Curriculum for MD/MS Ayurveda
(PRESCRIBED BY NCISM)

अभ्यासात्प्राप्यते दृष्टिः कर्मसिद्धिप्रकाशिनी।

Semester III-VI
Kriya Sharira
(Human Physiology)
(SUBJECT CODE : AYPG-KS)

(Applicable from 2024-25 batch, from the academic year 2025-26 onwards until further notification by NCISM)

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PREFACE

Kriya Sharira, a foundational pillar of Ayurvedic learning, is the exploration of the dynamic functional principles that govern the human body. This postgraduate program is designed to deepen the understanding of core physiological concepts such as Dosha, Dhatu, Mala, Agni, Srotas, Prakriti, and Naadi, providing a robust framework to interpret health and disease from an Ayurvedic lens. With its roots in classical texts and relevance in present-day health paradigms, this program enables students to understand the balance (Samya) and imbalance (Vaishamya) of bodily functions, which form the basis of Ayurvedic diagnosis and treatment.

The curriculum is curated to foster critical thinking and clinical reasoning, bridging traditional Ayurvedic physiology with contemporary biomedical insights. Through interactive sessions, clinical case analysis, Naadi Pariksha demonstrations, simulation-based learning, and practical applications in health and disease evaluation, students develop the ability to apply Kriya Sharira principles in real-world scenarios. Special emphasis is placed on Agni and Ama, psychosomatic interactions, chronobiology (Dinacharya, Ritucharya), and understanding Prakriti typing for predictive, personalized, and preventive healthcare—thus aligning Ayurvedic physiology with modern global health challenges.

This program also prepares students for interdisciplinary engagement and research. By incorporating modern methodologies for assessing physiological parameters alongside Ayurvedic diagnostics, students are encouraged to develop evidence-informed approaches. Opportunities in academic leadership, integrative clinical practice, pharmaceutical and wellness industries, and global consultancy are integral pathways. Ultimately, this curriculum aspires to create scholars who can carry forward the legacy of Kriya Sharira not just as a subject of study, but as a living science that contributes meaningfully to the understanding of life, health, and holistic well-being across cultures and systems.

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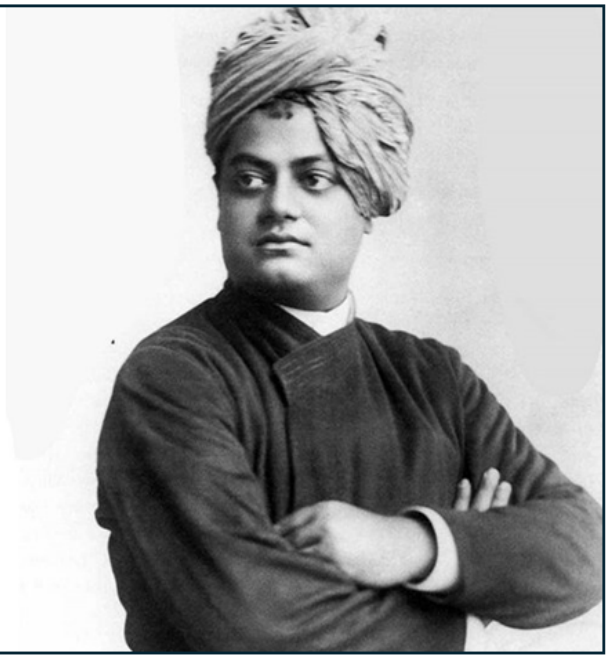
We want that education by which **character** is formed, **strength of mind** is increased, the **intellect** is expanded, and by which one can **stand on one's own feet.**

-Swami Vivekananda



NCISM

(NATIONAL COMMISSION FOR INDIAN SYSTEM OF MEDICINE)

Curriculum MD/ MS Ayurveda

Kriya Sharira (AYPG-KS)

Summary & Credit Framework

Semester III-VI

Module Number & Name	Credits	Notional Learning Hours	Maximum Marks of assessment of modules (Formative Assessment)
Semester No : 3			
Paper No : 1 (DOSHA EVAM PRAKRITI VIJNANIYAM)			
M1 Vata Dosha	2	60	50
M2 Pitta Dosha	2	60	50
Paper No : 2 (DHATU EVAM MALA VIJNANIYAM)			
M9 Dhatu Poshana Nyaya	1	30	25
M10 Dhatu	3	90	75
Paper No : 3 (KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM)			
M17 Aahara and Nutrition	2	60	50
M18 Aahara Vidhi Visheshaytana & Aahara Vidhi Vidhana	2	60	50
Paper No : 4 (SATVA ATMA INDRIYAADI VIJNANIYAM)			
M25 Dharaniya and Adharaniya Vega	2	60	50
M26 Indriya	2	60	50
Total	**16**	**480**	**400**
Semester No : 4			
Paper No : 1 (DOSHA EVAM PRAKRITI VIJNANIYAM)			
M3 Kapha Dosha	2	60	50
M4 Neuro-Immuno-Endocrinology	2	60	50

Paper No : 2 (DHATU EVAM MALA VIJNANIYAM)			
M11 Dhatu Saara	3	90	75
M12 Oja & Bala	1	30	25
Paper No : 3 (KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM)			
M19 Koshtang- Avayaya Parichaya Part -1	1	30	25
M20 Koshtang- Avayaya Parichaya Part -2	3	90	75
Paper No : 4 (SATVA ATMA INDRIYAADI VIJNANIYAM)			
M27 Manas and Atma	3	90	75
M28 Buddhi	1	30	25
Total	**16**	**480**	**400**
Semester No : 5			
Paper No : 1 (DOSHA EVAM PRAKRITI VIJNANIYAM)			
M5 Prakriti	3	90	75
M6 Body Patterns & Personality	1	30	25
Paper No : 2 (DHATU EVAM MALA VIJNANIYAM)			
M13 Upadhatu – Part I (Stanya, Artava & Tvak)	2	60	50
M14 Upadhatu – Part II (Kandara adi)	2	60	50
Paper No : 3 (KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM)			
M21 Agni and Koshta	2	60	50
M22 Grahani and Pittadhara Kala	2	60	50
Paper No : 4 (SATVA ATMA INDRIYAADI VIJNANIYAM)			
M29 Dhruti, Smruti	2	60	50
M30 Nidra, Svapna	2	60	50
Total	**16**	**480**	**400**
Semester No : 6			
Paper No : 1 (DOSHA EVAM PRAKRITI VIJNANIYAM)			
M7 Manasika Prakriti	2	60	50
M8 Bija, Bija Bhaga, Bija Bhaga Avayava	2	60	50
Paper No : 2 (DHATU EVAM MALA VIJNANIYAM)			
M15 Mala	3	90	75
M16 Dhatumala	1	30	25
Paper No : 3 (KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM)			

M23 Dasha Pranayatana, Hrudaya and Agni	2	60	50
M24 Ayu and Agni	2	60	50
Paper No : 4 (SATVA ATMA INDRIYAADI VIJNANIYAM)			
M31 Ashtavidha, Dashavidha Pariksha	2	60	50
M32 Swathya Rakshana: Preventive Physiology	2	60	50
Total	**16**	**480**	**400**
Grand Total	**64**	**1920**	**1600**

Credit frame work

AYPG-KS consists of 32 modules totaling 64 credits, which correspond to 1920 Notional Learning Hours. Each credit comprises 30 hours of learner engagement, distributed across teaching, practical, and experiential learning in the ratio of 1:2:3. Accordingly, one credit includes 5 hours of teaching, 10 hours of practical training, 13 hours of experiential learning, and 2 hours allocated for modular assessment, which carries 25 marks.

Important Note: The User Manual MD/MS Ayurveda is a valuable resource that provides comprehensive details about the curriculum file. It will help you understand and implement the curriculum. Please read the User Manual before reading this curriculum file. The curriculum file has been thoroughly reviewed and verified for accuracy. However, if you find any discrepancies, please note that the contents related to the MSE should be considered authentic. Each paper has 16 credits and each semester covers 16 credits across 4 papers. In case of difficulty and questions regarding the curriculum, write to syllabus24ayu@ncismindia.org.

Credit Analysis Overview					
Sem/Paper	**Paper No 1**	**Paper No 2**	**Paper No 3**	**Paper No 4**	**Credits**
Semester 3	M-1 | 2 Crs M-2 | 2 Crs	M-9 | 1 Crs M-10 | 3 Crs	M-17 | 2 Crs M-18 | 2 Crs	M-25 | 2 Crs M-26 | 2 Crs	**16**
Semester 4	M-4 | 2 Crs M-3 | 2 Crs	M-11 | 3 Crs M-12 | 1 Crs	M-19 | 1 Crs M-20 | 3 Crs	M-27 | 3 Crs M-28 | 1 Crs	**16**
Semester 5	M-5 | 3 Crs M-6 | 1 Crs	M-13 | 2 Crs M-14 | 2 Crs	M-21 | 2 Crs M-22 | 2 Crs	M-29 | 2 Crs M-30 | 2 Crs	**16**
Semester 6	M-7 | 2 Crs M-8 | 2 Crs	M-15 | 3 Crs M-16 | 1 Crs	M-23 | 2 Crs M-24 | 2 Crs	M-31 | 2 Crs M-32 | 2 Crs	**16**
Credits	**16**	**16**	**16**	**16**	**64**

Semester VI University examination					
Theory			Practical*		
Paper	Marks	Total	Practical Heads	Marks	Total

Paper -1	100	400	Long case or procedure/Major practical as applicable	100	400
			Short case or procedure/Minor practical	50	
Paper -2	100		Spotters	50	
			Assessing teaching ability	20	
Paper -3	100		Assessing presentation skills	20	
			Viva (4 examiners: 20 marks/each examiner)	80	
Paper -4	100		Dissertation Viva	40	
			Logbook (Activity record)	20	
			Practical/Clinical Record	20	
Semester VI University examination – 800 Marks					

* Details in 6H table

Course Code and Name of Course

Course code	Name of Course
AYPG-KS	Kriya Sharira (Human Physiology)

Table 1 : Course learning outcomes and mapped Program learning outcomes

CO No	A1 Course learning Outcomes (CO) AYPG-KS At the end of the course AYPG-KS, the students should be able to-	B1 Course learning Outcomes mapped with program learning outcomes.
CO1	Analyze, apply, demonstrate the physiological and clinical significance of fundamental principles of Kriya Sharir, integrated with essential aspects of human physiology and biochemistry.	PO1,PO3
CO2	Conducts Prakriti, Kostha, Sara, Agni adi Pariksha in Swastha and Aatura precisely at OPD, IPD, research Level; gives appropriate diet, life style modification; obtains clinical skills, entrepreneurship qualities to establish, run specialty based centers, clinics on above parameters.	PO2,PO4,PO5
CO3	Analyze, interpret modern physiological concepts, integrating recent updates to enhance conceptual understanding, improve clinical and research skills.	PO1,PO3,PO7
CO4	Utilize various objective parameters, investigative knowledge to distinguish between Prakrita and Vikrita, thereby enhancing diagnostic and therapeutic skills in clinical practice.	PO2,PO3,PO8
CO5	Conduct clinical examinations and experiments, interpret results, and understand the applied physiology involved, justifying its relevance in the specialty. Apply this foundational knowledge to pursue advanced studies and excel in academics & professional practice.	PO3,PO4,PO7,PO8
CO6	Exhibit a solid conceptual understanding, commitment to evidence-based research, recognizing the strengths and limitations of the concepts taught and observed.	PO3,PO5
CO7	Develop academic and administrative skills to establish departmental laboratories and collaborate on research with allied sciences, clinical sciences, and biomedical engineering.	PO6,PO7,PO8
CO8	Demonstrate ethical behaviour, effective verbal and written communication regarding physiology in Ayurveda and modern physiology. Prepare to contribute effectively as a member of teaching, administrative and research teams.	PO4,PO6

Table 2 : Course contents (Modules- Credits and Notional Learning Hours)

Paper No : 1 (DOSHA EVAM PRAKRITI VIJNANIYAM)						
Semester No : 3						
2A Module Number	**2B Modules & units**	**2C Number of Credits**	**Notional Learning hours**			
			2D Lectures	**2E Practical Training**	**2F Experiential Learning including Modular Assessment**	**2G Total**
1	**M-1 Vata Dosha** **This module covers comprehensive and detailed approach on functional and applied aspects of Vata Dosha on the basis of Sthana, Guna, Karma, Kshaya-Vriddhi and Nanatmaja Vikara description.It includes the challenges to be addressed during the evaluation of physiological functions related to Vata Dosha, along with the establishment of its Gunas using various subjective and advanced objective parameters. It includes physiological perspective of Prakrita & Vaikrita Karma of Vata with its types** • **M1U1 Physiological reflections of Vata Dosha** • Role of Vata Dosha in Utpatti, Sthiti, and Laya of life. • Concept of Atmarupa (self-nature) and Swabhavalinga (inherent qualities). • Classification of *Guna* & their physiological reflections (e.g. diffusion, neurotransmission etc.) • **M1U2 Functional anatomy of Vata Sthana**	2	10	20	30	60

- Biophysical relevance of Vata Sthana.
- Relavant functional anatomy of Vata Sthana: Like large intestine, pelvis, ear etc.
- Dosha Sanchaya in relation to systemic physiology

• **M1U3 Functional spectrum and subtypes of Vata Dosha**

- Differentiation between the Prakrita and Vaikrita functions of Vata using Advanced parameters
- Pancha Vidha and Dasha Vidha Vata Dosha with advanced system physiology
- Applied physiology of Pacha Vidha and Dasha Vidha Vata Dosha

• **M1U4 Diet and lifestyle factors influencing Vata Dosha**

- Vata-Vriddhikar and Kshayakar Aahara- Vihara
- Physiological modulation of Vata Dosha by Aahara and Vihara
- Clinical significance of Aahara and Vihara of Vata Dosha

• **M1U5 Clinical manifestations of Vata Dosha**

- Symptoms and signs of Vata Vriddhi
- Symptoms and signs of Vata Kshaya
- Pathophysiology of Vata Vriddhi & Vata Kshaya

