP II	Community Based OT and Rehabilitation
OTOC 1.2	Analyse the assessment done and identify and document the problems	K, S	SH	Y	DOAP	Viva, OSCE, Practical	7		

OTOC 1.3	Outline the application of appropriate and various Models, Fames of references and approaches as applied to Musculoskeletal Rehabilitation to promote participation in occupations which includes the use of therapeutic exercises, occupation as means and prescription and/or fabrication of orthosis, assistive devices and mobility aids	K, S, A, C	SH, P	Y	Lecture, DOAP	Written, Viva, Practical	7		
OTOC 1.4	Enlist and describe adjunctive therapies specific to musculoskeletal conditions to promote occupational participation	K, S	KH	N	Lecture	Written	0		
Topic: Orthoses No of competencies: 2 Number of procedures for certification: 1									
OTOC 2.1	Describe the application of orthoses related to the Upper Extremity, Lower Extremity and Spine in musculoskeletal conditions	K, S	KH	Y	Lecture, DOAP	Written, OSCE, practicals	0	Clinical Orthopaedics, Biomechanics and Kinesiology	OT in Community Medicine and Rehabilitation
OTOC 2.2	Demonstrate assessment, prescription and fabrication orthosis on client	S	SH/P	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	1		
Topic: Fractures of upper and lower extremities No of competencies: 6 Number of procedures for certification: 0									
OTOC 3.1	Demonstrate Occupational therapy assessment in fractures of upper extremity and lower extremity	K, S, A, C	SH/P	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0	Clinical Orthopaedics, Fundamentals of OT, OTDP II	Occupational Therapy in Psychiatry, OT in Service

OTOC 3.2	Identify limitations in occupational participation and contextual factors and client factors affecting participation in occupations	K, S	SH	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0		Management
OTOC 3.3	Demonstrate Occupational Therapy interventions using appropriate Models/FORs/Approaches to promote participation in occupations which includes the use of therapeutic exercises, occupation as means and prescription and/or fabrication of orthosis, assistive devices and mobility aids and psychological aspects of chronic pain to promote occupational participation	K, S, A, C	SH/P	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0		
OTOC 3.4	Discuss and demonstrate the Occupational Therapy role in the management of complications	K, S, A, C	SH/P	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0		
OTOC 3.5	Demonstrate Occupational Therapy intervention with respect to the type of fixators, following precautions	K, S, A, C	SH	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0		
OTOC 3.6	Identify the need for counselling the clients and caregivers individually and in groups	K, S, A, C	KH	Y	Small group discussions	OSCE	0		
Topic: Fractures of vertebral column and Pathological conditions of vertebra and spinal column No of competencies: 5 Number of procedures for certification: Nil									

OTOC 4.1	Demonstrate the Occupational therapy assessment including motor and sensory assessment	K, S, A, C	SH, P	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0	Clinical Orthopaedics OTDP II, Fundamentals of OT II	Occupational Therapy in Psychiatry, Community Based OT & Rehabilitation, Occupational Therapy in Psychiatry
OTOC 4.2	Identify limitations in occupational participation and contextual factors and client factors affecting participation in daily occupations	K, S	SH, P	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0		
OTOC 4.3	Demonstrate Occupational Therapy interventions using appropriate Models/FORs/Approaches to promote participation in occupations which includes the use therapeutic exercises, occupation as means and prescription and/or fabrication of orthosis, assistive devices and prescription of wheel chair and mobility aids, skin care and transfer training	K, S	SH, P	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0		
OTOC 4.4	Demonstrate Assessments and interventions for return to community and job	K, S	SH, P	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0		
OTOC 4.5	Identify the need for counselling the clients and caregivers individually and in groups	K, S, A, C	SH	Y	Small group discussions	OSCE	0		
Topic: Injuries at and around upper and lower extremity joints and Pathological and arthritic conditions of upper limbs, lower limbs, vertebral column and spinal cord No of competencies: 3 Number of procedures for certification: Nil									

OTOC 5.1	Demonstrate Pre-operative and post-operative Occupational Therapy evaluation in Joint replacement surgeries and corrective surgeries to identify problems in occupational performances and contextual factors and client factors affecting occupational performance	K, S, A, C	SH, P	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0	Clinical Orthopaedics, OTDP II, Fundamentals of OT	Occupational Therapy in Psychiatry
OTOC 5.2	Demonstrate pre-operative and post-operative Occupational Therapy intervention using appropriate Models/FORs/Approaches to promote participation in occupations which includes the use therapeutic exercises, occupation as means and prescription and/or fabrication of orthosis, assistive devices and mobility aids and psychological aspects of chronic pain to promote occupational participation	K, S, A, C	SH, P	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0		
OTOC 5.3	Identify the need for counselling the clients and caregivers individually and in groups	K, S, A, C	SH	Y	Small group discussions	OSCE	0		
Topic: Metabolic bone disorders No of competencies: 2 Number of procedures for certification: Nil									
OTOC 6.1	Demonstrate Occupational Therapy evaluation to identify limitations in occupational performance and contextual factors and client factors in metabolic bone disorders	K, S, A, C	SH	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals		Clinical Orthopaedics, OTDP II, Ergonomics and Work Physiology	
OTOC 6.2	Demonstrate Occupational Therapy management including preventive, accommodative and restorative approaches including joint protection techniques and work simplification	K, S, A, C	SH	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals			

	techniques								
Topic: Repetitive stress syndrome No of competencies: 5 Number of procedures for certification: 1									
OTOC 7.1	Demonstrate Occupational Therapy assessment and management in various phases of injury and identify problems in occupational performance and contextual factors and client factors affecting occupational performance	K, S, A, C	SH	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0	OTDP II, Biomechanics and Kinesiology, Ergonomics and Work Physiology	Community Based OT & Rehabilitation, OT in Psychiatry
OTOC 7.2	Describe the preventive/ rehabilitative techniques based on Ergonomic and Biomechanical principles	K, S, A, C	SH	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0		
OTOC 7.3	Demonstrate Occupational Therapy interventions to promote return to occupations using appropriate Models/FORs/Approaches which includes the use therapeutic exercises, occupation as means and prescription and/or fabrication of orthosis, assistive devices and mobility aids	K, S	SH	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0		
OTOC 7.4	Record and interpret from the observations following Industrial visit to identify mechanisms of injury and suggest ergonomic modifications	K, S, A, C	SH	Y	Small group discussions	OSCE	1		

OTOC 7.5	Identify the need to counsel stake holders on prevention based on preventive and restorative approaches including work simplification, life style modifications and joint protection techniques	K, S, A, C	SH	Y	Small group discussions	OSCE	1		
Topic: Congenital musculoskeletal deformities No of competencies: 3 Number of procedures for certification: Nil									
OTOC 8.1	Define and classify common congenital musculoskeletal deformities	K	K	Y	Lecture	Written	0	Clinical Orthopaedics, Fundamentals of OT	
OTOC 8.2	Demonstrate Occupational Therapy evaluation to identify problems in occupational performance and contextual factors and client factors affecting occupational performance	K/S	SH	Y	Lecture/Small group discussions/DOAP	Written, viva, OSCE, practicals	0		
OTOC 8.3	Demonstrate Occupational Therapy intervention to promote occupational performances which includes the use therapeutic exercises, occupation as means and prescription and/or fabrication of orthosis, assistive devices and mobility aids	K/S	SH	Y	Lecture/Small group discussions/DOAP	Written, viva, OSCE, practicals	0		
Topic: Neuromuscular deformities in Cerebral Palsy and Poliomyelitis No of competencies: 3 Number of procedures for certification: Nil									
OTOC 9.1	Describe the Neuromuscular deformities in Cerebral Palsy and Poliomyelitis	K	K	Y	Lecture	Written	0	Clinical Orthopaedics	OT in paediatrics
OTOC 9.2	Demonstrate Occupational therapy evaluation in preoperative and post-operative stages of reconstructive and corrective surgeries in Cerebral Palsy and Poliomyelitis and identify limitations in Occupational performance and contextual factors and client factors affecting occupational performance	K, S	SH	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0	Fundamentals of OT	OT in paediatrics

OTOC 9.3	Demonstrate Occupational Therapy interventions including pre-operative and post-operative management to promote occupational performances which includes the use therapeutic exercises, occupation as means and prescription and/or fabrication of orthosis, assistive devices and mobility aids and recent advances	K, S	SH	Y	Lecture, Small group discussions, DOAP	Written, viva, OSCE, practicals	0	Fundamentals of OT	OT in paediatrics
Topic: Sports Medicine No of competencies: 7 Number of procedures for certification: Nil									
OTOC 10.1	Explain the Effect of sports on mind and body of sports person	K	K	Y	Lecture, Small group discussions	Written	0		
OTOC 10.2	Discuss various sports injuries	K	K	Y	Lecture, Small group discussions	Written	0	Clinical Orthopaedics, Ergonomics and work physiology, OTDP II	
OTOC 10.3	Describe the prerequisites for participation in sports including physical fitness and cardiopulmonary fitness	K	KH	Y	Lecture, Small group discussions	Written	0		
OTOC 10.4	Enumerate various approaches in psychological skill training and intervention	K	KH	Y	Lecture, Small group discussions	Written	0		
OTOC 10.5	Describe the predisposing factors for sports injuries	K	K	Y	Lecture, Small group discussions	Written	0		
OTOC 10.6	Discuss the Occupational Therapy role in preparedness of the person for different sports events	K, S	K	Y	Lecture, Small group discussions	Written	0		
OTOC 10.7	Discuss the Occupational Therapy role in prevention of sports injuries and rehabilitation and return to sports after injury	K, S			Lecture, Small group discussions	Written	0		

Reference Books:

1. Willard and Spackman's Occupational Therapy by Elizabeth Blesedell Crepeau, Ellen S. Cohn, Barbara A.
2. Boyt Schell. Published by Lippincott Williams & Wilkins. Occupational Therapy for Physical Dysfunction by Catherine A. Trombly, Mary Vining Radomski. Published by Lippincott Williams & Wilkins.
3. Occupational Therapy - Practice Skills for Physical Dysfunction by Lorraine Williams Pedretti. Published by Mosby.
4. Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice by Annie Turner, Marg Foster, Sybil E. Johnson. Published by Churchill Livingstone.
5. Physical Rehabilitation by Susan B. O'Sullivan, Thomas J. Schmitz. Published by F. A. Davis Company. Indian Reprint by Jaypee Brothers.
6. Orthopaedic Physical Assessment by David J. Maggee Published by W. B. Saunders.
7. Therapeutic Exercise by John V. Basmajian & Steven L. Wolf. Published by Williams & Wilkins.
8. Therapeutic Exercise, Foundation & Techniques by Carolyn Kisner & Lynn Allen Colby. Published by F. A. Davis Company. Treatment and Rehabilitation of Fractures by Stanley Hoppen field and Vasantha L. Murthy. Published by Lippincott Williams & Wilkins.
9. Clinical Orthopaedic Rehabilitation by S. Brent Brotzman Published by Mosby.
10. Rehabilitation of the Hand by C. B. Wynn Parry. Published by Butterworths.
11. Ergonomics for therapists by Karen Jacobs. Published by Butterworth Heinemann.
12. Clinical Sports Medicine by Peter Brukner & Karim Khan. Published by The McGraw-HillCompanies.