• **M1U6 Technological integration and advancements in Vata assessment**

- Instruments to assess Vata Guna and Karma
- Vata Guna and Karma & its integrative perspective pulse wave analysis, neurophysiological tests, gait analysis, autonomic response tests, HRV (Heart Rate Variability), EMG, etc.
- Research Updates on Vata Guna and Karma

2	**M-2 Pitta Dosha** **This module covers comprehensive and detailed approach on Applied and Functional aspects of Pitta Dosha on the basis of Sthana, Guna, Karma, Kshaya-Vriddhi and Nanatmaja Vikara description.It includes the challenges to be addressed during the evaluation of physiological functions related to Pitta Dosha, along with the establishment of its Gunas using various subjective and advanced objective parameters. It includes physiological perspective of Prakrita & Vaikrita Karma of Pitta with its types using advanced parameters** • **M2U1 Physiological reflections of Pitta Dosha** ◦ Role of Pitta Dosha in Utpatti, Sthiti, and Laya of life. ◦ Concept of Atmarupa (self-nature) and Swabhavalinga (inherent qualities). ◦ Classification of Guna & their physiological reflections (e.g. transformation, digestion, metabolism etc.) • **M2U2 Functional anatomy of Pitta Sthana** ◦ Biophysical relevance of Pitta Sthana. ◦ Relavant functional anatomy of Pitta Sthana: Like Umblical region, Stomach etc. ◦ Dosha Sanchaya in relation to systemic physiology	2	10	20	30	60

- **M2U3 Functional spectrum and types of Pitta Dosha**
    - Differentiation between the Prakrita and Vaikrita functions of Pitta using advanced parameters
    - Pancha Vidha Pitta Dosha with systemic physiology
    - Applied physiology of Pancha Vidha Pitta Dosha
- **M2U4 Diet and lifestyle factors influencing Pitta Dosha**
    - Pitta-Vriddhikar and kshayakar Aahara- Vihara
    - Physiological modulation of Pitta Dosha by Aahara and Vihara
    - Clinical significance of Aahara and Vihara on Pitta dosha
- **M2U5 Clinical manifestations of Pitta Dosha**
    - Symptoms and signs of Pitta Vriddhi
    - Symptoms and signs of Pitta Kshaya
    - Pathophysiological of PittaVriddhi & Pitta Kshaya
- **M2U6 Technological integration and advancements in Pitta assessment**
    - Instruments to assess Pitta Guna and Karma
    - Pitta Guna and Karma & its integrative perspective Thermal imaging (body heat), Enzyme and hormone assays (liver, thyroid, pancreas), HRV (Heart Rate Variability) for stress-metabolic interactions, Optical coherence tomography (OCT) and other vision assessment tools, etc.
    - Research Updates on Pitta Guna and Karma

		4	**20**	**40**	**60**	**120**
Semester No : 4						
2A Module Number	**2B Modules & units**	**2C Number of Credits**	**Notional Learning hours**			
			2D Lectures	**2E Practical Training**	**2F Experiential Learning including Modular Assessment**	**2G Total**
3	**M-3 Kapha Dosha** **This module covers comprehensive and detailed approach on functional and applied aspects of Kapha Dosha on the basis of Sthana, Guna, Karma, Kshaya-Vriddhi and Nanatmaja Vikara description. It includes the challenges to be addressed during the evaluation of physiological functions related to Kapha Dosha, along with the establishment of its Gunas using various subjective and objective parameters. It includes physiological perspective of Prakrita & Vaikrita Karma of Kapha with its types.** • **M3U1 Physiological reflections of Kapha Dosha** ◦ Role of Kapha Dosha in Utpatti, Sthiti, and Laya of life. ◦ Concept of Atmarupa (self-nature) and Swabhavalinga (inherent qualities). ◦ Classification of Guna & their physiological reflections (e.g.	2	10	20	30	60

compactness, immunity etc.)

- **M3U2 Functional anatomy of Kapha Sthana**
    - Biophysical relevance of Kapha Sthana.
    - Relavant functional anatomy of Kapha Sthana: Like Thorax, throat etc.
    - Dosha Sanchaya in relation to systemic physiology
- **M3U3 Functional spectrum and subtypes of Kapha Dosha**
    - Differentiation between the Prakrita and Vaikrita functions of Kapha using advanced parametrs
    - Pancha Vidha Kapha Dosha with systemic physiology
    - Applied physiology of Pancha Vidha Kapha Dosha
- **M3U4 Diet and lifestyle factors influencing Kapha Dosha**
    - Kapha-Vriddhikar and Kshayakar Aahara- Vihara
    - Physiological modulation of Kapha Dosha by Aahara and Vihara
    - Clinical significance of Aahara and Vihara on Kapha Dosha
- **M3U5 Clinical manifestations of Kapha Dosha**
    - Symptoms and signs of Kapha Vriddhi
    - Symptoms and signs of Kapha Kshaya
    - Pathophysiological aspect of Kapha Vriddhi & Kapha Kshaya
- **M3U6 Technological integration and advancements in Kapha assessment**
    - Instruments to assess Kapha Guna and Karma
    - Kapha Guna and Karma & its integrative perspective Pulmonary

	function tests (mucus production, surfactant activity), CSF analysis, Imaging of joint lubrication (MRI of synovial spaces), Biomarkers of anabolic state: GH, IGF-1, lipid panels, Body composition analysis (fat mass, muscle mass, water retention) etc ◦ Research Updates on Kapha Guna and Karma					
4	**M-4 Neuro-Immuno-Endocrinology** **This module covers structural, functional aspects, cellular & Molecular mediators of Neuro-immuno-endocrinology. It includes Hypothalamic Pituitary Axis, Immune modulation. It includes Bidirectional communication pathways, stress, Inflammation & immune regulation, Research Perspectives of Neuro-immuno-endocrinology** • **M4U1 Structural & Functional overview of Neuro-immuno-endocrinology** • Nervous System: CNS, ANS, Enteric Nervous System • Endocrine System: Major Glands and Hormones • Immune System: Innate and Adaptive Immunity • Organs of Neuro-Immuno-Endocrine Interaction • **M4U2 Cellular and Molecular Mediators** • Neurotransmitters and Neuropeptides • Hormones Involved in Immune Regulation • Cytokines and Chemokines • Receptors and Signaling Pathways	2	10	20	30	60

	• **M4U3 Hypothalamic-Pituitary Axis and Immune Modulation** • Hypothalamic-Pituitary-Adrenal (HPA) Axis in Stress and Immunity • Feedback Mechanisms • Role of Glucocorticoids and Catecholamines • **M4U4 Bidirectional Communication Pathways** • Neuro-immune Crosstalk • Endocrine-immune Interactions • Neuroendocrine Reflex Arcs • Vagus Nerve and Immune Signaling • **M4U5 Stress, Inflammation, and Immune Regulation** • Acute and Chronic Stress Responses • Inflammatory Pathways and Stress Hormones • Psychoneuroimmunology • **M4U6 Research Perspectives of Neuro-immuno-endocrinology** • Pharmacological Modulation of Neuro-Immuno-Endocrine Pathways • Mind-Body Medicine and Yoga in Immune Modulation • Future Trends and Biomarkers					
		4	**20**	**40**	**60**	**120**
Semester No : 5						

2A Module Number	2B Modules & units	2C Number of Credits	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
5	**M-5 Prakriti** **This module covers comprehensive and detailed approach on the concept of Sharira Prakriti on the basis of Guna. It includes involvement of different objective parameters in Prakriti Pariksha. It includes clinical applicability Bhautika Prakriti, Anguli Pariksha; application of Prakriti Pariksha in prevention of disease & promotion of health.** • **M5U1 Basics of Prakriti** Physiological & clinical significance of derivation of Prakriti • Definition of Prakriti • Synonyms of Prakriti • Factors influencing Prakriti Determination including Jatyadi Prakriti • **M5U2 Vata Prakriti** • Vata Prakriti Lakshana based on attributes • Biorhythms in relation to certain features	3	15	30	45	90

- Significance of psychological features mentioned among the list of features
- Applied physiological aspects

• **M5U3 Pitta Prakriti**

- Pitta Prakriti Lakshana based on attributes
- Biorhythms in relation to certain features
- Significance of psychological features mentioned among the list of features
- Applied physiological aspects

• **M5U4 Kapha Prakriti**

- Kapha Prakriti Lakshana based on attributes
- Biorhythms in relation to certain features
- Significance of psychological features mentioned among the list of features
- Applied physiological aspects

• **M5U5 Prakriti Pariksha**

- Prakriti Pariksha based on attributes
- Biorhythms in relation to certain features
- Significance of subjective & objective parameters in assessment
- Applied physiological aspects

• **M5U6 Bhautika Prakriti**

- Bhautika Prakriti Lakshana
- Biorhythms in relation to certain feature
- Applied physiological aspects

• **M5U7 Anukatva, Diet & Dinacharya Chart**

	• Anukatva of Prakriti • Diet & Dinacharya Chart based on Prakriti • Applied physiological aspects					
6	**M-6 Body Patterns & Personality** **This module covers a detailed approach on the concept of body patterns & personality. It includes challenges to be faced and overcome during assessment of body patterns & Personality. It includes clinical applicability of brain activity models etc.** • **M6U1 Body Patterns** • Different types of Body patterns • Physiological significance of Body patterns • Clinical significance of Body patterns • **M6U2 Personality & Personality traits** • Different types of Personality, Personality traits • Physiological significance of Personality, Personality traits • Clinical significance of Personality, Personality traits • **M6U3 Brain activity model**	1	5	10	15	30

	• Different types of Brain activity models • Physiological significance of Brain activity models etc • Clinical significance of Brain activity models etc					
		4	**20**	**40**	**60**	**120**

Semester No : 6

2A Module Number	**2B Modules & units**	**2C Number of Credits**	**Notional Learning hours**			
			2D Lectures	**2E Practical Training**	**2F Experiential Learning including Modular Assessment**	**2G Total**
7	**M-7 Manasika Prakriti** **This module covers comprehensive and detailed approach on the concept of Manasika Prakriti. It includes challenges during Prakriti Pariksha and involvement of Psycho-Somatic relation in perspective of Manasika Prakriti .It even includes clinical applicability of Personality and Personality Traits.** • **M7U1 Basics of Manasika Prakriti** • Basic understanding of Mansika Prakriti • Domains of Manasika Prakriti Classification • Applied & Clinical significance of Manasika Prakriti	2	10	20	30	60

	• **M7U2 Satvika Kaaya** • Types of Satvika Kaaya • Physiological & clinical significance of classification • Psycho-Somatic relation • **M7U3 Rajasika Kaaya** • Types of Rajasika Kaaya • Physiological & clinical significance of classification • Psycho-Somatic relation • **M7U4 Tamasika Kaaya** • Types of Tamasika Kaaya • Physiological & clinical significance of classification • Psycho-Somatic relation • **M7U5 Recent advances and research works in Manasika Prakriti** • Recent updates and research works in the field of Manasa Prakriti • Role of Manasa Prakriti in maintaining health • Role of Manasa Prakriti in disease manifestation					
8	**M-8 Bija, Bija Bhaga, Bija Bhaga Avayava** **This module covers comprehensive and detailed approach on the applied aspects**	2	10	20	30	60

of Bija, Bija Bhaga, Bija Bhaga Avayava Pariksha on the basis description mentioned in commentary.

- **M8U1 Bija**
  - Physiological Significance of Bija
  - Clinical Significance of Bija
- **M8U2 Bija Bhaga**
  - Physiological Significance of Bija Bhaga
  - Clinical Significance of Bija Bhaga
- **M8U3 Bhija bhaga avayava**
  - Physiological Significance of Bija Bhaga avayava
  - Clinical Significance of Bija Bhaga avayava
- **M8U4 Genetic Disorder**
  - Sngle-gene disorders
  - Chromosomal disorders
  - Multifactorial disorders
  - Mitochondrial Disorders etc
- **M8U5 Recent advances & research works**
  - Recent updates and research works in the field of Bija, Bijabhaga, Bijabhaga Avayava
  - Role of Bija, Bijabhaga, Bijabhaga Avayava in maintaining health
  - Role of Bija, Bijabhaga, Bijabhaga Avayava in understanding of pathophysiology of diseases.

		4	**20**	**40**	**60**	**120**
		16	**80**	**160**	**240**	**480**

Paper No : 2 (DHATU EVAM MALA VIJNANIYAM)

Semester No : 3

2A Module Number	**2B Modules & units**	**2C Number of Credits**	**Notional Learning hours**			
			2D Lectures	**2E Practical Training**	**2F Experiential Learning including Modular Assessment**	**2G Total**
9	**M-9 Dhatu Poshana Nyaya** **This module covers a comprehensive & detailed approach to the applied & functional aspects of Dhatuposhana Nyaya & Associated concepts of contemporary science, it includes clinical applicability** • **M9U1 Basics of Dhatu Poshana Nyaya** • Physiological perspective of different Dhatu Poshana Theories • Applied physiology of different Dhatu Poshana Theories • **M9U2 Factors affecting Dhatu Poshana** • Influence of Agni, Prakriti, on Dhatu Poshana	1	5	10	15	30

	• Influence of Srotas, Sharira Vriddhikara Bhava, on Dhatu Poshana • Influence of Life Style, Nutritional Status, etc on Dhatu Poshana • **M9U3 Applied Physiology of Dhatu Poshana** • Role of Rasayan therapy on Dhatuposhana • Metabolic Disorders associated with Dhatuposhana • Nutritional Deficiency associated with Dhatuposhana • **M9U4 Tissue formation** • Tissue formation, • Differentiation,regeneration • Mechanisms of Cell adaptation • **M9U5 Recent Updates & advances** • Recent update and research works in the field of Dhatu Poshana Nyaya, • Role in maintaining health and in understanding of pathophysiology realted to Dhatu and Dhatu Poshana Nyaya.					
10	**M-10 Dhatu** **This module covers a comprehensive & detailed approach to the applied & functional aspects of Dhatus based on Sthana, Guna, Karma, Kshaya- Vriddhi. It includes Associated concepts of contemporary science, also includes pathophysiology of Dhatu Pradoshaja Vikara** • **M10U1 Rasa Dhatu**	3	15	30	45	90

- Physiological and clinical significance of Panchabhautikatva , location, properties ,Pramana,functions & formation (intrauterine and extrauterine) of Rasa Dhatu
- Rasa Dhatu in terms of Microcirculation and the Lymphatic System: Capillary Fluid Exchange, Interstitial Fluid, and Lymph Flow.
- Pathophysiology of Rasa Dhatu-Kshaya & Vriddhi Lakshana

• **M10U2 Rakta Dhatu**

- Physiological and clinical significance of location, properties ,Pramana,functions & formation of Rakta Dhatu
- Rakta Dhatu in terms of Red Blood Cell Indices etc
- Pathophysiology of Rakta Dhatu -Kshaya-Vriddhi, Assess Rakta Kshaya Lakshana in patients of Anaemia

• **M10U3 Mamsa Dhatu**

- Physiological and clinical significance of location, properties ,Pramana,functions & formation of Mamsa Dhatu.
- Mamsa Dhatu in terms of muscle physiology-Skeletal Muscle Contraction -Molecular Mechanism ,Electromyography (EMG) Muscle Contraction
- Pathophysiology of Mamsa Dhatu-Assessment of Kshaya-Vriddhi.