OCCUPATIONAL THERAPY SERVICES & MANAGEMENT

Course Description: This course involves a better understanding of the overall administration of the Occupational Therapy department/ Institute in Government & Private setup, Budgeting, Ethical practice of Occupational Therapy. The course involves a better understanding of Bioethics, ethical considerations, service management, implication of different environments on OT practices industrial Rehabilitation.

Goal: The broad goal to teach the undergraduate students about OT Services & management is to have the knowledge, to function effectively as an occupational therapist, set up the department

and manage the services in different settings.

Course Objectives:

Knowledge : at end of the course :

1. Understand the term Bioethics and Occupational Therapy code of ethics
2. Describe various service managements under occupational therapy
3. Describe the Human and non human environment and OT process
4. Describe importance of practice in different setups & consideration of human sexuality in relation to disability and its management in occupational Therapy
5. Describe the strategies & approaches used in stress management during Occupational Therapy intervention
6. Described its importance of evidence based practice in occupational therapy.
7. Describe the strategies in Industrial rehabilitation into Occupational therapy practice

Scheme of Marks for University Theory exam

MCQs, Short answer questions, Brief answer questions

COMPETENCIES TABLE: OCCUPATIONAL THERAPY SERVICES & MANAGEMENT

Code	Objectives/Competency Students should be able to	Domains of Learning	Competencies	Core Y/N	Teaching Learning methods	Assessment methods	Horizontal Integration	Vertical Integration
OCCUPATIONAL THERAPY SERVICES & MANAGEMENT								
Topic: Introduction to Bioethics, Professional Ethics & Development						**No of competencies: 4**		

OTSM 1.1	Define Bioethics	K	K	Y	Lecture	Written	-	-
OTSM 1.2	Explain the uses and purposes of a professional code	K	KH, SH	Y	Lecture	Written	-	-
OTSM 1.3	Understand occupational therapy code of ethics given by AOTA and AIOTA	K , A	KH	Y	Lecture	Written	-	FOT II
OTSM 1.4	Examine current ethical dilemmas in OT , issues and conflicts involved and generate possible solution to the dilemmas	K , S , A	KH,SH	Y	Lecture ans case scenario	Written	-	-
Topic: Service Management in Occupational Therapy		**No of competencies:5**						
OTSM 2.1	Identify and describe various management functions & strategies	`K	KH	Y	Lecture	Written		
OTSM 2.2	Enumerate different types of documentations, its purpose & its importance	K, S	KH, SH	Y	Lecture	Written		
OTSM 2.3	Define Quality assurance & describe monitoring of it along with utilization review	K, S	KH, SH	Y	Lecture Case scenario, DOAP	Written		
OTSM 2.4	Define fiscal management, explain budgeting	K	KH	Y	Lecture	Written		
OTSM 2.5	Describe marketing strategies in health care	K, S	KH, SH	Y	Lecture	Written		
Topic: The Human and Non-Human Environments and the Occupational Therapy Process						**No of competencies: 2**		
OTSM 3.1	Define and classify environment with details of human & non-human environment	K	K	Y	Lecture	Written		
OTSM 3.2	Describe Occupational Therapy in environmental practice	K, S	KH SH	Y	Lecture DOAP	Written		
Topic: Home Care and Private Practice						**No of competencies: 3**		
OTSM 4.1	Describe overview of Home care	K	K	Y	Lecture	Written		

OTSM 4.2	Enumerate members of home care team and their functions	K	K	Y	Lecture	Written		
OTSM 4.3	Describe parameters & delivery system for home care	K, S	KH , SH	Y	Lecture, DOAP	Written		
Topic: Introduction to Human Sexuality in relation to Disability Management in Occupational Therapy No of competencies: 3								
OTSM 5.1	Define Human sexuality	K	K	Y	Lecture	Written		
OTSM 5.2	Identify the importance of Human sexuality in Occupational therapy practices	K, S, A, C	K	Y	Lecture	Written		
OTSM 5.3	Describe awareness, knowledge & Interpersonal competencies in human sexuality	K, S, A, C	KH, SH	Y	Lecture Case scenario	Written		
Topic: Stress management No of competencies: 2								
OTSM 6.1	Identify common stressors and enumerate the stress response	K	K	Y	Lecture	Written		Psychology And psychiatry
OTSM 6.2	Describe Stress management techniques & their appropriate use	K, S, A, C	KH , SH	Y	Lecture DOAP	Written		Psychology and psychiatry
Topic: Research informed Occupational Therapy practice & Translation of research in to practice (Evidence based practice) No of competencies: 3								
OTSM 7.1	Define clinical reasoning in OT Describe nature of occupational therapy & implementation of clinical reasoning in occupational therapy	K	K	Y	Lecture	Written		OTDP 2
OTSM 7.2	Identifying various types of clinical reasoning in OT practice	K	KH,SH	Y	Lecture , DOAP	Written		
OTSM 7.3	Enumerate and describe OT Intervention based on conventional/recent	K,S	KH,SH	Y	Lecture Case based	Written		

	approaches/research evidences				scenario			
Topic: Industrial Rehabilitation					**No of competencies: 4**			
OTSM 8.1	Understand Historical overview for industrial rehabilitation	K	KH	Y	Lecture DOAP	Written		
OTSM 8.2	Enumerate and describe industrial rehabilitation services	K	KH , SH	Y	Lecture DOAP	Written		
OTSM 8.3	Describe work hardening program	K	KH , SH	Y	Lecture DOAP	Written		
OTSM 8.4	Describe role of Occupational therapy in Vocational assessment & Vocational rehabilitation	K, S, A, C	KH , SH	Y	Lecture DOAP	Written		

Reference Books:

1. Willard and Spackman's Occupational Therapy by Elizabeth Blesedell Crepeau, Ellen S. Cohn, Barbara A. Boyt Schell. Published by Lippincott Williams & Wilkins.
2. Occupational Therapy for Physical Dysfunction by Catherine A. Trombly, Mary Vining Radomski. Published by Lippincott Williams & Wilkins.
3. Occupational Therapy - Practice Skills for Physical Dysfunction by Lorraine Williams Pedretti. Published by Mosby.
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5. Physical Rehabilitation by Susan B. O'Sullivan, Thomas J. Schmitz. Published by F. A. Davis Company. Indian Reprint by Jaypee Brothers.
6. Biofeedback: Principles & Practice for Clinicians by John V. Basmajian. Published by Williams & Wilkins

COMMUNITY MEDICINE, PUBLIC HEALTH & SOCIOLOGY

COURSE DESCRIPTION: This course aims to provide students with a comprehensive understanding of community medicine and sociology in the context of occupational therapy. It covers key concepts in epidemiology, health programs in India, preventive medicine across different life stages, nutrition and health, and the role of social sciences in healthcare. The course also explores social problems faced by people with disability, the role of medical social workers, environmental health, disaster management, occupational health, international health, and the healthcare services provided by AYUSH. Students will learn to apply these concepts in occupational therapy to enhance community integration and holistic care for individuals with disabilities.

GOAL: The primary goal of teaching Community Medicine and Sociology to undergraduate students is to equip them with the knowledge to function effectively as occupational therapists. The focus is on improving the health and quality of life of individuals and communities through prevention, early intervention, and rehabilitation.

OBJECTIVES

A. KNOWLEDGE

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

1. Define community medicine and understand the role of the occupational therapist in the team.
2. Define and explain epidemiology, including the epidemiology of various infections.
3. Enumerate and describe health programs for community integration and international agencies providing support.
4. Understand the role of preventive medicine in obstetrics, gynaecology, paediatrics, and geriatrics.
5. Describe nutritional components, profiles of principal foods, and the food guide pyramid.
6. Identify nutritional problems in public health and malnutrition factors in selected diseases.
7. Explain the concept of nutritional surveillance.
8. Describe the context of medicine and its relation to social sciences.
9. Describe social and behavioural sciences, including terms such as sociology, community, socialization, and social problems.
10. Identify social problems faced by disabled individuals and the role of various agencies in assisting them.
11. Identify the role of medical social workers.
12. Understand the importance of a safe environment and its impact on health.

13. Define and identify methods of sanitation and biowaste management.
14. Identify and describe principles, aspects, and implications of disaster management.
15. Define occupational health, types of occupational hazards, and occupational diseases.
16. Describe international health plans and the roles of international health agencies.
17. Identify different healthcare facilities provided by AYUSH

Scheme of Marks for University Theory exam : 50 Marks
MCQs, Short answer questions, Brief answer questions

COMPETENCIES TABLE: Community medicine and Sociology

Number	COMPETENCY The student should be able to	Domain K/S/A/C	Level K/KH/SH/P	Core Y/N	Teaching-Learning Methods	Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
Community medicine and Sociology									
Topic: Epidemiology		**No of competencies: 2**							
CMS 1.1	Define Epidemiology	K	K	Y	Lecture	Written	0	Medicine, Pathology and Microbiology	
CMS 1.2	Explain Epidemiology of Respiratory infections, intestinal infections, Arthropod-borne infections, Zoonosis, Surface infections, Hospital-acquired infections	K	KH	Y	Lecture	Written	0		
Topic: Health programs in India		**No of competencies: 3**							
CMS 2.1	Enumerate different health programs in India	K	KH	Y	Lecture	Written	0		