• **M10U4 Meda Dhatu**

- Physiological and clinical significance of location, properties,Pramana, functions & formation of Meda Dhatu
- Meda Dhatu in terms of Adipose Tissue etc
- Pathophysiology of Meda Dhatu- Assessment of Kshaya-Vriddhi

	• **M10U5 Asthi Dhatu** • Physiological and clinical significance of location, properties,Pramana, functions & formation of Asthi Dhatu • Asthi Dhatu in terms of physiology of bone, • Pathophysiology of Asthi Dhatu-Assessment of Kshaya-Vriddhi • **M10U6 Majja Dhatu** • Physiological and clinical significance of location, properties,Pramana, functions & formation of Majja Dhatu • Majja Dhatu in terms of Microenvironment of Bone Marrow etc • Pathophysiology of Majja Dhatu-Assessment of Kshaya-Vriddhi • **M10U7 Shukra Dhatu** • Physiological and clinical significance of location, properties,Pramana, functions & formation of Shukra Dhatu • Shukra Dhatu in terms of Male & Female Sex Hormones,Local Hormones,Basics of Invitro fertilization,Physiological Basis of Contraception. • Pathophysiology of Shukra Dhatu - Assessment of Kshaya-Vriddhi • **M10U8 Applied Physiology of Dhatu** • Pathophysiology of Dhatu Pradoshaja Vikara • Dhatu Pradoshaja Vikara in terms of pathophysiology • Recent updates & research works on Dhatu					
		4	**20**	**40**	**60**	**120**

Semester No : 4						
2A Module Number	**2B Modules & units**	**2C Number of Credits**	**Notional Learning hours**			
			2D Lectures	**2E Practical Training**	**2F Experiential Learning including Modular Assessment**	**2G Total**
11	**M-11 Dhatu Saara** **This module covers comprehensive & detailed approach to Dhatusaarata, It includes Physiological perspective of Astatvidhasaara & their applicability,also includes applicability of Saara Pariksha** • **M11U1 Dhatu Saara** • Comprehensive physiological perspective of Dhatusaarta. • Saara assessment using advanced techniques • Hematology analyser, EMG, BMD, multiple parameter skin analyser (derma scan), Sebumeter, moisture meter, pH meter, Semen analyser etc) • **M11U2 Rasa Saara** • Physiological perspective of Rasa Saara Pariksha • Saara assessment using advanced techniques • Clinical Applicability by using multiple parameter skin analyser (derma	3	15	30	45	90

scan)., Sebometer, Moisuremetre etc.

• **M11U3 Rakta Saara**

- Physiological perspective of Rakta Saara Pariksha
- Saara assessment using advanced techniques
- Clinical Applicability using Hematology analyser, multiple parameter skin analyser (derma scan) etc

• **M11U4 Mamsa Saara**

- Physiological perspective of Mamsa Saara Pariksha
- Saara assessment using advanced techniques
- Clinical Applicability using CPET (Cardio-pulmonary exercise test machine and Body plethysmograph etc.

• **M11U5 Meda Saara**

- Physiological perspective of Meda Saara Pariksha
- Saara assessment using advanced techniques
- Clinical Applicability using 3-DXA BMD, BMI, Total Body Fat etc.

• **M11U6 Asthi Saara**

- Physiological perspective of Asthi Saara Pariksha
- Saara assessment using advanced techniques
- Clinical Applicability using 3-DXA BMD, using CPET (Cardio-pulmonary exercise test machine) and Body plethysmograph etc.

• **M11U7 Majja Saara**

- Physiological perspective of Majja Saara Pariksha

	• Saara assessment using advanced techniques • Clinical Applicability 3-DXA BMD, CPET (Cardio-pulmonary exercise test machine) etc. • **M11U8 Shukra Saara** • Physiological perspective of Shukra Saara Pariksha • Saara assessment using advanced techniques • Clinical Applicability with subjective, objective parameters using Complete Semen analyser & Hormonal essay. • **M11U9 Satva & Sarva Saara** • Physiological perspective of Satva & Sarva Saara Pariksha • Clinical Applicability with subjective, objective parameters					
12	**M-12 Oja & Bala** **This module covers a comprehensive & detailed approach to Formation, Appearance, Classification, Functions,Applied Physiology of Oja, Bala with clinical application & associated concepts of contemporaryscience** • **M12U1 Applied Physiology of Oja** • Comprehensive physiological perspective and clinical significance of location, appearance, properties, classification, Pramana of Oja • Functions & formation of Oja (Intra & Extra Uterine), Critical analysis- Oja -Mala or Updahatu	1	5	10	15	30

	• **M12U2 Pathophysiology of Oja** • Ojakshaya & Ojovyapad – different Stages, manifestations & assessments, • Pathophysiology of Ojakshaya Diseases - Pandu, Madhumeha (Diabetes), etc. • **M12U3 Advanced Physiological Perspective of Oja** • Specific Attributes of B - Lymphocytes, Antibodies- Mechanisms of Actions • Immunoregulation - Autoimmunity, HLA, Immunodeficiency, Tolerance of the Acquired Immunity - Autoimmune Diseases • Immunological Techniques - Immunoassays, Immunodiagnostics • **M12U4 Oja, Bala and Vyadhikshamtva** • Applicability ,Differentiate between Oja & Bala • Types of Vyadhikshamtva ,Assessment of Bala & Bala Vriddhikara Bhava • **M12U5 Recent advances & research works on Oja & Bala** • Recent update and research works in the field of Ojas & Bala • Role of Oja & Bala in maintaining health and causing of disease					
		4	**20**	**40**	**60**	**120**
Semester No : 5						
2A Module Number	**2B Modules & units**	**2C Number of Credi**	**Notional Learning hours**			

		ts	2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
13	**M-13 Upadhatu – Part I (Stanya, Artava & Tvak)** **This module covers a comprehensive approach to the formation, appearance, classification, functions, & applied physiology of Updhatu-Stanya, Artava & Tvak & associated concepts of contemporary science** • **M13U1 Stanya** • Overview of Stanya -formation, nourishment, functions, Kshaya, Vriddhi, and Stanya Pariksha. • Stanya Updhatu in terms of Breast Milk Synthesis, Secretion & Ejection (Lactogenesis & Lactation) • Review of Research Publications • **M13U2 Artava** • Physiological perspective of Updhatu Artava , Pathophysiology of Artava Vriddhi & Kshaya, Correlation of Artavapravrutti and Artavanivrutti • Artava in terms of reproductive physiology- Menstrual Cycle, Hormonal regulation, Fertilization, Implantation, Fetoplacental Unit, Pathophysiology • Review of Research Publications • **M13U3 Tvak**	2	10	20	30	60

	• Physiological perspective of Tvak ,Functional Anatomy, Pathophysiology of Tvak with it's clinical Significance • Tvak Updhatu in terms of Applied physiology of different layers of Tvak,Varna, Vaivarnyata etc • Review of Research publications					
14	**M-14 Upadhatu – Part II (Kandara adi)** **This module covers a comprehensive & detailed approach to the Formation, Appearance, Classification, Functions & Applied Physiology of Updhatu-Kandara, Sira, Vasa, Snayu, Sandhi, Danta, Kesha, Roma with clinical application & associated concepts of contemporary science.** • **M14U1 Sira & Kandara** • Physiological perspective of Upadhatu Sira & Kandara-Formation, Appearance,Nourishment , Functions, number of Sira & Kandara • Clinical significance of Sira, Kandara • Review of Research publications of Sira & Kandara • **M14U2 Vasa, Snayu, Sandhi** • Comprehensive physiological perspective of - Updhatu Vasa, Snayu, Sandhi-Formation, Appearance, Nourishment , Functions, Pramana of Vasa, Snayu,Sandhi • Clinical significance of Vasa, Snayu, Sandhi • Review of Research publications of Vasa, Snayu,Sandhi • **M14U3 Danta, Kesha, Roma**	2	10	20	30	60

	• Comprehensive physiological perspective of - Updhatu Danta, Kesha, Roma Formation, Appearance,Nourishment , Functions,Pramana of Danta, Kesha, Roma • Clinical significance of Danta, Kesha, Roma • Review of Research publications of Danta, Kesha, Roma					
		4	**20**	**40**	**60**	**120**

Semester No : 6

2A Module Number	2B Modules & units	2C Number of Credits	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
15	**M-15 Mala** **This module covers a comprehensive & detailed approach to the Formation, Appearance, Classification, Functions, & Applied Physiology of Mala-Purisha,Mutra,Sweda with clinical application & associated concepts of contemporary science** • **M15U1 Trimala** • Comprehensive physiological perspective of Mala & Kitta Formation, Appearance, Nourishment , Classification, Functions,Pramana	3	15	30	45	90

	• Clinical significance of Trimala • Review of Research publications • **M15U2 Purisha** • Comprehensive physiological perspective of Purisha - Formation, Appearance, Nourishment , Functions, Pramana • Clinical significance of Purisha • Review of Research publications • **M15U3 Mutra** • Comprehensive physiological perspective of Mutra - Formation, Appearance, Nourishment , Functions, Pramana • Clinical significance of Mutra • Review of Research publications • **M15U4 Sweda** • Comprehensive physiological perspective of Sweda - Formation, Appearance, Nourishment , Functions, Pramana • Clinical significance of Sweda • Review of Research publications					
16	**M-16 Dhatumala** **This module covers a comprehensive & detailed approach to the formation, appearance, classification, functions, & applied physiology of Dhatumala with clinical application & associated concepts of contemporary science**	1	5	10	15	30

- **M16U1 Rasa Dhatu Mala**

  - Formation, Properties, Quantity, Functions, Pramana, Applied aspect Dhatu Mala of Rasa
  - Clinical Significance, Assessment & relevant physiology perspective Perspective of Dhatu Mala of Rasa

- **M16U2 Rakta and Mamsa Dhatu Mala**

  - Formation, Properties, Quantity, Functions, Pramana, Applied aspect of Dhatu Mala of Rakta & Mamsa Dhatu
  - Assessment Clinical Significance, relevant physiology perspective of Dhatu Mala of Rakta & Mamsa Dhatu

- **M16U3 Meda and Asthi Dhatu Mala**

  - Formation, Properties, Quantity, Functions, Applied aspect Dhatu Mala of Meda & Ashti Dhatu
  - Clinical Significance, Assessment & relevant physiology perspective of Dhatu Mala of Meda & Ashti Dhatu

- **M16U4 Majja and Shukra Dhatu Mala**

  - Formation, Properties, Quantity, Functions, Applied aspect Dhatu Mala of Majja & Shukra Dhatu
  - Clinical Significance, Assessment, relevant physiology perspective of Dhatumala of Majja & Shukra Dhatu

- **M16U5 Recent advances in the field of Dhatu Mala**

  - Review of research publications on Dhatu Mala

		4	**20**	**40**	**60**	**120**
		16	**80**	**160**	**240**	**480**

Paper No : 3 (KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM)

Semester No : 3

2A Module Number	**2B Modules & units**	**2C Number of Credits**	**Notional Learning hours**			
			2D Lectures	**2E Practical Training**	**2F Experiential Learning including Modular Assessment**	**2G Total**
17	**M-17 Aahara and Nutrition** **Aahara, is considered one of the three foundational pillars of life in Ayurveda, essential for sustaining vitality.** **Ayurvedic nutrition emphasizes eating in harmony with one's individual constitution (Prakriti) and the environment guided by the six tastes (Shadrasa), the qualities of food (Gunas), its potency (Veerya, post-digestive effect (Vipaka), and unique properties (Prabhava) along with different factors responsible for Aahara Pachan** • **M17U1 Aahariya Dravya Parichay**	2	10	20	30	60

	• Food & Nutrition on the basis of Ayurvedic Principles & Planning diets for different life stages, such as adults, pregnant women, nursing mothers, adolescents, and senior citizens. • Comaprison of Ahariya Dravya & its calorie content • Role of dietary fibre in digestion • Calulation of BMR-Basal Metabolic rate & MET- Metabolic Equivalent of Task calculations according to energy expenditure • **M17U2 Aahara Parinamakara Bhava and Anna Pachana** • Factors responsible for biotransformation, Metabolism of macronutrients and micronutrients. • **M17U3 Introduction to Nutrigenomics** • Basics of Nutrigenomics • Nutrigenomics & other Omics • Genetic variations & Nutrient Metabolism • **M17U4 AI powered nutrition in Ayurveda** • Open Source software for nutrition • Digital/ application based Dietary Planner .					
18	**M-18 Aahara Vidhi Visheshaytana & Aahara Vidhi Vidhana** **This module delves into impact on overall health, through Aahar vidhi Visheshaytan & Aahar Vidhi Vidhana. Module gives an overview of compatible & incompatible food & dietary practice according to Prakruti & Sarata. The**	2	10	20	30	60

module also provides practical guidelines for maintaining optimal digestive health with Healthy dietary Juices & Anupana according to Dosha, Dushya, Prakruti, Saarata, Desh, Kaal, etc.