CMS 2.2	Enumerate various international agencies providing technical & material assistance in implementing these programs	K	KH	Y	Lecture	Written	0		
CMS 2.3	Describe different health & program implementation plans	K	KH	Y	Lecture	Written	0		
Topic: Preventive medicine in Obstetrics, Paediatrics & Geriatrics No of competencies: 4									
CMS 3.1	Identify the need of preventive medicine & social medicine	K	KH	Y	Lecture	Written	0	Surgery - Gynaecology, Medicine and Paediatrics	
CMS 3.2	Describe the role of social & preventive Medicine in Obstetrics - antenatal, natal & postnatal care	K	KH	Y	Lecture	Written	0		
CMS 3.3	Describe the role of social & preventive medicine in Paediatrics - Care of neonates, infants, children, National Policy for Children	K	KH	Y	Lecture	Written	0		
CMS 3.4	Describe the role of social & preventive medicine in Geriatrics	K	KH	Y	Lecture	Written	0		
Topic: Nutrition & Health No of competencies: 6									
CMS 4.1	Enumerate nutritional components	K	K	Y	Lecture	Written	0		
CMS 4.2	Describe the nutritional profile of Principal foods	K	K	Y	Lecture	Written	0	Physiology, Paediatrics and Medicine	
CMS 4.3	Describe the food guide	K	KH	Y	Lecture	Written	0		

	pyramid								
CMS 4.4	Identify nutritional problems in public health	K	KH	Y	Lecture	Written	0		
CMS 4.5	Describe malnutrition factors in selected disease	K	K	Y	Lecture	Written	0		
CMS 4.6	Explain nutritional surveillance	K	SH	Y	Lecture	Written	0		
Topic: Medicine and Social Sciences No of competencies: 4									
CMS 5.1	Identify the context of medicine	K	K	Y	Lecture	Written	0	Psychology	
CMS 5.2	Identify relation between community health & social sciences	K	KH	Y	Lecture	Written	0		
CMS 5.3	Describe social & behavioural sciences	K	K	Y	Lecture	Written	0		
CMS 5.4	Describes term sociology, community, socialism, socialization, social control mechanism, customs, culture, standard of living, social problems, social pathology, social surveys, social defence	K	K	Y	Lecture	Written	0		
Topic: Social Problems of Disabled No of competencies: 2									
CMS 6.1	Identify the social problems in disabled	K	KH	Y	Lecture	Written	0		Occupational Therapy in Community Rehabilitation & public health
CMS 6.2	Identify the role of various agencies in assisting the disabled in the social environment	K	KH	Y	Lecture	Written	0		
Topic: Role of medical social worker No of competencies: 1									
CMS 7.1	Identify the role of the	K	KH	Y	Lecture	Written	0		

	medical social worker								
Topic: Environment & Health, Environmental Science No of competencies: 1									
CMS 8.1	Identify the importance of a safe environment & health.	K	K	Y	Lecture	Written	0		Occupational Therapy in Community Rehabilitation & public health
Topic: Sanitation & Biowaste management No of competencies: 2									
CMS 9.1	Define and identify methods of sanitation.	K	KH	Y	Lecture	Written	0		
CMS 9.2	Identifying various aspects of biowaste management	K	KH	Y	Lecture	Written	0		
Topic: Disaster management No of competencies: 3									
CMS 10.1	Identify & describe principles in Disaster management	K	K	Y	Lecture	Written	0		Occupational Therapy in Community Rehabilitation & public health
CMS 10.2	Enumerate various aspects of disaster management	K	K	Y	Lecture	Written	0		
CMS 10.3	Describe implications in disaster management	K	KH	Y	Lecture	Written	0		
Topic: Occupational Health No of competencies: 3									
CMS 11.1	Define Occupational health	K	K	Y	Lecture	Written	0		Occupational Therapy in Community Rehabilitation & public health
CMS 11.2	Describe the types of Occupational Hazards	K	KH	Y	Lecture	Written	0		
CMS 11.3	Enumerate Occupational diseases & medical management	K	KH	Y	Lecture	Written	0		
Topic: International Health No of competencies: 4									
CMS	Identify international	K	K	Y	Lecture	Written	0		

12.1	Health plan								
CMS 12.2	Describe the role of the World Health Organization	K	KH	Y	Lecture	Written	0		
CMS 12.3	Describe the role of United Nations agencies -UNICEF, UNDP, FAO, SIDA, DANIDA	K	KH	Y	Lecture	Written	0		
CMS 12.4	Enumerate non-governmental & other agencies	K	K	Y	Lecture	Written	0		
Topic: Introduction to Ayush			**No of competencies: 1**						
CMS 13.1	Identify different healthcare facilities provided by AYUSH	K	K	Y	Lecture	Written	0		

Reference Books:

1. Park's textbook of Preventive and Social Medicine by K. Park. Published by Banarsidas Bhanot.

2. Disabled village children- A guide for Community Health, Workers, Rehabilitation Workers & Families by David Werner. Published by The Hesperian Foundation

3. Handbook Of Medical Sociology for Nursing, physiotherapy and Paramedical Students by Malhotra Varun, Jaypee Brothers Medical Publishers

4. Sociology of Health and Medicine New Perspectives By V. Sujatha. Published by Oxford University Press

5. Sociology and Occupational Therapy: An integrated approach by Derek Jones, Sheena E.E. Blair, Terry Hartery. Published by Churchill Livingston

Occupational Therapy in Neurological Conditions

COURSE DESCRIPTION

This course intends to familiarize students with terminology & abbreviations for efficient & effective chart reviewing & documentation for occupational therapy in Neurological conditions. It also gives overview of etiology as well as primary & secondary clinical characteristics, complications and their management. Discusses & integrates subsequent occupational therapy management of Acute and chronic Neurological disorders including genetic disorders, infective conditions of the brain and spine with reference to red flag indicators, indications, contraindications & precautions to formulate appropriate therapeutic intervention.

GOAL: The goal to teach the undergraduate students OT in Neurological Conditions is to have the knowledge, skills and behavioral attributes to function effectively as an occupational therapist and subsequently improve functional independence and Quality of Life of the patient.

OBJECTIVES:

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

1. Identify the clinical presentation of common neurological conditions with special reference to conditions like Stroke, Parkinsonism, Multiple Sclerosis and other conditions like metabolic and muscular disorders.
2. Outline and apply various modalities and methods of management including various approaches, exercise protocol, splinting process.
3. Recognize Occupational dysfunctions in relation to person, task and environment due to neurological involvement
4. Plan and provide occupational therapy treatment under supervision for occupational performance areas of independent living/daily living skills, leisure skills, social skills, pre-vocational/work adjustment skills.

B. SKILLS: At the end of the course, the student shall be

1. Develop clinical skills (history taking, clinical examination and other instruments of examination) to know the clinical manifestations and its impact on function.
2. Perform simple assessments using standardized methods, test batteries and instruments to assess performance components.
3. Assist the common bedside evaluations and assessment procedures related to neurological conditions and be able to document their findings and intervention.

C. ATTITUDE:

1. The teaching and training in "OT in Neurological condition" must aim at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.
2. It is necessary to develop in students a sense of responsibility towards holistic patient care & prognostic outcomes of therapy
3. Students should develop behavioral skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- professionals.

Examination scheme

Scheme of Marks for University Theory exam :100 Marks

MCQs, Short answer questions, Brief answer questions and Long answer Questions

Scheme of examination for University Practical exam : 100 Marks

Short case	Long Case	Viva voce	Communication skills	Total
25 marks	50marks	20 marks	5 marks	100 marks

COMPETENCIES TABLE: OCCUPATIONAL THERAPY IN NEUROLOGICAL CONDITIONS

Code No.	Objectives/Competency Students should be able to	Domains of Learning	Level	Core Y/N	Teaching Learning methods	Assessment methods	Vertical Integration	Horizontal Integration
OCCUPATIONAL THERAPY IN NEUROLOGICAL CONDITIONS								
Topic : Occupational Therapy Evaluation and interventions in Neurological Clinical Evaluation No of Competencies - 2								
OTNC 1.1	Demonstrate the evaluation of occupational performances, performance skills, performance patterns, contexts and client factors in neurological conditions using standardised Occupational Therapy tools/scales.	K, S, A,C	KH, SH	Y	Lecture, DOAP, Case study	Practical, Viva,OSCE		
OTNC 1.2	Interpret the assessment done and identify and document the problems	K, S, A	KH,SH, DOAP		Lecture, practical , case presentation	Written, Viva, practical	OTDP I & OTDP II	
Topic : Occupational Therapy Frames of references, models and approaches used in Neurological Conditions. N of Competencies – 1								
OTNC 2.1	Choose, describe and demonstrate appropriate and various Models, Fames of references and approaches as applied to Neurological Rehabilitation to promote participation in occupations including but not limited to • PEO Model • MOHO • Cognitive Frame of reference • Neurophysiological approaches	K	KH, SH	Y	Lecture, DOAP	Written, Viva, practical		

	• Task oriented approach • Rehabilitative Frame of Reference							
Topic : Occupational Therapy Evaluation and interventions in Cognitive, Perceptual Skills No of Competencies - 3								
OTNC 3.1	Enlist and explain all the cognitive and perceptual dysfunctions and how they affect a client's occupational performance.	K	KH	Y	Lecture	Written, Viva	OTDP II,OTSC	
OTNC 3.2	Describe and demonstrate the standardised and non-standardised Assessment of cognitive perceptual skills.	K, S	KH, SH		lecture	Written, Viva,		
OTNC 3.3	Describe and demonstrate the Occupational therapy management of performance components affected due to cognitive perceptual deficits.	K, S	KH, SH		Lecture, DOAP	Written, Viva, practical, OSCE		
Topic : Occupational Therapy Evaluation and interventions in Dysphagia No of Competencies - 3								
OTNC 4.1	Describe the Normal physiology of swallowing. Enlist and enumerate the Causative factors in Dysphagia. Enlist the assessment & treatment of Dysphagia.	K	KH	Y	Lecture	Written, Viva	FOT II, OTDP II	
OTNC 4.2	Enlist and enumerate the Causative factors in Dysphagia. Enlist the assessment & treatment of Dysphagia.	K	KH, S	Y	Lecture, DOAP	Written, Viva		

OTNC 4.3	Demonstrate Feeding position, diet modification, Specific and special therapeutic considerations in context to specific clinical diagnosis.	K,S	SH	Y	Lecture, DOAP,Case study	Written, Viva, Practical		
Topic : Occupational Therapy Evaluation and interventions in Disorders of the cerebral circulation No of Competencies - 5								
OTNC 5.1	Describe Anatomy & physiology of cerebral circulation.	K	KH	Y	Lecture	Written, Viva		
OTNC 5.2	Describe the aetiopathogeneis of the cerebral circulation disorders. Classification of cerebral circulation disorders	K	KH	Y	Lecture	Written, Viva		
OTNC 5.3	Choose and demonstrate strategies to optimize motor, sensory, balance, visual, cognito –perceptual components of function using appropriate Frame of reference and neurophysiological approach to improve the client's occupational performance.	K,S	KH, SH	Y	Lecture, DOAP	Written, Viva, Practicals		
OTNC 5.4	Describe various Orthotic, Assistive and Augmentative Technologies for the clients with stroke	K	KH,SH		Lecture, DOAP session, case study, seminar, presentations	Written, Viva voce, Skill assessment, Practical	FOT II, OTDP II	
OTNC 5.5	Discuss and present the Prognostic determinants.	K	KH		lecture	Written,Viva ,Practicals		
Topic : Occupational Therapy Evaluation and interventions in Traumatic injuries to the Brain. No of Competencies - 6								