- **M18U1 Aahara Vidhi Visheshaytana**
  - Overview of Aahara Vidhi Visheshayatana
  - Role of Aahara Vidhi Visheshayatana in maintaing health
- **M18U2 Aahara Vidhi Vidhana**
  - Aahara Vidhi Vidhan and food consumption practices to enhance healthy digestion & metabolism.
  - Food eating habits and personalized dietary modifications
- **M18U3 Dwadasha Aashana Pravichara**
  - Dwadasha Ashana Pravichara
  - Recent Dietary practices.
- **M18U4 Viruddha Aahara**
  - Overview of Viruddha Aahara
  - Viruddha Aahara & its impact of digestion, absortion and metabolism
- **M18U5 Bioavailability and Absorption of Nutrient**

	• Bioavailability and nutritional perspectiveis of Peyadi Dravya or Varga/ Anupana • Bioavailability and a food matrix, liberation, absorption, distribution, metabolism and elimination phases (LADME)					
		4	**20**	**40**	**60**	**120**
Semester No : 4						
2A Module Number	**2B Modules & units**	**2C Number of Credits**	**Notional Learning hours**			
			2D Lectures	**2E Practical Training**	**2F Experiential Learning including Modular Assessment**	**2G Total**
19	**M-19 Koshtang- Avayaya Parichaya Part -1** **This module focuses to the study of Visceral organs associated in digestion & Metabolism. This knowledge can be essential for understanding microscopic structure and It's signicance physiology, and physiological perspective of diseases** • **M19U1 Accessory organs involved in digestive process** • Microscopic structure of accessory organs involved in digestive process e.g. Teeth, Tongue, Glottis, Epiglottis, salivary glands, liver, gallbladder, and pancreas etc in digestion process.	1	5	10	15	30

	• Significance of functional anatomy. • Examination of Oral cavity • **M19U2 Composition, Function Mechanism and regulation of Secretions** • Description of Saliva, gastric, pancreatic, intestinal juices & bile secretions • Interpratation of Lab Reports. • Imaging Technique					
20	**M-20 Koshtang- Avayaya Parichaya Part -2** **This module provides a detailed exploration of the intricate mechanisms of the alimentary canal and it emphasizes their role in health and disease. The module examines the physiological processes of digestion, absorption and the interaction taken place in GIT in the body. This module also covers disorders related to GIT.** • **M20U1 Study of GIT** • Functional anatomy & microscopic structures of GIT . • Histolgy of GIT • **M20U2 Biochemistry of Macronutrients, micronutrient, Bile pigments & salts** • Biochemistry of Macronutrients • Biochemistry of Micronutrient	3	15	30	45	90

- Biochemistry of Bile pigments & salts

• **M20U3 Digestion and metabolism of proteins, fats and carbohydrates**

- Physiology of digestion, absorption & metabolism of proteins.
- Physiology of digestion, absorption & metabolism of fats .
- Physiology of digestion, absorption & metabolism of carbohydrates.

• **M20U4 Applied physiology of gut & Gut Movement**

- Gut motility and motility disorders.
- Clinical Examination of Abdomen

• **M20U5 Gut - Organ axis**

- Gut organ axis in functions with relation to GIT

• **M20U6 Physiological Aspect of disorder of GIT**

- Pathophysiology involed in Swallowing, or Deglutition,
- Pathophysiology involed in Constipation,
- Pathophysiology involed in Diarrhea,
- Pathophysiology involed in Vomiting

		4	**20**	**40**	**60**	**120**
Semester No : 5						
2A Module Number	**2B Modules & units**	**2C Number of Credits**	**Notional Learning hours**			
			2D Lectures	**2E Practical Training**	**2F Experiential Learning including Modular Assessment**	**2G Total**
21	**M-21 Agni and Koshta** **This module provides an in-depth understanding of Agni, Avasthapaka , Nishtapak, Koshta, Ama and applied physiology . It explores the different types of Agni and their analytic roles in digestion, metabolism, and overall health.** • **M21U1 Jatharagni Paka and Digestive physiology** • Mechanism of Jatharagni Paka - sequential transformation of Aahara and its regulation by Agni (digestive fire). • Compare Jatharagni activity with gastric secretion, enzyme action, bile release, and intestinal absorption. • Comparison of Agni Assessment Tools and Digestive Health Questionnaires • Evaluation of Digestive Efficiency	2	10	20	30	60

	• **M21U2 Dhatwagni Paka and Bhutagnipaka** • Sequential Role in Digestion and Metabolism - Jatharagni, Bhutagni, and Dhatwagni in a hierarchical manner for the digestion, transformation, and assimilation of nutrients. • Functional Correlation with Digestive Physiology – Interpret Bhutagni as responsible for elemental processing and Dhatwagni as tissue-specific metabolism, comparable to cellular enzymatic and anabolic processes. • Dhatwagni and Bhutagni in applied physiology. • **M21U3 Avasthapaka and Nishtapaka** • Description of Avasthapaka with related stage wise digestive physiology. • Description of Nishthapaka with related stage wise digestive physiology. • Phases of digestion and nutrient sensing. • **M21U4 Concept of Ama in Agnimandya** • Ama and Agnimandya – formation of Ama and its role in initiating disease. • Ama - oxidative stress, free radical accumulation, and poor metabolic detoxification. • Evaluation of Ama Lakshanas . • **M21U5 Koshta and its variations** • Significance of Koshta with understanding of Digestion Patterns. • Variations in Koshta in GI disorders. • Dietary Practices for effective functioning of Koshta.					
22	**M-22 Grahani and Pittadhara Kala**	2	10	20	30	60

The module explores the concepts and applications of Grahani and Pittadhara Kala. It examines the interactions between gut microbiota and host physiology. Additionally, it delves into the field of metabolomics to analyze metabolites, providing insights into their roles in health and disease.

- **M22U1 Grahani, Pittadhara Kala and role in digestive health**

  - Anatomical and functional understanding of Grahani and Pittadhara Kala with reference to intestine and gut mucosa.
  - Role of Jatharagni and Pittadhara Kala in digestion, absorption, and transformation of food substances and disease manifestation .
  - Evaluation of functional significance of Grahani

- **M22U2 Impact of Takra Prayaga on Grahani and digestion**

  - Effect of prebiotics and probiotics – on growth of healthy gut bacteria, improving the overall function of Grahani
  - Role and impact of Takra on Grahani and digestion.
  - Personalized application of Takra, prebiotic, and probiotic for functioning of Pittadhara Kala

- **M22U3 Applied physiology of Grahani and Pittadhara Kala**

  - Description of applied physiology of Grahani and Pittadhara Kala
  - Impaired Grahani and Pittadhara Kala leading to poor digestion
  - Recognizing compatible and incompatible foods to maintain Grahani functions

- **M22U4 Grahani and Pittadhara Kala with recent advancement of gut microbiota**

	• Gut microbiota in maintaining gut health • Role of fermented food commonly used by individuals with healthy digestion • Recent advances in microbiome research, proteomics, and metabolomics, which highlight personalized gut function and metabolic response.					
		4	**20**	**40**	**60**	**120**

Semester No : 6

2A Module Number	2B Modules & units	2C Number of Credits	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
23	**M-23 Dasha Pranayatana, Hrudaya and Agni** **This module provides a foundational understanding of Pranayatana, Hrudaya, and Hrudayashrita Bhavas, emphasizing their physiological, and clinical significance in Ayurveda and supportive role of Agni** • **M23U1 Dasha Pranayatana and supportive role of Agni** • Role of Dasha Pranas for health with special reference to cardiac health • Measures for enhancing Prana (Pranavardhaka) with support of Agni • Preventive cardiology strategies based on Ayurvedic principles	2	10	20	30	60

	• **M23U2 Arthodasha Mahamuliyam** • Functional anatomy and physiology of Hrudaya • Hrudayshrita Ghataka and its role in physiology • Hrudayaghata Lakshnas and its applied aspects • **M23U3 Hrudaya and Dasha Dhamani** • Synonyms of Hrudaya and its physiology • Differentiate Sira, Dhamani and Srotas • Applied physiology of Sira and Dhamani • **M23U4 Parirakshana of Hrudaya** • Role of lifestyle for Hrudaya Prirakshana • Food and lifestyle for effective Hrudaya Parirakshana • Effective functioning of Prana ,Bala, Brumhana , Ananda, Harshana and Ayana					
24	**M-24 Ayu and Agni** **This module covers the concepts of Ayu, its determinants like Agni and the factors that enhance longevity and quality of life. This module will give insight to factors favorable for Ayu. It also covers application of techniques and strategies to enhance and maintain Ayu.** • **M24U1 Concept of Ayu with evidences of healthy practices** • Definition and Dimensions of Ayu.	2	10	20	30	60

	• Factors Contributing to Long and Healthy Ayu like Agni. • Effectiveness of individual health routines by comparing them with classical Ayurvedic guidelines. • **M24U2 Rasayana and Dhatu Samya concept** • Concept of Rasayan aimed at promoting longevity. • Identification of herbs with rasayana properties and their validated anti-aging properties. • Rasayana therapies to enhance tissue nourishment and rejuvenation. • **M24U3 Ayu, Agni and genetic /programmed aging** • Concept of Ayu as a predetermined lifespan influenced by Prakriti. • Genetic theories of aging. • Relationship between Ayu, Agni and aging. • **M24U4 Ayu and Cellular Senescence** • Ayurvedic concept of Ayu in relation to the biological process of cellular senescence. • Biological process of cellular senescence and its role in aging. • Functional impact of aging with Ayu decline.					
		4	**20**	**40**	**60**	**120**
		16	**80**	**160**	**240**	**480**
Paper No : 4 (SATVA ATMA INDRIYAADI VIJNANIYAM)						
Semester No : 3						

2A Module Number	2B Modules & units	2C Number of Credits	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
25	**M-25 Dharaniya and Adharaniya Vega** **This module covers detailed approach on the concept of Dharaniya and Adharaniya Vega. It includes physiological changes appreciated due to Vega. It includes clinical applicability of Dharaniya and Adharaniya Vega.** • **M25U1 Physiological Perspective of Dharaniya Vega** • The Mana-Sharira Sambandha and its role in regulating urges. • The physiological changes triggered by the suppression or proper management of Dharaniya Vega. • The impact of controlling or releasing these urges on mental health and physical health. • **M25U2 Advanced and Applied Physiology of Dharaniya Vega** • The Doshik manifestation of emotional urges and their physiological outcomes. • The role of emotional intelligence in regulating Dharaniya Vega and its role in maintaining emotional and physical balance. • Clinical case study on how the suppression of natural urges may lead to disease condition	2	10	20	30	60

	• **M25U3 Physiological Perspective of Adharaniya Vega** • The physiological and psychological interplay between Mana-Sharira Sambandha and the suppression of these natural urges. • The potential physical and mental health consequences of ignoring or suppressing Adharaniya Vega. • **M25U4 Advanced and Applied Physiology of Adharaniya Vega** • The significance of natural urges such as hunger, thirst, sleep, and sexual urges, and how their suppression leads to physiological imbalance. • Case study to explain the physiological connection between repressed emotions and different disorders. • Clinical relevance: Understanding the Dharaniya & Adharaniya Vega • **M25U5 Research Works on Dharaniya and Adharaniya Vega** • Advanced studies linking emotional suppression and psycho-neuro-immunology (PNI), exploring the physiological effects of unresolved Vega on the immune system and chronic disease progression. • Research on Ayurvedic treatments to relieve suppressed urges and restore balance. • Recent clinical trials and studies exploring the mind-body connection and role of Vega management in improving health.					
26	**M-26 Indriya** **This module covers inter-relationship between Pancha Jnanendriya, Panchapanchaka, It emphasizes physiological & clinical significance of the verse**	2	10	20	30	60

Sarva Indriyanam Nayanam Pradhanam. It includes physiological & clinical aspects of Jnanendriya. It includes physiological & clinical aspects of Karmendriya.

- **M26U1 Jnanendriya and Panchapanchaka**

  - Indriya: Sensory organs and their physiological roles.
  - Indriyadishtana: The site of action for each sensory organ.
  - Indriyabuddhi: The perception and cognitive processes associated with sensory input.
  - Mahabhuta and Tanmatra: The elemental qualities influencing each sensory function & other aspects of Panchapanchaka

- **M26U2 Physiological and Clinical Aspects of Jnanendriya**

  - Visual system
  - Auditory system
  - Taste perception
  - Olfaction
  - Somatosensory functions

- **M26U3 Sarva Indriyanam Nayanam Pradhanam.**

  - The anatomical and functional primacy of vision among the Indriyas.
  - Applied Physiology related to eye
  - The role of Pratyaksha Pramana in diagnosing disorders and the significance of sight in overall sensory and cognitive health.

- **M26U4 Advanced physiological description of Karmendriya.**

  - The physiological significance of Karmendriya
  - Clinical significance of Karmendriya

	• Physiological Signifiance of Vak Utpatti • **M26U5 Research works on Jnanendriya and Karmendriya** • The latest findings on neuroplasticity and sensory-motor function restoration. • Contemporary clinical trials on Ayurvedic treatments for sensory and motor impairments. • The role of sensory-motor evaluation in early diagnosis of neurodegenerative diseases.					
		4	**20**	**40**	**60**	**120**

Semester No : 4

2A Module Number	2B Modules & units	2C Number of Credits	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including Modular Assessment	2G Total
27	**M-27 Manas and Atma** **This module covers detailed understanding and clinical application of Mana, Domains of Mana. It includes physiology & pathophysiology of Manovaha Srotas & theories related to Mana. It includes Mana in terms of contemporary physiology.**	3	15	30	45	90

This module covers detailed understanding and clinical application of Atma, physiology of death. It includes signs of life, Daivavyapshraya Chikitsa. It includes Atma in terms ofcontemporary physiology.