OTNC 6.1	Describe and enumerate Classification of Head Injury, Mechanism of Injury, Immediate Effects of Head Injury, signs and symptoms of Post Head Injury sequelae.	K	KH	Y	Lecture	Written,Viva	Surgery, OTSC	
OTNC 6.2	Describe and demonstrate the Various assessment tools for evaluating level of consciousness and occupational performance of a client.	K,S	KH,SH	Y	Lecture, DOAP	Written,Viva ,Practicals		
OTNC 6.3	Discuss and present the Prognostic determinants.	K	KH		lecture	Written,Viva		
OTNC 6.4	Choose and demonstrate strategies to optimize motor, sensory, balance, visual, cognito –perceptual components of function using appropriate Frame of reference and neurophysiological approach to improve the client's occupational performance	K,S	KH, SH	Y	Lecture, DOAP	Written,Viva,Practicals	OTDP II	
OTNC 6.5	Describe various Orthotic, Assistive and Augmentative Technologies for the clients TBI	K	KH, SH		Lecture, DOAP, case study, Seminar, Presentations	Written, Viva voce, Skill assessment, Practical	FOT II, OTDP II	CBOT & R
OTNC 6.6	Discuss various Prognostic determinants of clients with TBI	K	KH		lecture	Written,Viva ,Practicals	Surgery	CBOT & R
Topic : Occupational Therapy Evaluation and interventions in Infective conditions of the brain No of Competencies - 3								

OTNC 7.1	Describe the aetio-pathogenesis, and symptoms of various infective conditions of the brain for example Intracranial abcess, meningitis, Encephalitis, cerebral malaria.	K	KH		Lecture	Written,Viva		
OTNC 7.2	Enlist and demonstrate the assessment and intervention based on clinical reasoning for selection of appropriate frame of reference and neurophysiological approaches.	K, S	KH,SH		Lecture, DOAP	Written, Viva , Practical		
OTNC 7.3	Discuss and present the Prognostic determinants.	K	KH		Lecture	Written,Viva		
Topic : Occupational Therapy Evaluation and interventions in Neoplastic conditions of the brain and spinal cord (Intracranial & Spinal Tumors) **No of Competencies - 4**								
OTNC 8.1	Describe the aetio-pathogenesis, and symptoms of various neoplastic conditions of the brain. Classification of tumors as per WHO classification.	K	KH	y	Lecture, DOAP, case study, Seminar, Presentations	Written, Viva voce, Skill assessment, Practical		
OTNC 8.2	Enlist and demonstrate the assessment and intervention based on clinical reasoning for selection of appropriate frame of reference and neurophysiological approaches.	K	KH,SH	y	Lecture, DOAP, case study, Seminar, Presentations	Written, Viva voce, Skill assessment, Practical	OTDP II	

OTNC 8.3	Describe various Orthotic, Assistive and Augmentative Technologies for the clients TBI	K	KH,SH		Lecture, DOAP, case study, Seminar, Presentations	Written, Viva voce, Skill assessment, Practical	FOT II, OTDP II	CBOT & R
OTNC 8.4	Discuss and present the Prognostic determinants	K	KH		Lecture	Written, Viva voce	Neurology, Surgery	
Topic : Occupational Therapy Evaluation and interventions in Movement disorders					**No of Competencies - 5**			
OTNC 9.1	Describe the aetio-pathogenesis, and symptoms of Movement Disorders.	K	KH	Y	Lecture	Written, Viva voce	Neurology	
OTNC 9.2	Classify describe grading of Movement disorders	K	KH	Y	Lecture, seminar, Case study	Written, Viva voce		
OTNC 9.3	Enlist and demonstrate the assessment and intervention based on clinical reasoning for selection of appropriate frame of reference and neurophysiological approaches.	K,S	KH, SH	Y	Lecture, DOAP, Case study, Small group discussion	Written, Viva voce, practical	OTDP II	
OTNC 9.4	Describe various Orthotic, Assistive and Augmentative Technologies for the clients TBI	K	KH,SH		Lecture, DOAP, case study, Seminar, Presentations	Written, Viva voce, Skill assessment, Practical	FOT II,	CBOT & R
OTNC 9.5	Discuss and present the Prognostic determinants Movement disorders.	K	KH		Lecture	Written, Viva voce		
Topic : Occupational Therapy Evaluation and interventions in Inflammatory and autoimmune disorders of the brain						**N of Competencies - 3**		

OTNC 10.1	Describe the aetio-pathogenesis, and symptoms of Inflammatory and autoimmune disorders of the brain and spinal cord. Example Multiple Sclerosis, Transverse Myelitis, etc.	K	KH	Y	Lecture	Written, Viva voce	Neurology	
OTNC 10.2	Enlist and demonstrate the assessment and intervention based on clinical reasoning for selection of appropriate frame of reference and neurophysiological approaches.	K,S	KH,SH		Lecture, DOAP	Written, Viva voce, Practical		
OTNC 10.3	Discuss and present the Prognostic determinants of Inflammatory and autoimmune disorders of the brain and spinal cord.	K	KH		Lecture	Written, Viva voce		
Topic: Occupational Therapy Evaluation and interventions in Diseases of Motor Neurone, Neuromuscular Junction And Muscles. No of Competencies - 3								
OTNC 11.1	Describe the aetio-pathogenesis, and symptoms and classification of Motor neuron diseases, NM junction. Example Motor Neuron Disease, Myasthenia Gravis. Myopathy and Muscular Dystrophies.	K	KH	Y	Lecture	Written, Viva voce		
OTNC 11.2	Enlist and demonstrate the assessment and intervention based on clinical reasoning for selection of appropriate frame of reference and neurophysiological approaches.	K,S	KH,SH		Lecture, DOAP	Written, Viva voce, Practical		
OTNC 11.3	Discuss and present the Prognostic determinants of Motor neuron diseases, NM junction.	K	KH		Lecture	Written, Viva voce		
Topic: Occupational Therapy Evaluation and interventions in cerebellar dysfunctions. No of Competencies - 3								

OTNC 12.1	Describe the aetio-pathogenesis, and symptoms and classification of Cerebellar dysfunctions.	K	KH	Y	Lecture	Written, Viva voce		
OTNC 12.2	Enlist and demonstrate the assessment and intervention based on clinical reasoning for selection of appropriate frame of reference and neurophysiological approaches.	K, S	KH, SH	Y	Lecture, DOAP	Written,Viva voce, Practical, OSCE		
OTNC 12.3	Discuss and present the Prognostic determinants of Cerebellar dysfunctions.	K	KH		Lecture	Written, Viva voce		
Topic: Occupational Therapy Evaluation and interventions in Vestibular function and dysfunction. No of Competencies - 3								
OTNC 13.1	Describe the aetio-pathogenesis, and symptoms and classification of Vestibular functions and dysfunctions.	K	KH	Y	Lecture	Written, Viva voce	OTDP I & OTDP II	
OTNC 13.2	Enlist and demonstrate the assessment and intervention based on clinical reasoning for selection of appropriate frame of reference and neurophysiological approaches.	K, S	KH,SH	Y	Lecture, DOAP	Written, Viva voce, OSCE		
OTNC 13.3	Discuss and present the Prognostic determinants of Vestibular dysfunctions.	K	KH		Lecture	Written, Viva voce		
Topic: Occupational Therapy Evaluation and interventions in Cranial Nerves function and dysfunctions. No of Competencies - 3								

OTNC 14.1	Describe pathways and functions of cranial nerves. Explain the aetio-pathogenesis of various cranial nerve dysfunctions.	K	KH	Y	Lecture	Written, Viva voce		
OTNC 14.2	Enlist and demonstrate the assessment and intervention based on clinical reasoning for selection of appropriate frame of reference and neurophysiological approaches for a Cranial nerve dysfunction.	K,S	KH, SH	Y	Lecture, DOAP	Written, Viva voce, Practical, OSCE	OTDP II	
OTNC 14.3	Discuss and present the Prognostic determinants of Cranial nerve dysfunctions.	K	KH		Lecture	Written, Viva voce		
Topic: Occupational Therapy Evaluation and interventions in Seizure disorders.					**No of Competencies - 3**			
OTNC 15.1	Describe the aetio-pathogenesis, and symptoms and classification of seizure disorders	K	KH	Y	Lecture	Written, Viva voce	Psychology, Neurology, paediatrics	OTPC
OTNC 15.2	Enlist and demonstrate the assessment and intervention based on clinical reasoning for selection of appropriate frame of reference and neurophysiological approaches.	K,S	KH,SH	Y	Lecture, DOAP	Written, Viva voce , Case study		CBOT & R
OTNC 15.3	Discuss and present the Prognostic determinants of seizure disorders	K	KH		Lecture	Written, Viva voce		

Reference Books:

References & Books:

1 Willard and Spackman's Occupational Therapy by Elizabeth BlesedellCrepeau, Ellen S. Cohn, Barbara A. Boyt Schell. Published by Lippincott Williams & Wilkins.

2 Occupational Therapy for Physical Dysfunction by Catherine A. Trombly, Mary Vining Radomski. Published by Lippincott Williams & Wilkins.

3 Occupational Therapy - Practice Skills for Physical Dysfunction by Lorraine Williams Pedretti. Published by Mosby.

4 Occupational Therapy Process & Practice skills . Turner .

5 Frames of Reference for Pediatric Occupational Therapy by Paula Kramer, Jim Hinojosa Published by Lippincott Williams and Wilkins.Sensory Integration Therapy: Process & Practice by Anita Bundy.

IV BOT SEMESTER VIII

Semester Pattern:

SEMESTER VIII										
Sr. No.	**Course Code**	**Subjects**	**Total Teaching Hours/Semester**			**Credits**			**Total Credits**	**Marks Disribution**
			Theory	**Practical/Demo/ Lab work**	**Clinical**	**Theory**	**Practical/Demo/ Lab work**	**Clinical**		**Total**
1	COTR	Community occupational Therapy & Rehabilitation	**60**	**30**	**--**	**4**	**1**	**--**	**5**	**Theory-100**
2	OTPS	Occupational Therapy in Psychiatry	**75**	**30**	**180**	**5**	**1**	**4**	**10**	**Theory 100** **Practicals -100**

3	OTPC	OT in Paediatrics conditions	**75**	**30**	**180**	**5**	**1**	**4**	**10**	**Theory-100** **Practicals -100**
	Project Work		**--**	**30**	**--**	**--**	**01**	**--**	**01**	**NUE- 50 marks**
	Elective Clinical		**--**		**90**	**--**	**--**	**2**	**2**	**--**
Total no. of hours / semester =780										
Total no. of Credits									**28**	
Total no of marks for Examination/semester										**500**

NUE- Non university Examination

Community Occupational Therapy & Rehabilitation

Course Description: This course involves a better understanding of the overall Occupational Therapy application in community-based setup & rehabilitation perspective in Occupational therapy. The course involves a better understanding and application of different interventions Frames of references, approaches in community base Occupational Therapy & skills required for planning rehabilitation goals

Goals:

The broad goal to teach the undergraduate students different aspects of Community Occupational Therapy is to have the knowledge, skills and behavioral attributes to function effectively as a occupational therapist in community improve Quality of life & understand different rehabilitative measures to enhance functional independence and Quality of Life of the patient.