• **M27U1 Applied Basics of Mana**

Physiology & applied physiology of following points related to Mana

- Definition of Mana
- Location of Mana
- Properties of Mana

• **M27U2 Domains of Mana**

- Manoartha and Manovishaya.
- Physiology of learning, memory, and motivation.
- Learning disabilities, Influence of gadgets on Mana

• **M27U3 Physiology and pathophysiology of Manovaha Srotas**

- Physiology & Pathophysiology of Manovaha Srotas
- Guru Vyadita & Laghu Vyaditha
- Emotions & emotional Intelligence

• **M27U4 Theories related to Mana.**

- Applied physiology of different theories related to Mana
- Deergha Sashkuli Nyaya
- Shatapatra Suchi Vyadhi Nyaya etc

• **M27U5 Physiology of Atma.**

Physiology & applied physiology of following points related to Atma

	• Definition of Atma • Properties of Atma • Characteristic features of Atma • **M27U6 Physiology of death.** Detailed physiology, features and objective parameters for assessment of • Cardiac Death • Brain Death • **M27U7 Signs of life** Detailed physiology different characteristic and objective features to assess • Signs of life • ECG, pupillary reaction, Pulse etc. • Daivavyapashraya Chikitsa.					
28	**M-28 Buddhi** **This module covers comprehensive & detailed approach Buddhi and its Vibhramsha. It includes different types of Pradnyaparadha done in day to day routine, mode of utilization of day today modern gadgets and its influence over Buddhi. It even includes influence of Ayurveda & other therapeutics over Developmental, concentration & attention related disorders.**	1	5	10	15	30

	• **M28U1 Physiological and applied description on Buddhi** • Jnana Utpatti • Vak Utpatti. • The neurological basis of Buddhi • Clinical implications of Buddhi • **M28U2 Advanced Physiological Perspective of Buddhi** • Learning, Intelligence, functional cortical areas • Brain in communication • Language input and output • Clinical relevance • **M28U3 Dravya influencing Buddhi** • Food, medicines, drugs which cross blood brain barrier • Food imparts positive and negative effects on Buddhi • Ayurvedic herbs that enhance Buddhi • **M28U4 Research works on Buddhi** • Recent updates & Research works on Buddhi • Significance of Buddhi in maintaining health and understanding of pathophysiology of disease					

		4	**20**	**40**	**60**	**120**
Semester No : 5						
2A Module Number	**2B Modules & units**	**2C Number of Credits**	**Notional Learning hours**			
			2D Lectures	**2E Practical Training**	**2F Experiential Learning including Modular Assessment**	**2G Total**
29	**M-29 Dhruti, Smruti** **This module covers Dhruti, Smruti and Vibhramsha. It includes influence of Pradnyaparadha, modern gadgets over Dhruti, Smrutii. It even includes influence of Panchakarma, and other therapeutics over Developmental, concentration & attention related disorders.** • **M29U1 Dhi & Dhruti Vibramsha** • Details on Dhruti • Physiology of Motivation, especially involving the limbic system, dopaminergic pathways • Dhruti Vibhramsha , neural physiology and its related physiological aspects with clinical significance • **M29U2 Smruti & Smruti Vibhramsha.** • Smruti and its functional classifications. • Structural and functional insights into memory & its related physiology, their	2	10	20	30	60

	role in transferring thoughts and memory consolidation. • Smruti Vibhramsha and its clinical manifestations • **M29U3 Pradnyaparadha.** • Types of Pradnyaparadha. • Lifestyle-related disorders. • Role of Pradnyaparadha in Tridosha Prakopa & its influence on Dhatu & Mala • **M29U4 Influence of Social networking usage Dhriti, Smruthi** • Social Networking Usage(SNU), Types of Social Networking Usage • Influences of SNU on Dhruti and Smruti					
30	**M-30 Nidra, Svapna** **This module covers advanced insight of Nidra. It includes physiological & clinical significance of Nidra. This module covers advanced insight of Svapna, interpretation of Svapna. It includes physiological & clinical significance of Svapna with evidence. This module covers Physiology, theories & clinical applicability of sleep & dreams. It includes interpretation of dreams.** • **M30U1 Nidra** • Nidra Utpatti • Nidra Bheda, theories of sleep • Sleep cycle and related objective parameters	2	10	20	30	60

	• **M30U2 Physiological significance on Nidra with evidence.** In terms of Ayurveda, Physiology, case scenario, research works. Physiological relation of Nidra with • Sukha, Pusthi, • Bala, Vrushata, • Dyana • **M30U3 Clinical significance of Nidra with evidence.** • In terms of Ayurveda, Physiology, case scenario, research works • Applied Physiological relation of Nidra with Dukha, Karshya, Abala, Kleebata, Dnyana, Adnyana • **M30U4 Svapna** • Svapna Utpatti • Svapna Bheda with Theories of Dream • **M30U5 Interpretation of Svapna.** • Interpretation of svapna and related physiology of dreams. • **M30U6 Research work on Nidra & Svapna** • Recent advances and research work in field of Nidra. • Recent advances and research work in field of Svapna.					

		4	**20**	**40**	**60**	**120**
Semester No : 6						
2A Module Number	**2B Modules & units**	**2C Number of Credits**	**Notional Learning hours**			
			2D Lectures	**2E Practical Training**	**2F Experiential Learning including Modular Assessment**	**2G Total**
31	**M-31 Ashtavidha, Dashavidha Pariksha** **This module covers Ashtavidha, Dashavidha Pariksha integrating Ayurvedic diagnostic principles with contemporary clinical examination techniques. This module emphasizes the physiological significance of Pariksha tools, and their relevance in individualized assessment based on Desha, Kala, Vaya etc.** • **M31U1 Applied Approach on Ashtavidha Pariksha** • Detailed physiological description of : ◦ Nadi – including pulse recording techniques and insights from cardiovascular physiology ◦ Jihwa – clinical signs in systemic illness, oral health markers ◦ Mala & Mutra – relation with digestive and renal physiology; integration of stool and urine analysis ◦ Shabda & Sparsha – relevance in auscultation and palpation; early detection of systemic disorders ◦ Drik – ocular markers of systemic diseases ◦ Akriti – observational diagnosis, constitutional markers	2	10	20	30	60

Role in differentiating Swastha and Aatura individuals

- Examination of Ahara Shakti:
    - Correlation with BMR (basal metabolic rate), digestive efficiency, and nutrient assimilation
- Examination of Vyayama Shakti:
    - Assessment of physical endurance, strength, and exercise tolerance
- Contextual analysis of capacity based on:
    - Physiological conditions (e.g., puberty, pregnancy, geriatrics)
    - Vaya and Kala considerations
    - Relevance in designing diet plans, activity levels, and recovery protocols

• **M31U2 Applied approach on Dashavidha Pariksha**

- Physiological interpretation of:
    - Prakriti, Vikriti, Sara, Samhanana, Pramana, Satmya, Satva, Aahara Shakti, Vyayama Shakti and Vaya
- Use of these parameters in tailoring clinical decisions, such as:
    - Predicting response to therapy
    - Determining dosage and route of administration
- Differentiation of individualized health status and disease susceptibility using integrative and advanced tools.

• **M31U3 Detailed Prakriti, Awastha based Nadi Pariksha.**

- Dosha Anusara, Vaya Anusara, Kala Anusara Nadi Pariksha
- Nadi Pariksha at various stages e.g. Aahara Sevana, Garbhini, Vyayama, Nidra and Ritu etc

• **M31U4 Detailed approach on Samhanana Satmya and Satva Pariksha.**

	• Examination of: ◦ Samhanana as an index of physical strength and immunity ◦ Satmya and its influence on metabolism and tolerance ◦ Satva with emphasis on psycho-physiological assessments • Relevance in different conditions: ◦ Vaya ◦ Kala ◦ Garbhini					
32	**M-32 Swathya Rakshana: Preventive Physiology** **This module covers preventive physiological basis of Swasthya Rakshana (health preservation) through Indian traditions, customs, alternate therapies, and applied contemporary physiology. The module highlights how lifestyle practices influence Sharira, Mana, Indriya, and Satva to prevent chronic disease and promote holistic well-being.** • **M32U1 Indian traditions & customs in maintaining health.** • Role of different Indian tradition and influence of those customs on Doshik and Swasthya status and its role in preventing chronic diseases. • Impact of these customs on Dosha balance, Agni, and immune modulation • Application in preventing lifestyle disorders such as diabetes, obesity, hypertension • Clinical relevance: Behavioral routines as preventive interventions • **M32U2 Physiological influence of Samanya and Vishesha –customs.** • Role of Samanya (customs celebrated all over india)and Vishesha (region	2	10	20	30	60

specific customs) in Indian tradition
- Influence of those customs on Doshik and Swastha status
- Role in preventing chronic diseases

• **M32U3 Alternative therapy influence on Sharira, Mana, Indriya and Satvavajaya Chikitsa.**

- Impact of therapies such as yoga, meditation, music therapy, color therapy, aroma therapy, and Mandala art
- Effect on neurophysiology, hormonal regulation, and emotional stability
- Role in different therapies especially for stress-related and psychosomatic disorders

• **M32U4 Swasthya Rakshana with reference to Aviation, deep sea and Hyperbaric condition**

- Physiological challenges: hypoxia, pressure changes, altered circadian rhythm, fluid-electrolyte shifts
- Strategies for:
    - Pilots and crew (aviation medicine)
    - Divers and submariners (barophysiology)
- Application of preventive methods or tools to maintain Swasthya

• **M32U5 Swsthya Rakshana with reference to Exercise, Sports.**

- Understanding the physiological effects of exertion, oxidative stress, micro-injuries, and recovery cycles
- Role of tailored diet, Rasayana use, mental conditioning, and recovery protocols
- Guidelines based on Vaya, Prakriti, Kala for exercise suitability
- Preventive insights for avoiding sports injuries, overtraining syndrome, and mental burnout

		4	**20**	**40**	**60**	**120**
		16	**80**	**160**	**240**	**480**
		64	**320**	**640**	**960**	**1920**

Table 3 : Modules - Unit - Module Learning Objectives and Session Learning Objective- Notional Learning Hours- Domain-Level- TL Methods

Paper No : 1 DOSHA EVAM PRAKRITI VIJNANIYAM						
Semester No : 3						
3A Course Outcome	**3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)**	**3C Notional learning Hours**	**3D Lecture/ Practical Training/ Experiential Learning**	**3E Domain/ Sub Domain**	**3F Level (Does/Shows how/ Knows how/Know)**	**3G Teaching Learning Methods**
Module 1 : Vata Dosha						
Module Learning Objectives **(At the end of the module, the students should be able to)** ◦ Evaluate different Guna, Sthana, Bheda & Karma of Vata Dosha on the basis of subjective & objective parameters. ◦ Perform & assess functional aspects of Vata Dosha types in Swastha and Aatur using advanced parameters. ◦ Compare Guna and Karma of Vata Dosha on the basis of Kshaya-Vriddhi Lakshanas.						
M 1 Unit 1 Physiological reflections of Vata Dosha • Role of Vata Dosha in Utpatti, Sthiti, and Laya of life. • Concept of Atmarupa (self-nature) and Swabhavalinga (inherent qualities). • Classification of *Guna &* their physiological reflections (e.g. diffusion, neurotransmission etc.) **References:** 1,2,3,4,5,6,7,8,56,77,78,80,84,88,89,90						
3A	**3B**	**3C**	**3D**	**3E**	**3F**	**3G**

CO1,CO3	Analyze role of Vata Dosha in Intrauterine life, Life Process/Extrauterine life	1	Lecture	CC	Knows-how	L&GD
CO1,CO3,CO4	Analyse the role of Vata dosha Atmarupa / Swabhavlinga with their physiological reflections	1	Lecture	CAN	Knows-how	L&PPT ,L&GD
CO1,CO3,CO5 ,CO7	Assess of Vata Dosha Guna based on Generalized physiological and clinical significance of Vata Dosha	4	Practical Training 1.1	PSY-GUD	Shows-how	CBL,L&PPT ,DIS

M 1 Unit 2 Functional anatomy of Vata Sthana

- Biophysical relevance of Vata Sthana.
- Relavant functional anatomy of Vata Sthana: Like large intestine, pelvis, ear etc.
- Dosha Sanchaya in relation to systemic physiology

References: 1,2,3,4,5,6,7,8,49,53,55,56,63,67,74,84,85,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Compare location of Vata Dosha with various organ systems based on biophysical principles.	1	Lecture	CAN	Knows-how	L,L&GD
CO1,CO4	Analyse Vata Sanchaya, Dhatu Ashraya, on the basis of location & season in relation to systemic physiology	1	Lecture	CAN	Knows-how	L,L&GD
CO2,CO4	Assess Vata Sanchaya Lakshana in Swastha and Aatura	4	Practical Training 1.2	PSY-GUD	Shows-how	DIS,PBL

M 1 Unit 3 Functional spectrum and subtypes of Vata Dosha

- Differentiation between the Prakrita and Vaikrita functions of Vata using Advanced parameters
- Pancha Vidha and Dasha Vidha Vata Dosha with advanced system physiology
- Applied physiology of Pacha Vidha and Dasha Vidha Vata Dosha

References: 1,2,3,4,5,6,7,8,10,16,18,34,56,64,68,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Differentiate between Prakrit and Vaikrit Functions of Vata considering advanced parameters	1	Lecture	CAN	Knows-how	L,L&GD
CO1,CO3	Analyse physiological and clinical significance of different types of Vata Dosha	1	Lecture	CAN	Knows-how	L,L&GD
CO3,CO5	Interpret Pancha Vidha and Dasha Vidha Vata Dosha with systemic physiology	2	Lecture	CAN	Knows-how	DIS,BS
CO4,CO5	Assess Pancha Vidha Vata Dosha Karma	3	Practical Training 1.3	PSY-ORG	Shows-how	D-BED,DIS,D
CO4,CO5	Assess of motor & sensory system related to Vata Bheda.	4	Practical Training 1.4	PSY-GUD	Shows-how	CBL,IBL

M 1 Unit 4 Diet and lifestyle factors influencing Vata Dosha

- Vata-Vriddhikar and Kshayakar Aahara- Vihara
- Physiological modulation of Vata Dosha by Aahara and Vihara
- Clinical significance of Aahara and Vihara of Vata Dosha

References: 1,2,3,4,5,6,7,8,33,55,56,57,62,77,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Appraise Influence of Vata Kshayakara Aahara and Vihara on Vata Karma.	1	Lecture	CAN	Knows-how	PBL,DIS,CBL
CO1,CO2	Appraise Influence of Vata Vriddhikar Aahara and Vihara on Vata Karma.	1	Lecture	CAN	Knows-how	L,L&PPT,L&GD
CO2,CO6	Analyse the Influence of Ahara - Vihara on Vata Dosha Karma	5	Practical Training 1.5	PSY-ORG	Shows-how	DIS,CBL