Course Objectives (competency statements) – The objectives of this course are:

Knowledge:

1. Describe e community based rehabilitation, difference between IBR & CBR & understand role of occupational therapist in the team
2. Describe the components in wellness program in occupational therapy
3. Understand the term community integration, mobility & strategies to enhance the community integration
4. Understand about low cost aids & appliances used in Occupational Therapy intervention
5. Understand the organisation of Community based rehabilitation centre
6. Enumerate various additive therapies & explain their uses, describe about assistive technologies used in persons with disabilities
7. Identify need for various adjunctive therapies to occupational therapy & discuss their benefits to persons with disabilities
8. Understand Physical agent modalities, its principles & implementation in Occupational Therapy intervention

Skills:

1. understand role of occupational therapy intervention in disaster management
2. Identify the environmental & architectural barriers, plan intervention to overcome them
3. Evaluate the disability as per Gazette guidelines. Laws for certification, perform Disability assessment for person with disability
4. Identify occupational demands in driving & plan strategies for driving rehabilitation
5. Evaluate various factors responsible for successful mobility & adaptations used for wheelchair mobility & seating adaptations
6. Identify pain management & plan intervention in occupational therapy

Attitude:

1. The teaching and training in “CB OT & Rehabilitation” must aim at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.
2. It is necessary to develop in students a sense of responsibility towards holistic patient care & prognostic outcomes of therapy.
3. Students should develop behavioural skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- professionals.

Scheme of Marks for University Theory exam

MCQs, Short answer questions, Brief answer questions

Examination scheme

Semester pattern

For 50 marks-

In semester pattern 2 periodicals of minimum 10 marks each and 1 Prelim/ model paper of theory of 50 marks.

Annual pattern

For 50 marks-

2 periodicals of minimum 10 marks each and 1 midterm exam of theory of 25 marks and 1 Prelim/ model paper of theory

Competencies table: COMMUNITY BASED OCCUPATIONAL THERAPY & REHABILITATION

Code No	Objectives/Competency Students should be able to	Domains of Learning	Competencies	Core Y/N	Teaching Learning methods	Assessment methods	Number required to certify P	Vertical Integration	Horizontal Integration
COMMUNITY BASED OCCUPATIONAL THERAPY & REHABILITATION									
Topic: Community Based Rehabilitation –Introduction			**No of competencies: 5**						
COTR 1.1	Define Community Based Rehabilitation	K	KH	Y	Lecture	written			
COTR 1.2	Explain models, structure, process and outcome of CBR.	K	KH	Y	Lecture, DOAP	Written			
COTR 1.3	Discuss the Role of Occupational Therapy and the contributions of other health professionals in CBR.	K	KH	Y	Lecture	Written, viva			
COTR 1.4	Describe Difference between CBR and IBR	K	KH	Y	Lecture	Written			
COTR 1.5	Explain Treatment approach Alternatives	K	KH	Y	Lecture	written			
Topic: Wellness program & Preventive Occupational Therapy			**No of competencies: 4**						
COTR 2.1	Define Health, Health promotion & wellness	K	KH	Y	Lecture	written			

COTR 2.2	Explain the hypothesis of association of occupation with balance & participation to promote Health	K	K	Y	Lecture	viva			
COTR 2.3	Discuss research related to wellness & health promotion	K	K	Y	Lecture	Viva, written			
COTR 2.4	Describe the wellness & health promotion in Occupational therapy	K	KH	Y	Lecture	written			
Topic: Community Integration		**No of Competencies: 6**							
COTR3. 1	Identify community integration factors	K	K	Y	Lecture	written			
COTR3. 2	Describe the approaches used in Fall prevention to enhance mobility and safety	K	KH	Y	Lecture	written			
COTR3. 3	Enumerate the factors required for Driving Skills	K	K	Y	Lecture	Written, Viva voce			
COTR3. 4	Identify Prerequisite for Driving skills	K	KH	Y	Lecture	written			
COTR3. 5	Demonstrate Visual perceptual assessment for driving	K	SH	Y	Lecture/DOAP	Written, Viva voce, Skill assessment			
COTR3. 6	Describe The occupational therapy intervention to improve/enhance driving skills	K, S	KH	Y	Lecture, DOAP session	Written, Viva voce			
Topic: OT in occupational hazards		**No of Competencies: 2**							
COTR4. 1	Identify Occupational Hazards	K	K	Y	Lecture	Written, Viva voce			
COTR4. 2	Describe the strategies for management of prevention of occupational hazards	K	K	Y	Lecture	Written, Viva voce			
Topic: Occupational therapy in Disaster management		**No of Competencies: 3**							
COTR5.	Describe Anticipated calamities or	K	K	Y	Lecture	Written, Viva voce			

1	Disaster in India								
COTR5.2	Identify the role of Occupational therapy in prevention of disaster	K	K	Y	Lecture	Written, Viva voce			
COTR5.3	Describe the role of Occupational therapy in acute & post disaster events as a team member	K	K	Y	Lecture	Written, Viva voce			
Topic: Environmental Vs. Architectural Barriers No of Competencies: 4									
COTR 6.1	Describe various factors in Assessment of Environment	K	K	Y	Lecture	Written, Viva voce			
COTR 6.2	Describe the strategies to manage & overcome architectural barriers	K	KH	Y	Lecture	Written, Viva voce			
COTR 6.3	Indian & international guidelines for barrier free environment (Toilet, Kitchen, bed room, Ramp/stairs, public transport facility etc.)	K	KH	Y	Lecture	Written, Viva voce			
COTR 6.4	Web accessibility	K	KH	Y	Lecture	Written, Viva voce			
Topic: Disability & Health evaluation, certification & rights to disabled person No of Competencies: 5									
COTR 7.1	Describe International Classification of Functioning, Disability & Health: WHO's ICF 2001 & older editions of ICIDH	K	SH	Y	Lecture	Written, Viva voce			
COTR 7.2	Discuss Magnitude of disability problems, its causes & future trends	K	KH	Y	Lecture	Written, Viva voce			
COTR 7.3	Describe Persons with Disability Act (1995), National Trust Act 1999, RCI Act 1992, Right to Person with	K	KH	Y	Lecture	Written, Viva voce			

	Disabilities (RPwD) Act (2016) by Government of India								
COTR 7.4	Identify & describe the concepts of disability evaluation and certification in India and its Social Legislation	K	SH	Y	Lecture	Written, Viva voce			
COTR 7.5	Describe the role of Occupational Therapy in Prevention & detection of disability	K	KH	Y	Lecture	Written, Viva voce			
REHABILITATION									
Topic: Driving Rehabilitation for persons with Disabilities Competencies: 3									
COTR 8.1	Describe the skills required in Driving	K	KH	Y	Lecture	Written, Viva voce			
COTR 8.2	Enumerate the factors affecting driving skills	K	KH	Y	Lecture	Written, Viva voce			
COTR 8.3	Describe standardised Assessments used in Driving	K	SH	Y	Lecture, DOAP	Written, Viva voce			
Topic: Mobility & seating No of Competencies: 5									
COTR 9.1	Identify needs of assessment mobility aids	K	K	Y	Lecture	Written, Viva voce			
COTR 9.2	Describe assessment factors for mobility aids	K	KH	Y	Lecture	Written, Viva voce			
COTR 9.3	Discuss the prescription of mobility & seating aids & appliances	K	SH	Y	Lecture, DOAP	Written, Viva voce			
COTR 9.4	Identify the need for selection of Assistive aids for mobility & ambulation	K	KH	Y	Lecture	Written, Viva voce			
COTR 9.5	Describe the factors considered for fitting of assistive devices for ambulation	K	KH	Y	Lecture	Written, Viva voce			

Topic: Wheelchair & seating training & adaptations **No of Competencies: 4**									
COTR 10.1	Describe Wheel chair selection process	K	KH	Y	Lecture	Written, Viva voce			
COTR 10.2	Describe Wheel chair assessment, assessment for adaptations	K	SH	Y	Lecture, DOAP	Written, Viva voce			
COTR 10.3	Describe types, parts, adaptations in wheelchair	K	SH	Y	Lecture, DOAP	Written, Viva voce			
COTR 10.4	Describe training wheelchair maneuvering & safety assessment in wheelchair	K	SH	Y	Lecture, DOAP	Written, Viva voce			
Topic: Low cost aids & appliances **No of Competencies: 3**									
COTR 11.1	Identify needs of low cost appliances	K	K	Y	Lecture	Written, Viva voce			
COTR 11.2	Describe innovative low cost aids & appliances	K	KH	Y	Lecture	Written, Viva voce			
COTR 11.3	Describe various therapeutic equipment, splints, adaptive devices used in CBR setup	K	KH	Y	Lecture	Written, Viva voce			
Topic: Organisation & administration of CBR centre **No of Competencies: 3**									
COTR 12.1	Describe the principles of organization & administration.	K	KH	Y	Lecture	Written, Viva voce			
COTR 12.2	Prepare Organizational chart	K	K	Y	Lecture	Written, Viva voce			
COTR 12.3	Describe procedure for starting a new Rehabilitation Centre, survey required & planning	K	KH	Y	Lecture	Written, Viva voce			
Topic: Additive Therapy **No of Competencies: 6**									
COTR 13.1	Enumerate the principals & the modalities used in Ayurveda, Yoga and Naturopathy, Unani, Siddha, Homeopathy	K	K	N	Lecture	Written, Viva voce			

COTR 13.2	Describe the various approaches used in Biofeedback, Yoga Therapy, Acupuncture therapy, Dry needling	K	KH	N	Lecture	Written, Viva voce			
COTR 13.3	Describe the various approaches & techniques used in Virtual Reality	K	KH	Y	Lecture	Written, Viva voce			
COTR 13.4	Describe about Assistive & adaptive Technology	K	KH	Y	Lecture	Written, Viva voce			
COTR 13.5	Describe the various new approaches in rehabilitation such as Tele-rehabilitation and Robotics	K	KH	Y	Lecture	Written, Viva voce			
COTR 13.6	Describe Computer / IT application in rehabilitation	K	KH	Y	Lecture	Written, Viva voce			
Topic: Discuss Adjunctive Therapy to O.T			**No of Competencies: 3**						
COTR 14.1	Introduction to physiotherapy: Understand scope & importance of prevention, remediation of movement dysfunction and various techniques	K	K	N	Lecture	Written, Viva voce			
COTR 14.2	Introduction to speech & language therapy : Understanding speech, communication, language & swallowing problems in children & adults and intervention for the same	K	K	N	Lecture	Written, Viva voce			
COTR 14.3	Assistive technology solutions: Describe the concepts in assistive technology solutions	K	K	Y	Lecture	Written, Viva voce			
Topic: Pain Management in Occupational Therapy			**No of competencies: 3**						
COTR 15.1	Define & classify pain	K	K	Y	Lecture	Written, Viva voce			
COTR 15.2	Describe the various assessment scales in pain	K	KH	Y	Lecture	Written, Viva voce			
COTR	Describe various modalities used in	K	SH	N	Lecture	Written, Viva			

15.3	Pain management such as Kinesio-taping, Aquatic therapy, Myofascial pain Syndrome management (Myofascial release and other pain management such as Taichi etc.)					voce, Skill assessment			
Topic: Physical agent modalities in adjunct to Occupational Therapy (PAMOT) No of competencies: 1									
COTR 16.1	Describe the application of Physical agent modalities as an adjunct to improve occupational performances	K	SH	Y	Lecture	Written, Viva voce, Skill assessment			

Reference Books:

1. Willard and Spackman's Occupational Therapy by Elizabeth BlesedellCrepeau, Ellen S. Cohn, Barbara A. BoytSchell. Published by Lippincott Williams & Wilkins.
2. Occupational Therapy for Physical Dysfunction by Catherine A. Trombly, Mary Vining Radomski. Published by Lippincott Williams & Wilkins.
3. Occupational Therapy - Practice Skills for Physical Dysfunction by Lorraine Williams Pedretti. Published by Mosby.Occupational Therapy and Physical Dysfunction: Principles, Skills and Practice by Annie Turner, Marg Foster, Sybil E. Johnson. Published by Churchill Livingstone.
4. Physical Rehabilitation by Susan B. O'Sullivan, Thomas J. Schmitz. Published by F. A. Davis Company. Indian Reprint by Jaypee Brothers.
5. Atlas of Orthoses and Assistive Devices by Bertram Goldberg, John D. Hsu. Published by F. A. Davis Company.
6. Community Based Rehabilitation by Malcolm Peat. Published by W. B. Saunders
7. WHO International Classification of Functioning manual
8. Hunter, Mackin, Callahan's Rehabilitation of the Hand and Upper Extremity by Evelyn Mackin, Anne D.Callahan. Published by Mosby
9. Yogic Exercises, physiologic and psychic processes by S. Dutta Ray. Published by Jaypee Brothers.
10. Physical Agent Modalities: Theory and Application for the Occupational Therapist by Alfred G. Bracciano. Published by Thorofare NJ SLACK Inc

OCCUPATIONAL THERAPY PRACTICES IN PSYCHIATRY

Theory Exam: 80 Marks
Practical: 80 marks
Internal Assessment: 20 Marks
Instruction hours: 120 hours (Theory 90 hours, Practical: 30 hours)
Supervised Clinical Practice: 210 hours

Course Description : This course offers the student to learn the foundational concepts of occupational therapy in psychiatry. It includes standardised and non-standardised occupational therapy psychiatric evaluations and assessments. The course introduces the student to various occupational therapy psychiatric settings and teaches theoretical and practical skills in using appropriate Models/ Frames of references/ Approaches for Occupational Therapy intervention throughout human lifespan.

Goal: The broad goal of Occupational therapy in psychiatry subject, is to enable the undergraduate student, to be an active participant in learning the knowledge, skills, behavioral, and attitudinal attributes, for assessing and providing occupational therapy intervention in psychiatry.

Course Objectives:

A. **Knowledge**:

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

1. Outline the history and evolution of occupational therapy in psychiatry.
2. Apply the foundational knowledge of occupational therapy in psychiatry.
3. Relate to the various settings of occupational therapy in psychiatry.

4. To study the theory and practical skills in using appropriate Models/ Frames of references/ Approaches for Occupational Therapy intervention throughout human lifespan.

B. Skills:

1. Select and perform the various evaluations and assessments used in occupational therapy in psychiatry.
2. Document occupational therapy assessment and intervention based on Occupational therapy practice framework.
3. Develop clinical skills to apply therapeutic use of self, activity prescription and grading, and environmental modifications.

C. Attitude:

1. Develop an empathetic and humanitarian approach.
2. Value confidentiality and priorities of the service seeker.
3. Respect towards the service seeker.

Course Outcome:

1. Know the history and evolution of occupational therapy mental health.
2. Describe the foundational knowledge of occupational therapy mental health.
3. Demonstrate the skills needed for occupational therapy assessment and intervention of various psychiatry conditions.

Scheme of Examination:

Written		**Eligibility/Passing Marks**		**Practicals**		**Eligibility/Passing Marks**		**Total Marks**
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	
50	100	25	50	50	100	25	50	200

The internal assessment will be based on the following criteria -

Subject	Theory			Practical/Viva		
OT Practices i Psychiatry	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
100 marks	30	20	50	30	20	50

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs, Short answer questions, Brief answer questions and Long answer Questions

Scheme of examination for University Practical exam

Short case	Long Case	Viva voce	Communication skills	Total
25 marks	**50marks**	**20 marks**	**5 marks**	**100 marks**

Semester pattern

For 100 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

Annual pattern

For 100 marks-

2 periodicals of 20 marks each and 1 midterm exam of theory and practical of 50 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

Understanding the competencies table

Course code	Objectives/Competency	Domains of Learning	Competencies	Core Y/N	Teaching Learning methods	Assessment methods	Vertical Integration	Horizontal Integration

	Students should be able to							
Topic: Theoretical basis of occupational therapy in Psychiatry		**No.of competencies: 5**						
OTPSY 1.1	Enlist key milestones and advancements in the history of occupational therapy in Psychiatry.	K	K	Y	Lecture	Written, Viva voce		
OTPSY 1.2	Explain historical context influencing contemporary practices and approaches in Psychiatry occupational therapy.	K	K	Y	Lecture	Written, Viva voce		
OTPSY 1.3	Explain major medical and psychological theories commonly applied in occupational therapy for Psychiatry interventions. i. Theory of object relations ii. Developmental theory iii. Behavioral theory iv. Cognitive Behavioral Therapy v. Client-centered therapy vi. Neurosciences theories vii. Psychiatric and psychosocial rehabilitation viii. Explanatory models from other cultures ix. Development of Adaptive Skills x. Role Acquisition and Social Skills Training xi. Psychoeducation xii. Sensory Integration/Processing xiii. Cognitive theories	K	K, KH	Y	Lecture	Written, Viva voce	OTDP II	
OTPSY 1.4	Explain mental health and well-being, including key components, factors influencing mental well-being, and strategies for promoting and maintaining	K	K	Y	Lecture	Written, Viva voce		

	positive mental health.							
OTPSY 1.5	Discuss the various mental health factors that impact human occupation across the lifespan, considering developmental stages and life transitions.	K	K, KH	Y	Lecture	Written		
Topic: Specific client factors related to mental health		**No. of competencies: 2**						
OTPSY 2.1	Define, classify, and describe neuropsychology and effect on occupational performance of the factors given below: i. Cognitive Skills ii. Cognitive Beliefs iii. Sensory Skills iv. Communication and Social Skills v. Coping Skills vi. Motivation vii. Emotion Regulation viii. Pain Regulation	K, S,A, C	SH	Y	Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
OTPSY 2.2	Describe evaluation and intervention of the factors given below: i. Cognitive Skills ii. Cognitive Beliefs iii. Sensory Skills iv. Communication and Social Skills v. Coping Skills vi. Motivation vii. Emotion Regulation viii. Pain Regulation	K, S,A, C	SH	Y	Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
Topic: Assessment and Outcome Measurements in occupational therapy practices in psychiatry					**No. of competencies: 2**			
OTPSY	Document Occupational therapy assessment	K, S,A, C	K/S	Y	Lecture, Small	Written, Viva		

3.1	and intervention in psychiatry based on Occupational Therapy Practice Framework.				group discussion, DOAP	voce, Skill assessment, Practical		
OTPSY 3.2	Describe various methods of assessment and outcome measurements used in psychiatric occupational therapy practice, including both standardized and non-standardized approaches.	K	SH		Lecture, DOAP	Written, Viva voce, Skill assessment, Practical		
Topic: Occupational therapy settings in mental health			**No. of competencies: 2**					
OTPSY 4.1	Describe occupational therapy functioning in various psychiatric settings.	K	KH	Y	Lecture	Written/Viva voce		
OTPSY 4.2	Identify and describe the role of an occupational therapist as a team member in various psychiatric settings.	K	KH		Lecture	Written		
Topic: Mental health occupational therapy interventions to support occupations			**No. of competencies: 11**					
OTPSY 5.1	Discuss various types of therapeutic media commonly used in psychiatric occupational therapy interventions.	K, S,A, C	K, S	Y	Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
OTPSY 5.2	Explain and demonstrate therapeutic use of self.	K, S,A, C	K, SH		Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
OTPSY 5.3	Explain and demonstrate use of environment for occupational therapy practices in psychiatry.	K, S,A, C	K, SH		Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
OTPSY 5.4	Explain and demonstrate use of occupation and activity for occupational therapy in psychiatry.	K, S,A, C	K, SH		Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
OTPSY 5.5	Explain and demonstrate use of physical activity for mental well-being.	K, S,A, C	K, SH		Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment,		

						Practical		
OTPSY 5.6	Explain and demonstrate use of play in occupational therapy practices in psychiatry.	K, S,A, C	K, SH		Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
OTPSY 5.7	Explain and demonstrate use of vocation in occupational therapy practices in psychiatry.	K, S,A, C	K, SH		Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
OTPSY 5.8	Explain and demonstrate therapeutic management of symptoms and behaviors.	K, S,A, C	K, SH		Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
OTPSY 5.9	Explain and demonstrate group therapy.	K, S,A, C	K, SH		Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
OTPSY 5.10	Explain and demonstrate stress management techniques.	K, S,A, C	K, SH		Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
OTPSY 5.11	Explain and demonstrate use of virtual reality.	K, S,A, C	K, SH		Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
Topic: Occupational therapy practices in psychiatry for children and adolescents				**No. of competencies: 4**				
OTPSY 6.1	Explain neuropsychiatry of neurodevelopmental disorders relevant to occupational therapy process and practice.	K	K	Y	Lecture, DOAP	Written, Viva voce		
OTPSY 6.2	Define, classify, and enumerate clinical presentation of neurodevelopmental disorders.	K	K	Y	Lecture, DOAP	Written, Viva voce		

OTPSY 6.3	Enlist common medical treatments and the effects of medications used in managing neurodevelopmental disorders.	K	K	Y	Lecture, DOAP	Written, Viva voce		
OTPSY 6.4	Explain occupational therapy assessment and management for the following Neurodevelopmental disorders: • Intellectual Disabilities • Communication Disorders • Autism Spectrum Disorder • Attention-Deficit Hyperactivity Disorder • Specific Learning Disorder • Motor Disorders	K, S,A, C	K/S	Y	Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		IV BOTh OT in Paediatrics
Topic: Mental health occupational therapy in adults		**No. of competencies: 4**						
OTPSY 7.1	Explain neuropsychiatry of adult psychiatric disorders relevant to occupational therapy process and practice.	K	K	Y	Lecture, DOAP	Written, Viva voce		
OTPSY 7.2	Define, classify, and enumerate clinical presentation of adult psychiatric disorders.	K	K	Y	Lecture, DOAP	Written, Viva voce		
OTPSY 7.3	Enlist common medical treatments and the effects of medications used in managing adult psychiatric disorders.	K	K	Y	Lecture, DOAP	Written, Viva voce		