CO2,CO6	Evaluate and document published literature on Clinical significance of Vata Vriddhikar Aahar and Vihara	6	Experiential-Learning 1.1	CE	Does	JC,LS

M 1 Unit 5 Clinical manifestations of Vata Dosha

- Symptoms and signs of Vata Vriddhi
- Symptoms and signs of Vata Kshaya
- Pathophysiology of Vata Vriddhi & Vata Kshaya

References: 1,2,3,4,5,6,7,8,26,35,56,57,61,62,66,69,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO5	Evaluate Kshaya and Vriddhi of Vata Dosha.	5	Experiential-Learning 1.2	CE	Does	DIS,CBL
CO5	Evaluate & report Vata Vikara based on Vata Dosha Bheda	5	Experiential-Learning 1.3	CE	Does	SDL,PBL,TPW

M 1 Unit 6 Technological integration and advancements in Vata assessment

- Instruments to assess Vata Guna and Karma
- Vata Guna and Karma & its integrative perspective pulse wave analysis, neurophysiological tests, gait analysis, autonomic response tests, HRV (Heart Rate Variability), EMG, etc.
- Research Updates on Vata Guna and Karma

References: 1,2,3,4,5,6,7,8,17,21,34,56,57,62,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO6,CO8	Evaluate Technological integration and advancements in Vata assessment with various equipments	2	Experiential-Learning 1.4	AFT-VAL	Does	SDL,DIS,SY

CO4	Evaluate Vata Dosha Guna and Karma and its Correlation with pulse wave analysis, neurophysiological tests, gait analysis, autonomic response tests, HRV (Heart Rate Variability), EMG, etc	5	Experiential-Learning 1.5	CE	Does	L,PL,PAL,L&PPT,SDL
CO4	Develop assessment Criteria for Prakopa of Vata dosha using various equipments	3	Experiential-Learning 1.6	CE	Does	C_L,BS,TBL

Practical Training Activity

Practical Training 1.1 : Vata Dosha Guna based on Generalized physiological and clinical significance of Vata Dosha

The teacher will carefully analyze and identify appropriate assessment tools for evaluating Vata Dosha by correlating them with its characteristic gunas. Once these tools are defined, students will be guided to apply them in practice by mapping each identified tool to observable and measurable clinical parameters. Students will then implement this mapping in two selected clinical case studies, thereby learning how to systematically assess Vata Dosha imbalances in healthy volunteers & patients

Practical Training 1.2 : Vata Sanchaya Lakshana in Swastha and Aatura

The teacher will demonstrate the clinical assessment of Vata Sanchaya Lakshanas using relevant subjective & objective parameters. Students will then be instructed to identify and assess 03 distinct cases of Vata Sanchaya.

Practical Training 1.3 : Assessment of Pancha Vidha Vata Dosha Karma

Teacher will demonstrate the structured format of Pancha Vidha Vata Karma assessment considering the subjective and objective parameters with grading/ scoring pattern for each Karma. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 1.4 : Assessment Motor & sensory system related to Vata Bheda.

Teacher will demonstrate various examinations of sensory and motor system examination related to Vata Bheda. Then student will perform and interpret the examination of Vata Bheda in at least 3 cases and document it.

Practical Training 1.5 : Influence of Ahara - Vihara on Vata Dosha Karm

Teacher will demonstrate influence of Ahara vihara on Vata Dosha Karma considering grading/ scoring pattern. Then student will analyse Influence of Ahara - Vihara on Vata Dosha Karma on atleast 3 cases related to it.

Experiential learning Activity

Experiential-Learning 1.1 : Published literature on Clinical significance of Vata Vriddhikar Aahar and Vihara
Review and document published literature on Clinical significance of Vata Vriddhikar Aahar and Vihara from available published work in journals & and have a departmental group discussion
Experiential-Learning 1.2 : Kshaya and Vriddhi of Vata Dosha.
Student will assess Vata Vriddhi Kshaya assessment based on grading/ scoring system of each lakshanas considering the subjective and objective parameters. Student will be asked to note down the observations, analyse and have a departmental discussion.
Experiential-Learning 1.3 : Vata Vikara based on Vata Dosha Bheda
Student will evaluate and report Vata Vikara in patients by identifying clinical features corresponding to the specific Vata Dosha Bheda (such as Prana, Udana, Vyana, Samana, and Apana) . Student will document the findings and present in the department as team project work.
Experiential-Learning 1.4 : Technological integration and advancements in Vata assessment with various equipments
Conduct 2 seminar sessions where students will present summary report from published literature on various advanced equipment for assessment and analysis of vata dosha
Experiential-Learning 1.5 : Vata Dosha Guna and Karma and its Correlation with pulse wave analysis, neurophysiological tests, gait analysis, autonomic response tests, HRV (Heart Rate Variability), EMG, etc
Conduct expert talk, group discussion on Vata Dosha Guna and Karma and its Correlation with pulse wave analysis, neurophysiological tests, gait analysis, autonomic response tests, HRV (Heart Rate Variability), EMG, etc. Each student should list down probable point related to vata dosha guna and karma, its correlation.
Experiential-Learning 1.6 : Assessment Criteria for Prakopa of Vata dosha using various equipments
Student will work in teams to develop assessment criteria of Vata Prakopa with various equipments. Student will analyze the findings and present their interpretation in department.
Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each	4

module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol.
Conduct a structured theory exam comprising of questions pertaining applied physiology of Vata Dosha (50marks)
OR
Any practical in converted form can be taken for assesment (25 marks)
and
Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/Shows how/ Knows how/Know)	3G Teaching Learning Methods

Module 2 : Pitta Dosha

Module Learning Objectives
(At the end of the module, the students should be able to)

- Evaluate different Guna, Sthana, Bheda & Karma of Pitta Dosha on the basis of Subjective & Objective parameters.
- Perform & assess functional aspects of Pitta Dosha types in Swastha and Aatur using advanced parameters.
- Compare Guna and Karma of Pitta Dosha on the basis of Kshaya-Vriddhi Lakshanas.

M 2 Unit 1 Physiological reflections of Pitta Dosha

- Role of Pitta Dosha in Utpatti, Sthiti, and Laya of life.
- Concept of Atmarupa (self-nature) and Swabhavalinga (inherent qualities).
- Classification of Guna & their physiological reflections (e.g. transformation, digestion, metabolism etc.)

References: 1,2,3,4,5,6,7,8,26,33,49,53,54,62,86,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyze role of Pitta Dosha in Intrauterine life, Life Process/Extrauterine life.	1	Lecture	CAN	Knows-how	L&GD,L
CO1,CO3	Analyse the role of Pitta Atmarupa / Swabhavlinga with their physiological reflections	1	Lecture	CAN	Knows-how	L&GD,LS,L
CO1,CO6	Assess Pitta Dosha Guna based on Generalized physiological and clinical significance	4	Practical Training 2.1	PSY-GUD	Shows-how	L&GD,CBL

M 2 Unit 2 Functional anatomy of Pitta Sthana

- Biophysical relevance of Pitta Sthana.
- Relavant functional anatomy of Pitta Sthana: Like Umblical region, Stomach etc.
- Dosha Sanchaya in relation to systemic physiology

References: 1,2,3,4,5,6,7,8,9,10,11,33,34,62,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyze the location of Pitta dosha comparing with various organ systems based on biophysical principles.	1	Lecture	CAN	Knows-how	L&GD,L
CO1,CO4	Analyse Pitta Sanchaya, Dhatu Ashraya based on Location & season in relation to systemic physiology	1	Lecture	CAN	Knows-how	L,L&GD
CO2,CO4	Assess Pitta Sanchaya Lakshana in Swastha and Aatura	4	Practical Training 2.2	PSY-GUD	Shows-how	RLE,D-BED,CBL

M 2 Unit 3 Functional spectrum and types of Pitta Dosha

- Differentiation between the Prakrita and Vaikrita functions of Pitta using advanced parameters
- Pancha Vidha Pitta Dosha with systemic physiology
- Applied physiology of Pancha Vidha Pitta Dosha

References: 1,2,3,4,5,7,8,43,55,56,57,70,72,77,86,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Analyse differentiation between Prakrut and Vaikrut Functions of Pitta dosha bheda using advanced parameters	1	Lecture	CAN	Knows-how	LS,L&GD
CO1,CO3	Analyse physiological and clinical significance of different types of Pitta Dosha	1	Lecture	CAN	Knows-how	L&GD,LS
CO3,CO5	Interpret Pancha Vidha Pitta Dosha with system physiology	2	Lecture	CAN	Knows-how	L&GD,L&PPT,C_L
CO4,CO5	Assess Pancha Vidha Pitta Dosha Karma	3	Practical Training 2.3	PSY-GUD	Shows-how	CD,D-BED,CBL
CO4,CO5	Assess Systemic examination related to Pitta Bheda.	3	Practical Training 2.4	PSY-GUD	Shows-how	D-BED,CBL,CD

M 2 Unit 4 Diet and lifestyle factors influencing Pitta Dosha

- Pitta-Vriddhikar and kshayakar Aahara- Vihara
- Physiological modulation of Pitta Dosha by Aahara and Vihara
- Clinical significance of Aahara and Vihara on Pitta dosha

References: 1,2,3,4,5,6,7,8,26,34,35,40,43,52,55,59,62,63,74,79,88,89,90

3A	3B	3C	3D	3E	3F	3G

CO1,CO2	Appraise Influence of Pitta Kshayakara Aahara and Vihara on Pitta Karma.	1	Lecture	CAN	Knows-how	L&PPT ,L&GD,LS
CO1,CO2	Appraise Influence of Pitta Vriddhikar Aahara and Vihara on Pitta Karma.	1	Lecture	CC	Knows-how	LS,L&PPT ,L&GD
CO2,CO6	Analyse the Influence of Aahara on Pitta Dosha Karma	3	Practical Training 2.5	PSY-GUD	Shows-how	PBL,RLE
CO2,CO6	Analyse the Influence of Vihara on Pitta Dosha Karma	3	Practical Training 2.6	PSY-GUD	Shows-how	CBL

M 2 Unit 5 Clinical manifestations of Pitta Dosha

- Symptoms and signs of Pitta Vriddhi
- Symptoms and signs of Pitta Kshaya
- Pathophysiological of PittaVriddhi & Pitta Kshaya

References: 1,2,3,4,5,6,7,8,34,62,79,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO5	Evaluate Kshaya and Vriddhi of Pitta Dosha.	5	Experiential-Learning 2.1	CE	Does	CBL
CO2,CO5	Evaluate & report Pitta Vikara based on Pitta Dosha Bheda	5	Experiential-Learning 2.2	CE	Does	IBL,TPW

M 2 Unit 6 Technological integration and advancements in Pitta assessment

- Instruments to assess Pitta Guna and Karma
- Pitta Guna and Karma & its integrative perspective Thermal imaging (body heat), Enzyme and hormone assays (liver, thyroid, pancreas), HRV (Heart Rate Variability) for stress-metabolic interactions, Optical coherence tomography (OCT) and other vision assessment tools, etc.

- Research Updates on Pitta Guna and Karma

References: 1,2,3,4,5,6,7,8,34,57,62,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO6,CO8	Evaluate Technological integration and advancements in Pitta assessment with various equipments	5	Experiential-Learning 2.3	CE	Does	PER,JC
CO4,CO7	Evaluate Pitta dosha guna and Karma and its Correlation with Thermal imaging, Enzyme and hormone assays (liver, thyroid, pancreas). HRV (Heart Rate Variability) for stress-metabolic interactions and Optical coherence tomography (OCT) and other vision assessment tools	5	Experiential-Learning 2.4	CE	Does	PAL,DIS
CO4	Develop assessment Criteria for Prakopa of Pitta dosha using various equipments	6	Experiential-Learning 2.5	CE	Does	TPW,BS

Practical Training Activity

Practical Training 2.1 : Pitta Dosha Guna based on Generalized physiological and clinical significance

The teacher will carefully analyze and identify appropriate assessment tools for evaluating Pitta Dosha by correlating them with its characteristic gunas. Once these tools are defined, students will be guided to apply them in practice by mapping each identified tool to observable and measurable clinical parameters. Students will then implement this mapping in two selected clinical case studies, thereby learning how to systematically assess Pitta Dosha imbalances in healthy volunteers & patients

Practical Training 2.2 : Assessment of Pitta Sanchaya Lakshana

The teacher will demonstrate the clinical assessment of Pitta Sanchaya Lakshanas using relevant subjective & objective parameters. Students will then be instructed to identify and assess 03 distinct cases of Pitta Sanchaya.

Practical Training 2.3 : Assessment of Pancha Vidha Pitta Dosha Karma

Teacher will demonstrate the structured format of Pancha Vidha Pitta Karma assessment considering the subjective and objective parameters with grading/ scoring pattern for each Karma. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 2.4 : Assessment of Systemic examination related to Pitta Bheda.

Teacher will demonstrate various Systemic examination related to Pitta Bheda. Then student will perform and interpret the examination of Pitta Bheda in at least 3 cases and document it.
Practical Training 2.5 : Influence of Aahara on Pitta Dosha Karma
Teacher will demonstrate influence of Aahara on Pitta dosha Karma using grading/scoring pattern. Then student will analyse Influence of Ahara on Pitta Dosha Karma on atleast 3 cases related to it.
Practical Training 2.6 : Influence of Vihara on Pitta Dosha Karma
Teacher will demonstrate influence of Vihara on Pitta dosha Karma using grading/scoring pattern. Then student will analyse Influence of Vihara on Pitta Dosha Karma on atleast 3 cases related to it.
Experiential learning Activity
Experiential-Learning 2.1 : Kshaya and Vriddhi of Pitta Dosha.
Student will assess Pitta Vriddhi Kshaya assessment based on grading/ scoring system of each lakshanas considering the subjective and objective parameters. Student will be asked to note down the observations, analyse and have a departmental discussion.
Experiential-Learning 2.2 : Pitta Vikara based on Pitta Dosha Bheda
Student will evaluate and report Pitta Vikara in patients by identifying clinical features corresponding to the specific Pitta Dosha Bheda . Student will document the findings and present in the department as team project work.
Experiential-Learning 2.3 : Technological integration and advancements in Pitta assessment with various equipments
Conduct 2 seminar sessions where students will present summary report from published literature on various advanced equipment for assessment and analysis of Pitta dosha
Experiential-Learning 2.4 : Pitta dosha guna and Karma and its Correlation with Thermal imaging, Enzyme and hormone assays (liver, thyroid, pancreas). HRV (Heart Rate Variability) for stress-metabolic interactions and Optical coherence tomography (OCT) and other vision assessment tools
Conduct expert talk, group discussion on Pitta dosha guna and Karma and its Correlation with Thermal imaging, Enzyme and hormone assays (liver, thyroid, pancreas). HRV (Heart Rate Variability) for stress-metabolic interactions and Optical coherence tomography (OCT) and other vision assessment tools
Experiential-Learning 2.5 : Assessment Criteria for Prakopa of Pitta dosha using various equipments

Student will work in teams to develop assessment criteria of Pitta Prakopa with various equipments. Student will analyze the findings and present their interpretation in department.

Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured theory exam comprising of questions pertaining applied physiology of Pitta Dosha (50marks) OR Any practical in converted form can be taken for assesment (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Semester No : 4

3A Course Outcome	**3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)**	**3C Notional learning Hours**	**3D Lecture/ Practical Training/ Experiential Learning**	**3E Domain/ Sub Domain**	**3F Level (Does/Shows how/ Knows how/Know)**	**3G Teaching Learning Methods**
Module 3 : Kapha Dosha						
Module Learning Objectives **(At the end of the module, the students should be able to)** ◦ Evaluate different Guna, Sthan, Bheda & Karma of Kapha Dosha on the basis of subjective & objective parameters. ◦ Perform & assess functional aspects of Kapha Dosha types in Swastha and Aatur using advanced parameters						

- Compare Guna and Karma of Kapha Dosha on the basis of Kshaya-Vriddhi Lakshanas.

M 3 Unit 1 Physiological reflections of Kapha Dosha

- Role of Kapha Dosha in Utpatti, Sthiti, and Laya of life.
- Concept of Atmarupa (self-nature) and Swabhavalinga (inherent qualities).
- Classification of Guna & their physiological reflections (e.g. compactness, immunity etc.)

References: 1,2,3,4,5,6,7,8,26,55,56,62,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Analyze role of Kapha Dosha in Intrauterine life, Life Process/Extrauterine life	1	Lecture	CAN	Knows-how	PrBL,PER,PSM,L&PPT,L&GD
CO1	Analyse the role of Kapha Atmarupa / Swabhavlinga with their physiological reflections	1	Lecture	CAN	Knows-how	L,L&GD
CO1,CO2	Asses Kapha Dosha Guna based on Generalized physiological and clinical significance	4	Practical Training 3.1	PSY-GUD	Shows-how	CBL,PBL

M 3 Unit 2 Functional anatomy of Kapha Sthana

- Biophysical relevance of Kapha Sthana.
- Relavant functional anatomy of Kapha Sthana: Like Thorax, throat etc.
- Dosha Sanchaya in relation to systemic physiology

References: 1,2,3,4,5,6,7,8,33,39,62,70,72,74,88,89,90

3A	3B	3C	3D	3E	3F	3G

CO1,CO3	Compare the location of Kapha dosha with various organ systems based on biophysical principles.	1	Lecture	CAN	Knows-how	DIS,L&GD,D
CO1,CO4	Analyse Kapha Dosha Sanchaya, Dhatu Ashraya based on location & season in relation to systemic physiology	1	Lecture	CAN	Knows-how	D,L&PPT,PBL,PER,SDL
CO2,CO4	Assess Kapha Sanchaya Lakshana in Swastha and Aatura	4	Practical Training 3.2	PSY-GUD	Shows-how	DIS,D,L&GD,DL,L&PPT

M 3 Unit 3 Functional spectrum and subtypes of Kapha Dosha

- Differentiation between the Prakrita and Vaikrita functions of Kapha using advanced parametrs
- Pancha Vidha Kapha Dosha with systemic physiology
- Applied physiology of Pancha Vidha Kapha Dosha

References: 1,2,3,4,5,6,7,8,33,55,56,66,67,72,73,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Differentiate between Prakrut and Vaikrut Functions of Kapha dosha bheda using advanced parameters	1	Lecture	CAN	Knows-how	D,DIS
CO1,CO3	Analyse physiological and clinical significance of different types of Kapha Dosha	1	Lecture	CAN	Knows-how	L&GD,D,DIS
CO3,CO5	Interpret Pancha Vidha Kapha Dosha with advanced system physiology	2	Lecture	CAN	Knows-how	L,L&PPT,L&GD
CO4,CO5	Assess Pancha Vidha Kapha Dosha Karma	4	Practical Training 3.3	PSY-GUD	Shows-how	CBL,D,SIM
CO4,CO5	Assess systemic examination related to Kapha Bheda.	4	Practical Training 3.4	PSY-GUD	Shows-how	CBL,SIM,DIS

M 3 Unit 4 Diet and lifestyle factors influencing Kapha Dosha

- Kapha-Vriddhikar and Kshayakar Aahara- Vihara
- Physiological modulation of Kapha Dosha by Aahara and Vihara
- Clinical significance of Aahara and Vihara on Kapha Dosha

References: 1,2,3,4,5,6,7,8,26,34,35,43,62,67,68,79,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Appraise Influence of Kapha Kshayakara Aahara and Vihara on Kapha Karma.	1	Lecture	CC	Knows-how	L&GD,IBL,L&PPT,DIS
CO1,CO2	Appraise Influence of Kapha Vriddhikar Aahara and Vihara on Kapha Karma.	1	Lecture	CAN	Knows-how	DIS,RLE,PrBL,C_L
CO2,CO6	Analyse the Influence of Aahara - Vihara on Kapha Dosha Karma	4	Practical Training 3.5	PSY-GUD	Shows-how	SIM,L&PPT ,RLE,D-BED
CO2,CO6	Evaluate and document published literature on Clinical significance of Kapha Vriddhikar Aahar and Vihara	6	Experiential-Learning 3.1	CE	Does	JC,LS

M 3 Unit 5 Clinical manifestations of Kapha Dosha

- Symptoms and signs of Kapha Vriddhi
- Symptoms and signs of Kapha Kshaya
- Pathophysiological aspect of Kapha Vriddhi & Kapha Kshaya

References: 1,2,3,4,5,6,7,8,43,57,62,65,70,74,78,82,87,88,89,90

3A	3B	3C	3D	3E	3F	3G

CO2,CO5	Evaluate Kshaya and Vriddhi of Kapha Dosha.	5	Experiential-Learning 3.2	CE	Does	BL,DIS,SIM
CO2,CO5	Evaluate & report Kapha Vikara based on Kapha Dosha Bheda	5	Experiential-Learning 3.3	PSY-GUD	Does	TBL,BS,TPW

M 3 Unit 6 Technological integration and advancements in Kapha assessment

- Instruments to assess Kapha Guna and Karma
- Kapha Guna and Karma & its integrative perspective Pulmonary function tests (mucus production, surfactant activity), CSF analysis, Imaging of joint lubrication (MRI of synovial spaces), Biomarkers of anabolic state: GH, IGF-1, lipid panels, Body composition analysis (fat mass, muscle mass, water retention) etc
- Research Updates on Kapha Guna and Karma

References: 1,2,3,4,5,6,7,8,33,34,35,43,49,53,56,61,62,65,70,71,72,73,86,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO4	Evaluate Technological integration and advancements in Kapha assessment with various equipments	3	Experiential-Learning 3.4	CE	Does	LS,BL,BS
CO4	Evaluate Kapha Dosha Guna and Karma with Body composition analysis	2	Experiential-Learning 3.5	CE	Does	SIM,CBL,CD
CO6	Evaluate Kapha Dosha Guna and Karma and its Correlation with Pulmonary function tests (mucus production, surfactant activity), CSF analysis, Imaging of joint lubrication (MRI of synovial spaces), Biomarkers of anabolic state: GH, IGF-1, lipid panels, Body composition analysis (fat mass, muscle mass, water retention) etc	3	Experiential-Learning 3.6	CE	Does	SIM,BS,D-BED
CO2,CO6,CO8	Develop assessment Criteria for Prakopa of Kapha Dosha using various equipments	2	Experiential-Learning 3.7	CE	Does	D-BED,SIM,BL,BS

Practical Training Activity

Practical Training 3.1 : Assessment of Kapha Dosha Guna based on Generalized physiological and clinical significance
The teacher will carefully analyze and identify appropriate assessment tools for evaluating Kapha Dosha by correlating them with its characteristic gunas. Once these tools are defined, students will be guided to apply them in practice by mapping each identified tool to observable and measurable clinical parameters. Students will then implement this mapping in two selected clinical case studies, thereby learning how to systematically assess Kapha Dosha imbalances in healthy volunteers & patients
Practical Training 3.2 : Assessment of Kapha Sanchaya Lakshana
The teacher will demonstrate the clinical assessment of Kapha Sanchaya Lakshanas using relevant subjective & objective parameters. Students will then be instructed to identify and assess 03 distinct cases of Kapha Sanchaya.
Practical Training 3.3 : Assessment of Pancha VidhaKapha Dosha Karma
Teacher will demonstrate the structured format of Pancha Vidha Kapha Karma assessment considering the subjective and objective parameters with grading/ scoring pattern for each Karma. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Practical Training 3.4 : Systemic examination related to Kapha Bheda.
Teacher will demonstrate various examinations related to Kapha Bheda. Then student will perform and interpret the examination of Kapha Bheda in at least 3 cases and document it.
Practical Training 3.5 : Influence of Aahara - Vihara on Kapha Dosha Karma
Teacher will demonstrate influence of Aahar-Vihar on Kapha dosha Karma using grading/ scoring pattern. Then student will analyse Influence of Ahara - Vihara on Kapha Dosha Karma on atleast 3 cases related to it.
Experiential learning Activity
Experiential-Learning 3.1 : Published literature on Clinical significance of Kapha Vriddhikar Aahar and Vihara
Review and document published literature on Clinical significance of Kapha Vriddhikar Aahar and Vihara from available published work in journals & and have a departmental group discussion
Experiential-Learning 3.2 : Kshaya and Vriddhi of Kapha Dosha.
Student will assess Kapha Vriddhi Kshaya assessment based on grading/ scoring system of each lakshanas considering the subjective and objective parameters. Student will

be asked to note down the observations, analyse and have a departmental discussion.
Experiential-Learning 3.3 : Kapha Vikara based on Kapha Dosha Bheda
Student will evaluate and report Kapha Vikara in patients by identifying clinical features corresponding to the specific Kapha Dosha Bheda. Student will document the findings and present in the department as team project work.
Experiential-Learning 3.4 : Technological integration and advancements in Kapha assessment with various equipments
Conduct 2 seminar sessions where students will present summary report from published literature on various advanced equipment for assessment and analysis of Kapha dosha
Experiential-Learning 3.5 : Kapha Dosha Guna and Karma with Body composition analysis
Student will conduct case based learning session to evaluate Kapha dosha guna and Karma with Body composition analyser (fat mass, muscle mass, water retention) on 5 healthy individuals
Experiential-Learning 3.6 : Kapha dosha guna and Karma and its Correlation with Pulmonary function tests (mucus production, surfactant activity), CSF analysis, Imaging of joint lubrication (MRI of synovial spaces), Biomarkers of anabolic state: GH, IGF-1, lipid panels, Body composition analysis (fat mass, muscle mass, water retention) etc
Conduct expert talk, group discussion on Kapha dosha guna and Karma and its Correlation with Pulmonary function tests (mucus production, surfactant activity), CSF analysis, Imaging of joint lubrication (MRI of synovial spaces), Biomarkers of anabolic state: GH, IGF-1, lipid panels, Body composition analysis (fat mass, muscle mass, water retention) etc. Each student should list down probable points related to Kapha dosha guna and karma, its correlation.
Experiential-Learning 3.7 : Assessment Criteria for Prakopa of Kapha Dosha using various equipments
Student will work in teams to develop assessment criteria of Kapha Prakopa with various equipments. Student will analyze the findings and present their interpretation in department.
Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each	4

module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol.
Conduct a structured theory exam comprising of questions pertaining applied physiology of Kapha Dosha (50marks)
OR
Any practical in converted form can be taken for assesment (25 marks)
and
Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/Shows how/ Knows how/Know)	3G Teaching Learning Methods

Module 4 : Neuro-Immuno-Endocrinology

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the characteristic features of Structural, Functional aspects, Cellular & Molecular mediators of Neuro-immuno-endocrinology, Hypothalamic Pituitary Axis, Immune modulation.
- Demonstrate neuroendocrine responses under stress using biochemical indicators, HPA (Hypothalamic-Pituitary-Adrenal) axis activation and measure relevant biochemical markers
- Evaluate Bidirectional communication pathways, stress, Inflammation & immune regulation, research perspectives of Neuro-immuno-endocrinology

M 4 Unit 1 Structural & Functional overview of Neuro-immuno-endocrinology

- Nervous System: CNS, ANS, Enteric Nervous System
- Endocrine System: Major Glands and Hormones

- Immune System: Innate and Adaptive Immunity
- Organs of Neuro-Immuno-Endocrine Interaction

References: 8,9,10,17,18,33,35,36,39,41,53,55,56,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyse the structural and functional components of the Neuro-immuno-endocrinology.	2	Lecture	CAN	Knows-how	L&PPT
CO1,CO4,CO6	Analyze the correlation between histological structure and endocrine function.	5	Practical Training 4.1	PSY-GUD	Shows-how	L_VC,RP,DL,CBL

M 4 Unit 2 Cellular and Molecular Mediators

- Neurotransmitters and Neuropeptides
- Hormones Involved in Immune Regulation
- Cytokines and Chemokines
- Receptors and Signaling Pathways

References: 8,9,10,11,16,17,33,39,41,51,54,55,56,57,61,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Justify the role Neurotransmitters, Neuropeptides, Hormones Involved in Immune Regulation	1	Lecture	CE	Knows-how	L&PPT
CO1,CO3,CO5	Discuss the Diabetes Mellitus & its hormonal basis	5	Practical Training 4.2	PSY-GUD	Shows-how	CBL,D-BED,DIS