OTPSY 7.4	Discuss occupational therapy assessment and management for the following: • Schizophrenia Spectrum and other Psychotic Disorders • Catatonia • Bipolar and related Disorders • Anxiety Disorders • Obsessive Compulsive and related Disorders • Trauma and Stressor-Related Disorders • Dissociative Disorders • Feeding and Eating Disorders • Elimination Disorders • Sleep-Wake Disorders • Sexual Dysfunctions • Gender Dysmorphia • Disruptive, Impulse-control, and Conduct Disorders • Substance-related and Addictive Disorders • Neurocognitive Disorders • Personality Disorders • Paraphilic Disorders	K, S, A, C	K, S	Y	Lecture, Small group discussion, DOAP	Written, Viva voce, Skill assessment, Practical		
Topic: Psychosocial aspects of disability		**No. of competencies: 1**						
OTPSY 8.1	Explain occupational therapy assessment and intervention for psychosocial aspects of disability.	K	KH	Y	Lecture	Written/Viva voce		

Reference Books:

1. Occupational Therapy in Mental Health A Vision for Participation, Catana Brown
2. Occupational Therapy and Mental health, Jennifer Creek
3. Mental Health Concepts and Techniques for the Occupational Therapy Assistant, Mary Early
4. Occupational Therapy in Psychiatry and Mental health, Crouch- Rosemary
5. Payne's Handbook of Relaxation Techniques, Rosemary Payne, Marie Donoghy
6. Occupational Therapy for Children and Adolescents, Case-Smith

Occupational Therapy in Pediatrics

COURSE DESCRIPTION: This course intends to familiarize students with terminology & abbreviations for efficient & effective chart reviewing & documentation for occupational therapy in paediatric conditions. It also gives overview of aetiology as well as primary & secondary clinical characteristics, complications and their management. Discusses & integrates subsequent occupational therapy management of Neurodevelopment disorders, genetic disorders, and musculoskeletal conditions, infective conditions of CNS in paediatrics, with reference to red flag indicators, indications, contraindications & precautions to formulate appropriate therapeutic intervention.

GOAL: The goal to teach the undergraduate students OT in Pediatrics is to have the knowledge, skills and behavioural attributes to function effectively as an occupational therapist and subsequently improve functional independence and Quality of Life of the patient.

OBJECTIVES:

A. KNOWLEDGE:

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

1. Identify the clinical presentation of common paediatric conditions with special reference to Neurodevelopmental conditions like cerebral palsy, Autism, ADHD and other conditions like congenital, metabolic and muscular disorders

2. Outline and apply various modalities and methods of management including various approaches, exercise protocol, splinting process.

3. Recognize atypical behaviour in children and its OT management

4. Plan and provide occupational therapy treatment under supervision for occupational performance areas of independent living/daily living skills, play/leisure skills, social skills, pre-vocational/work adjustment skills

B. SKILLS:

At the end of the course, the student shall be

1. Develop clinical skills (history taking, clinical examination and other instruments of examination) to know the clinical manifestations and its impact on function.

2. Perform simple assessments using standardised methods, test batteries and instruments to assess performance components.

3. Assist the common bedside evaluations and assessment procedures related to paediatric conditions and be able to document their findings and intervention.

C. ATTITUDE:

1. The teaching and training in “OT in paediatric condition” must aim at developing the attitude in students to apply the knowledge & skills he/she acquires for benefit and welfare of the patients.

2. It is necessary to develop in students a sense of responsibility towards holistic patient care & prognostic outcomes of therapy

3. Students should develop behavioural skills and humanitarian approach while communicating with patients, as individuals, relatives, society at large & the co- professionals.

Scheme of Examination:

Written		**Eligibility/Passing Marks**		**Practicals**		**Eligibility/Passing Marks**		**Total Marks**
Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	Internal Assessment	University exam	

50	100	25	50	50	100	25	50	200

The internal assessment will be based on the following criteria -

Subject	Theory			Practical/Viva		
OT in Pediatric conditions	**Written**	**Attendance Quiz/ Seminar/ Logbook/ Open book test/ Surprise test/ Capstone project, etc**	**Total**	**Practical**	**Practical/Clinical attendance/ Assignments/ Journals/Clinical Training card/Capstone Project/ Case presentations, etc**	**Total**
100 marks	30	20	50	30	20	50

For a candidate who fails in a subject(s), his/ her marks of internal assessment will be carried forward

Examination scheme

Scheme of Marks for University Theory exam

MCQs, Short answer questions, Brief answer questions and Long answer Questions

Scheme of examination for University Practical exam

Short case	Long Case	Viva voce	Communication skills	Total
25 marks	**50marks**	**20 marks**	**5 marks**	**100 marks**

Semester pattern

For 100 marks-

In semester pattern 2 periodicals of minimum 20 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

Annual pattern

For 100 marks-

2 periodicals of 20 marks each and 1 midterm exam of theory and practical of 50 marks each and 1 Prelim/ model paper of theory and practical of 100 marks each

Understanding the competencies table

Code no	Objectives/Competency Students should be able to	Domains of Learning	Competencies levels	Core Y/N	Teaching Learning methods	Assessment methods	Vertical Integration	Horizontal Integration
Topic: Development, Milestones and Reflexes			**No of Competencies: 3**					
OTPC 1.1	Demonstrate developmental Milestones and physiological measures in typical and child with developmental delay. (Physical, sensory motor, Cognitive perceptual, play and social andemotional)	K, S, A, C	KH, SH	Y	Lecture, Observation, DOAP, Case study, Case presentation	Written, Viva, Practical, OSCE	FOT II, OTDP2, Developmental Psychology	OT in Neurological Conditions, OT Practices in Psychiatry
OTPC 1.2	Demonstrate the normal and abnormal reflex patterns.	K, S, A	KH, SH		Lecture, practical, case presentation	Written, Viva, practical, DOAP		
OTPC 1.3	Explain the Paediatric occupational dysfunctions using the ICF and OTP Frameworks.	K, S	KH, SH		Lecture, Case Presentation	Written, Viva, Practical	OTDP II	
Topic: Approaches used in Paediatric Occupational therapy			**No of Competencies: 15**					
OTPC 2.1	Describe the principles and application of various evidence based treatment approaches used in paediatric OT.	K	KH	Y	Lecture, Case study, case presentation, seminar	Written,Viva Voce, Practical		
OTPC 2.2	Document the OT assessment and intervention in Paediatric conditions based on Occupational Therapy Practice Framework.	K	KH, SH		Lecture, DOAP session, case study, seminar, presentations	Written, Viva voce, Skill assessment, Practical		
OTPC 2.3	Discuss Philosophy of neurodevelopmental treatment	K	KH		Lecture	Written/Viva Voce	OTDP I	
OTPC 2.4	Identify Key Principles of NDT-preparation of movement patterns , developmental sequences, sensorimotor	K/S	SH		Lecture/DOAP session	Written/Viva voce/Skill assessment /Practical	OTDP I	

	experience ,key points of control, All day management							
OTPC 2.5	Document about Integrating NDT with Occupational Functioning Model in developmental Disorders	K/S	KH		Lecture/ DOAP session	Written/Viva voce	OTDP I	
OTPC 2.6	Describe A Model for Sensory Processing Underlying Concepts for Sensory-Processing Patterns based on Sensory Integration Therapy	K	KH		Lecture	Written	OTDP I	
OTPC 2.7	Identify Patterns of Sensory Processing from Dunn's Model in children with Sensory processing disorders	K/S	SH		Lecture/DOAP session	Written/Viva voce/Skill assessment /Practicals	OTDP I ,psychology, Psychiatry	
OTPC 2.8	Define Goals of Occupational Therapy Using Sensory Integration Strategies	K/S	KH		Lecture/ DOAP session	Written/Viva voce	OTDP I ,psychology, Psychiatry	
OTPC 2.9	Discuss Report Preparation for Sensory processing issues	K	KH		Lecture	Written/Viva Voce	OTDP I ,psychology, Psychiatry	
OTPC 2.10	Demonstrate the Sensory motor approaches such as Roods for improving Motor control	K/S	SH		Lecture/DOAP session	Written/Viva voce/Skill assessment /Practicals	OTDP I Neurology	
OTPC 2.11	Describe & discuss the use Play therapy in Paediatric Occupational therapy settings	K	KH		Lecture,small group discussion ,Case based study	Written/Viva Voce	OTDP II	
OTPC 2.12	Describe adjunctive treatment measures in paediatric occupational therapy not limited to CIMT, , MFR, KT, HWT, Yoga, Animal assisted therapy, Aqua therapy, AAT.	K	KH,SH		Lecture/DOAP session/case study/seminar/presentations	Written/Viva voce/Skill assessment /Practical		

OTPC 2.13	Explain Classification-various neurological & neurosurgical conditions & their considerations	K	KH		Lecture ,DOAP	Written		
OTPC 2.14	Describe OT & Family based intervention in Occupational Therapy	K	KH		Lecture ,DOAP	Viva,written	OT DP II	
OTPC 2.15	Demonstrate the appropriate documentatioafter followup	K,S	KH, SH		Lecture, DOAP session, case study, seminar, presentations	Written, Viva voce, Skill assessment, Practical	Paediatrics	
Topic: Introduction to Neurodevelopmental Disorders				**No of Competencies: 4**				
OTPC 3.1	Define and Explain Classification of neurodevelopmental disorders with emphasis on Intellectual Disabilities,Communication Disorders, Autism Spectrum Disorder, Attention - Deficit Hyperactive Disorder, Specific Learning disorder, and other Sensory Processing dysfunctions	K,S	KH, SH		Lecture, DOAP session, case study, seminar, presentations	Written, Viva voce, Skill assessment, Practical	Paediatrics	
OTPC 3.2	Explain the occupational dysfunctions in NDD (ICF and OTP Frameworks).	K, S	KH, SH		Lecture, DOAP session, case study, seminar, presentations	Written, Viva voce, Skill assessment, Practical		
OTPC OTPC 3.3	Enlist Treatment Approaches using Motor, Sensory, cognitive, perceptual and client centred based interventions.	K, S	KH, SH		Lecture, DOAP session, case study, seminar, presentations	Written, Viva voce, Skill assessment, Practical		
OTPC 3.4	Alternative treatment management in the management of	K, S	KH, SH		Lecture, DOAP session, case study, seminar, presentations	Written, Viva voce, Skill assessment,		

	Neurodevelopmental disorders					Practical		
Topic :Early Intervention			**No of competencies 6**					
OTPC 4.1	Discuss importance of Early intervention in developmental disabilities	K	KH	Y	Lecture	Written/Viva voce	Paediatrics	
OTPC 4.2	List Legislation & influences on services for children with developmental deviations	K	KH		Lecture	Written		
OTPC 4.3	Identify Goal of early intervention	K, S	SH		Lecture, DOAP session	Written, Viva voce, Skill assessment, Practical		
OTPC 4.4	Discuss the Role of occupational therapy	K	KH		Lecture	Written, Viva voce		
OTPC 4.5	Choose Service delivery in early intervention program	K	KH		Lecture	Written		
OTPC 4.6	Inform Parent about role of Occupational Therapy & choose appropriate professional interaction	K, C	KH		Lecture, DOAP session	Written, Viva voce		
Topic - Cerebral Palsy			**No of competencies -11**					
OTPC 5.1	Describe Historical Perspective	K	KH	Y	Lecture	written	OTDP I	CBOT & R
OTPC 5.2	Identify Scope of cerebral Palsy	K	KH		Lecture	written		
OTPC 5.3	Demonstrate Comparison of normal & abnormal development	K/S	SH		Lecture, DOAP session	Written, Viva voce, skills assessment, Practicals		
OTPC 5.4	Enumerate and describe the various Assessments in cerebral palsy	K	KH,SH		Lecture, DOAP session, case study, seminar, presentations	Written, Viva voce, Skill assessment, Practical		

OTPC 5.5	Classify Types of cerebral palsy	K	KH		Lecture	written		
OTPC 5.6	Demonstrate understanding of Consequences of abnormal neurological patterns of development	K	KH		Lecture	Written, Viva voce		
OTPC 5.7	Identify the Dysfunctions in oral motor abilities	K	KH		Lecture	written		
OTPC 5.8	Identify & discuss Assessment of oral Motor disabilities	K	SH		Lecture, DOAP	Viva, skills assessment, Practicals		
OTPC 5.9	Identify the treatment approaches for oral motor disabilities	K	KH		Lecture	Written, Viva voce		
OTPC 5.10	Describe Overview of treatment methods in cerebral Palsy	K	KH		Lecture, DOAP	Written, Viva voce		
OTPC 5.11	Document Occupational Therapy treatment in cerebral Palsy	K, S	SH		Lecture, DOAP	Written, Viva voce, skills assessment		
Topic: Other Neurodevelopmental disorders			**No of competencies- 4**					
OTPC 6.1	Discuss Incidence of Autism , ADHD & seizures disorders & their aetiology	K	KH	Y	Lecture	Written, Viva voce	Psychology	
OTPC 6.2	Describe the Developmental characteristics of Autism, ADHD & seizures disorders	K	KH		Lecture	Written, Viva voce		
OTPC 6.3	Describe Treatment & prognosis in Autism ,ADHD & seizures disorders	K	KH		Lecture	Written, Viva voce		
OTPC 6.4	Document Role of Occupational Therapy in the treatment of Autism, ADHD & seizures disorders	K, S, C	SH		Lecture, DOAP	Written, Viva voce, skills assessment		
Topic: OT in Neonatal Intensive care unit			**No of competencies- 6**					

OTPC 7.1	Understand the scope of Occupational Therapy & knowledge required for competent practice in the neonatal intensive care unit (NICU).	K	KH	Y	Lecture	Written, Viva voce		
OTPC 7.2	To understand the traditional occupational therapy approach of rehabilitation and developmental stimulation with current concepts of individualized developmentally supportive care in the NICU	K	KH		Lecture	Written, Viva voce		
OTPC 7.3	Define and compute postconceptional, chronologic, and corrected age.	K	KH		Lecture	Written, Viva voce		
OTPC 7.4	Identify potential negative effects of light, sound, and caregiving practices on infants in the NICU.	K, C	SH		Lecture, DOAP	Written, Viva voce, Skill assessments		
OTPC 7.5	Identify the basic principles and techniques of developmentally supportive care & positioning in the NICU.	K, S	KH		Lecture, DOAP	Written, Viva voce		
OTPC 7.6	Understand the (limited) appropriate use for range of motion and splinting in the NICU	K	KH		Lecture	Written, Viva voce		
Topic: Occupational Therapy in Preschool -School setup No of competencies -10								
OTPC 8.1	List Legislation aspect of school based Occupational therapy	K	KH	Y	Lecture	Written	Psychology	
OTPC 8.2	Demonstrate understanding of	K, A, C	KH		Lecture	Viva voce		

	Team approach in school set up							
OTPC 8.3	Interpret outcome of school based Assessment & inform team members, parents	K, S, C	KH		Lecture	Written, Viva voce		
OTPC 8.4	Present Program planning & documentation	K, S	SH		Lecture, DOAP	Written, Viva voce, Practicals		
OTPC 8.5	Identify components for Implementing program	K, S	KH		Lecture, DOAP	Written, Viva voce		
OTPC 8.6	Identify factors that contribute to typical or atypical development of visual perception	K, S	KH		Lecture, DOAP	Written, Viva voce		
OTPC 8.7	Choosing the Most Appropriate Type of Assessment	K	KH		Lecture	Written		
OTPC 8.8	Describe models and theories that may be used in structuring intervention plans for children who have problems with visual-perceptual skills	K	KH		Lecture	Written		
OTPC 8.9	Outline the intervention strategies& development of skills	K	KH		Lecture	Written		
OTPC 8.10	Demonstrate skills for assisting children in improving or compensating for problems with visual-perceptual skills	K, S	KH		Lecture, DOAP session	Written, Viva voce		
Topic : OT in degenerative & genetic disorders, Neural tube defects (Spina Bifida, Muscular dystrophy) No of competencies-4								
OTPC 9.9	List Etiology & Define Terms Neural Tube defects	K	KH	Y	Lecture	Written	Neurology, Orthopaedics	
OTPC 9.2	Describe Neurological & Neurosurgical concerns, Functional limitations in neural tube defects	K	KH		Lecture	Written, Viva Voce		

OTPC 9.3	Discuss Orthopaedic concern	K	KH		Lecture	Written, Viva Voce		
OTPC 9.4	Describe Occupational Therapy Role in treatment	K, S	SH		Lecture, DOAP session	Written, Viva voce, Skill assessment, Practical		
Topic: OT in Paediatric oncology			**No of competencies-2**					
OTPC 10.1	Identify conditions in paediatric oncology Enumerate occupational therapy goals in intervention	K	KH	N	Lecture	Written, Viva Voce	Surgery	
OTPC 10.2	Identify the Use of Play in Intervention	K	KH		Lecture, DOAP	Written, Viva Voce		

Reference Books:

1. Willard and Spackman's Occupational Therapy by Elizabeth Blesedell Crepeau, Ellen S. Cohn, Barbara A. Boyt Schell. Published by Lippincott Williams & Wilkins.
2. Occupational Therapy for Physical Dysfunction by Catherine A. Trombly, Mary Vining Radomski. Published by Lippincott Williams & Wilkins.
3. Occupational Therapy - Practice Skills for Physical Dysfunction by Lorraine Williams Pedretti. Published by Mosby.
4. Occupational Therapy for Children by Jane Case-Smith. Published by Elsevier – Mosby.
5. Frames of Reference for Pediatric Occupational Therapy by Paula Kramer, Jim Hinojosa Published by Lippincott Williams and Wilkins.
6. Sensory Integration Therapy: Process & Practice by Anita Bundy
7. Treatment of Cerebral palsy & Motor delay by Sophie Levitt,Wieley-Blackwell,A John Weley & sons Ltd Publication publication
8. Finnies Handling of young child with cerebral palsy at Home by Eva Bower;Elsevier publication
9. Illingworth's **NAMES** The development of the infant & young child (Normal & abnormal 0,Ronald Illingworth,,MKC Nair,paul Russell; Elsevier publication
10. Occupational therapyfor children by Jane case smith,Jane Clifford O'Biren ,Mosby Elsevier publication

NAMES OF THE EXPERTS CONTRIBUTED IN THE FORMATION OF COMPETENCIES :

Sr No	I st BOTH	
1	Dr Jyothika Bijlani	Dean, Academic Council of Occupational Therapy, India
2	Dr Sofia Hussain Azad	Principal and Professor Occupational Therapy School and Centre, Govt Medical College, Nagpur, Maharashtra
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4	Dr K. Sunita	AssistantProfessor OT School & Centre, T. N. Medical College & B. Y. L. Nair Ch. Hospital, Mumbai ,Maharashtra

5	Dr. Shilpshree Palsule	Assistant Professor O T School & Centre, Seth GSMC & KEM Hospital, Parel, Mumbai, Maharashtra
	II nd BOTh	
6	Dr Jyothika Bijlani	Dean, Academic Council of Occupational Therapy, India
7	Dr Shailaja Jaywant	EC member, Academic Council of Occupational Therapy, India
8	Dr Anurupa Senapati	Asst. Prof and Head Department of Occupational Therapy SVNIRTA, Cuttack, Odisha
9	Dr Hemant Nandgaonkar	Assistant Professor O T School & Centre, Seth GSMC & KEM Hospital, Parel, Mumbai, Maharashtra
	III rd BOTh	
10	Dr Jyothika Bijlani	Dean, Academic Council of Occupational Therapy, India
11	Dr Pratibha Vaidya	Associate professor &Incharge, Occupational Therapy School & Centre, TN Medical College, BYL Nair Ch Hospital, Mumbai, Maharashtra
12	Dr Rashmi Yeradkar	Associate professor &Incharge , Occupational Therapy School & Centre, LT M Medical College, LTM Hospital, Mumbai, Maharashtra
13	Dr Vivek Vajaratkar,	Associate Professor, AHSC, Goa Medical College, Goa
14	Dr Vinith Dani Jose J P	Professor & Head / Vice Principal, College of Occupational Therapy, National Institute of Speech & Hearing (NISH) , Trivandrum, Kerala, .
15	Dr Joseph Bose	Assistant professor College of Occupational Therapy, National Institute of Speech & Hearing (NISH) , Trivandrum, Kerala
16	Dr. Shashikant Chandanshive	Assistant Professor OT School & Centre, T. N. Medical College & B. Y. L. Nair Ch. Hospital, Mumbai Central. Mumbai ,Maharashtra
	IVth BOTh	
17	Dr Jyothika Bijlani	Dean, Academic Council of Occupational Therapy, India
18	Dr Shailaja Jaywant	EC member, Academic Council of Occupational Therapy, India
19	Dr Anuradha Pai	Assistant professor, Occupational Therapy School & Centre, LT M Medical College, LTM Hospital, Mumbai, Maharashtra
20	Dr Sushant Sarang	Associate professor, Occupational Therapy School & Centre, Seth G S Medical College, KEM

		Hospital, Mumbai, Maharashtra
21	Dr Anna Daniel	Principal, National Institute of Physical Medicine and Rehabilitation ,Kallettumkara, Kerala
22	Dr. Usha Kasar	Assistant professor, Occupational Therapy School & Centre, Seth G S Medical College, KEM Hospital, Mumbai, Maharashtra
23	Dr. Shriharsh Jahagirdar	OT School & Centre, T. N. Medical College & B. Y. L. Nair Ch. Hospital. Mumbai ,Maharashtra
24	Dr Beulah Samuel	Associate Professor National Institute of Physical Medicine and Rehabilitation ,Kallettumkara , Kerala

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