M 4 Unit 3 Hypothalamic-Pituitary Axis and Immune Modulation

- Hypothalamic-Pituitary-Adrenal (HPA) Axis in Stress and Immunity
- Feedback Mechanisms
- Role of Glucocorticoids and Catecholamines

References: 8,9,10,16,17,33,36,38,39,41,53,56,57,62,66,67,68

3A	3B	3C	3D	3E	3F	3G
CO1	Analyse hypothalamic-pituitary-adrenal (HPA) Axis in Stress and Immunity, Feedback Mechanisms, Role of Glucocorticoids and Catecholamines	2	Lecture	CAN	Knows-how	L&PPT
CO1,CO2	Assess hypothyroidism by feedback mechanisms and identify Ayurvedic equivalents.	5	Practical Training 4.3	PSY-GUD	Shows-how	REC,L_VC,DL,RP

M 4 Unit 4 Bidirectional Communication Pathways

- Neuro-immune Crosstalk
- Endocrine-immune Interactions
- Neuroendocrine Reflex Arcs
- Vagus Nerve and Immune Signaling

References: 8,16,17,18,33,34,39,41,56,62

3A	3B	3C	3D	3E	3F	3G
CO3	Evaluate Bidirectional Communication Pathways	10	Experiential-Learning 4.1	CE	Does	BS,TBL,TPW,BL
CO1,CO3,CO4,CO5	Analyse Bidirectional Communication Pathways considering Neuro-immune Crosstalk, Endocrine-immune Interactions, Neuroendocrine Reflex Arcs	1	Lecture	CAN	Knows-how	L&GD,L,L&PPT

M 4 Unit 5 Stress, Inflammation, and Immune Regulation

- Acute and Chronic Stress Responses
- Inflammatory Pathways and Stress Hormones
- Psychoneuroimmunology

References: 8,33,34,36,39,41,53,54,56,57,62,66

3A	3B	3C	3D	3E	3F	3G
CO1	Compare Acute with Chronic Stress Responses, Inflammatory Pathways and Stress Hormones, Psychoneuroimmunology	2	Lecture	CAN	Knows-how	L_VC,L&GD,D-BED,CBL
CO1,CO4,CO5	Assess PCOS and discuss it's harmonal basis & lifestyle management	5	Practical Training 4.4	PSY-GUD	Shows-how	CBL
CO2	Evaluate Stress, Inflammation, and Immune Regulation	6	Experiential-Learning 4.2	CE	Does	ML,PER,PBL,BS,RP

M 4 Unit 6 Research Perspectives of Neuro-immuno-endocrinology

- Pharmacological Modulation of Neuro-Immuno-Endocrine Pathways
- Mind-Body Medicine and Yoga in Immune Modulation
- Future Trends and Biomarkers

References: 8,9,10,33,34,36,39,41,48,49,53,79

3A	3B	3C	3D	3E	3F	3G
CO3	Analyse Research Perspectives of Neuro-immuno-endocrinology	2	Lecture	CAN	Knows-how	L_VC,L&PPT
CO3	Evaluate Research Perspectives of Neuro-immuno-endocrinology	10	Experiential-Learning 4.3	CE	Does	TPW,PSM,JC,RP,SY

Practical Training Activity

Practical Training 4.1 : Histology of endocrine glands

Teacher will demonstrate the histology slides of different endocrine tissue sections. Students will note down the observation and will align the structural and functional relations between histology & Doshik function
Practical Training 4.2 : Diabetes Mellitus & its hormonal basis
Teacher demonstrates a case of a diabetes mellitus and discuss the hormonal basis, influence on immunity and blood tests. Students will relate the symptoms to insulin's physiological role and prepare a brief lifestyle management based on Ayurvedic principles.
Practical Training 4.3 : Hypothyroidism by feedback mechanisms and identify Ayurvedic equivalents.
Teacher demonstrates a case of hypothyroidism and correlate them with TSH feedback mechanisms. Students will then analyze the case history and match the symptoms with physiological thyroid hormone functions and possible Ayurvedic correlates.
Practical Training 4.4 : PCOS with it's harmonal basis & lifestyle management
Teacher demonstrates cases of PCOS and discuss the hormonal basis and blood tests. Students will relate the symptoms to physiological role and prepare a brief lifestyle management based on Ayurvedic principles.
Experiential learning Activity
Experiential-Learning 4.1 : Bidirectional Communication Pathways
Student will conduct team based learning, brain storming sessions to evaluate Bidirectional Communication Pathways considering Neuro-immune Crosstalk, Endocrine-immune Interactions, Neuroendocrine Reflex Arcs, Vagus Nerve and Immune Signaling. Student submit team based report to department.
Experiential-Learning 4.2 : Stress, Inflammation, and Immune Regulation
Student will conduct library session, mobile learning session to Evaluate Stress, Inflammation, and Immune Regulation. Compiled information by student will be submitted to department.
Experiential-Learning 4.3 : Research Perspectives of Neuro-immuno-endocrinology
Student will conduct library session, mobile learning sessions on Research Perspectives of Neuro-immuno-endocrinology. Student will do a micro Journal presenatation on the information compiled.
Modular Assessment

Assessment method	Hour
Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured theory exam comprising of questions pertaining applied physiology of Neuro-Immuno-Endocrinology(50marks) OR Any practical in converted form can be taken for assesment (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Semester No : 5

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/Shows how/ Knows how/Know)	3G Teaching Learning Methods

Module 5 : Prakriti

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the characteristic features of Sharira Prakriti with its physiological basis and related objective parameters.
- Perform Prakriti Pariksha over Swastha and Rogi using Trividha Pariksha and standard formats, differentiates Prakrita and Vaikrta features using relevant modes of Pariksha.
- Evaluate the challenges in conducting Prakriti Pariksha and identify disease susceptibility & prevention stratergies in Svastha as well as its relevance in determing prognosis & formulating a personalized treatment plan in rogi

M 5 Unit 1 Basics of Prakriti Physiological & clinical significance of derivation of Prakriti

- Definition of Prakriti
- Synonyms of Prakriti
- Factors influencing Prakriti Determination including Jatyadi Prakriti

References: 1,2,3,4,5,6,7,8,56,70

3A	3B	3C	3D	3E	3F	3G
CO1	Analyse physiological & clinical significance of derivation & definitions of prakrti including domains used for its classification, characteristic features & confounding factors affecting its determination.	2	Lecture	CAN	Knows-how	L&GD,L_VC,L&PPT

M 5 Unit 2 Vata Prakriti

- Vata Prakriti Lakshana based on attributes
- Biorhythms in relation to certain features
- Significance of psychological features mentioned among the list of features
- Applied physiological aspects

References: 1,2,3,4,5,43,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2	Analyse Guna based features of Vata Prakriti.	1	Lecture	CAN	Knows-how	L&GD,L
CO2	Perform Guna based Vata Prakriti Pariksha	4	Practical Training 5.1	PSY-GUD	Shows-how	D-BED,CBL,RP,RLE
CO2	Evaluate Biorhythmic influence in the psychological features of Vata Prakriti	6	Experiential-	CE	Does	ML,BS,L

			Learning 5.1			S,CBL

M 5 Unit 3 Pitta Prakriti

- Pitta Prakriti Lakshana based on attributes
- Biorhythms in relation to certain features
- Significance of psychological features mentioned among the list of features
- Applied physiological aspects

References: 1,2,3,4,5,8,34,56,62,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2	Analyse Guna based features of Pitta Prakriti.	1	Lecture	CAN	Knows-how	L&PPT
CO2	Perform Guna based Pitta Prakriti Pariksha	4	Practical Training 5.2	PSY-GUD	Shows-how	RLE,RP, CBL,D-BED
CO2	Evaluate Biorhythmic influence in the psychological features of PittaPrakriti	6	Experiential-Learning 5.2	CE	Does	LS,ML,BS

M 5 Unit 4 Kapha Prakriti

- Kapha Prakriti Lakshana based on attributes
- Biorhythms in relation to certain features
- Significance of psychological features mentioned among the list of features
- Applied physiological aspects

References: 1,2,3,4,5,6,7,8,33,36,56,57,62,85,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2	Analyse Guna based features of Kapha Prakriti.	1	Lecture	CAN	Knows-	L&GD,L

					how	&PPT
CO2	Perform Guna based Kapha Prakriti Pariksha	4	Practical Training 5.3	PSY-GUD	Shows-how	D-BED,CBL,RP,RLE
CO2	Evaluate Biorhythmic influence in the psychological features of Kapha Prakriti	6	Experiential-Learning 5.3	CE	Does	CBL

M 5 Unit 5 Prakriti Pariksha

- Prakriti Pariksha based on attributes
- Biorhythms in relation to certain features
- Significance of subjective & objective parameters in assessment
- Applied physiological aspects

References: 1,2,3,4,5,6,7,8,62,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO4	Interpret the characteristic features of prakriti.	3	Lecture	CAN	Knows-how	L,L&GD,L&PPT
CO4	Analyse prakriti pariksha with subjective, objective parameters and clinical applicability	3	Lecture	CAN	Knows-how	L&GD,L
CO4,CO5	Assess Prakriti using structured format	3	Practical Training 5.4	PSY-GUD	Shows-how	PAL,D-BED,CBL,DIS
CO4,CO5	Assess Prakriti using structured format	7	Practical Training 5.5	PSY-GUD	Shows-how	CBL
CO4	Compose role of Prakriti in selection for sports, occupation, career guidance for day today inter personal relationship.	3	Experiential-Learning 5.4	CE	Does	SDL,JC,LS

CO4	Evaluate relation between Prakriti & women health with reference to menarche, menstruation, menstrual cycle pattern and menopause.	3	Experiential-Learning 5.5	CE	Does	D,SDL,BS
CO4	Evaluate insight on similar terms in context of Prakriti by considering tantrayukti & commentary.	3	Experiential-Learning 5.6	CE	Does	SDL,LS,BS
CO4	Evaluate and explore the relation between Prakriti and chromatics with reference to clothing, ornaments etc.	3	Experiential-Learning 5.7	CE	Does	SDL,C_L,BS

M 5 Unit 6 Bhautika Prakriti

- Bhautika Prakriti Lakshana
- Biorhythms in relation to certain feature
- Applied physiological aspects

References: 1,2,3,4,5,6,7,39,41,56,62,69,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO5	Interpret the Clinical application of Bhautika Prakriti.	2	Lecture	CAN	Knows-how	L,L&PPT,L&GD
CO5	Assess Bhautika Prakriti using structured format	4	Practical Training 5.6	PSY-GUD	Shows-how	CBL,D-BED

M 5 Unit 7 Anukatva, Diet & Dinacharya Chart

- Anukatva of Prakriti
- Diet & Dinacharya Chart based on Prakriti
- Applied physiological aspects

References: 1,2,3,4,5,6,7,8,60,62,86,87,88,89,90

3A	3B	3C	3D	3E	3F	3G

CO3	Interpret in detail on Anukatva of Prakriti	2	Lecture	CAN	Knows-how	L&GD,L
CO3	Assess Anukatva of Prakriti using structured format	4	Practical Training 5.7	AFT-CHR	Does	CBL
CO3,CO8	Evaluate Prakriti based Dinacharya chart & Diet chart	9	Experiential-Learning 5.8	CE	Does	LS,ML,C_L

Practical Training Activity

Practical Training 5.1 : Guna based Vata Prakriti Pariksha

Teacher should demonstrate the assesment of features of Vata Prakriti as per Guna on the basis of grading & scoring system using structured format to observe & assess physical, physiological & psychological characteristics.Each student should assess Vata Prakriti features in different age group in healthy volunteers (in 03 individuals).

Practical Training 5.2 : Guna based Pitta Prakriti Pariksha

Teacher should demonstrate the assesment of features of Pitta Prakriti as per Guna on the basis of grading & scoring system using structured format to observe & assess physical, physiological & psychological characteristics.Each student should assess Vata Prakriti features in different age group in healthy volunteers (in 03 individuals).

Practical Training 5.3 : Guna based Kapha Prakriti Pariksha

Teacher should demonstrate the assesment of features of Kapha Prakriti as per Guna on the basis of grading & scoring system using structured format to observe & assess physical, physiological & psychological characteristics.Each student should assess Vata Prakriti features in different age group in healthy volunteers (in 03 individuals).

Practical Training 5.4 : Prakriti Pariksha using structured format

Teacher should demonstrate the assessment of Prakriti taking features mentioned in Sharangadhara Samhita using structured format considering subjective & objective parameters on the basis of grading & scoring system. Each student should assess Prakriti features in different age group in healthy volunteers (06 individuals). Note down the observation & conduct departmental group discussion on the observation, scoring/grading etc.

Practical Training 5.5 : Prakriti Pariksha using structured format

Teacher should demonstrate the assessment of Prakriti using structured format considering subjective & objective parameters on the basis of grading & scoring system. Each student should assess Prakriti features in different age group in healthy volunteers (05 individuals). Note down the observation & conduct departmental group discussion on

the observation, scoring/grading etc.
Practical Training 5.6 : Bhautika Prakriti Pariksha using structured format
Teacher should demonstrate Bhautika Prakriti Pariksha using structured format considering subjective & objective parameters on the basis of grading & scoring system.Each student should assess Bauthika Prakriti in different age group in healthy volunteers (05). Note down the observation & conduct departmental group discussion on the observation, scoring/grading etc.
Practical Training 5.7 : Anukatva of Prakriti using structured format
Teacher will demonstrate the structured format of Anukatva Pariksha considering the subjective and objective parameters. Students will be asked to assess same using above format on 01 individual & note down the observations.
Experiential learning Activity
Experiential-Learning 5.1 : Biorhythmic influence in the psychological features of Vata Prakriti
Conduct library, mobile learning, case based learning sesion and compile information regarding Biorhythms of specific features, significance of psychological features mentioned in Vata Prakriti and prepare a team based departmental presentation.
Experiential-Learning 5.2 : Biorhythmic influence in the psychological features of Vata Prakriti
Conduct library, mobile learning, case based learning sesion and compile information regarding Biorhythms of specific features, significance of psychological features mentioned in Pitta Prakriti and prepare a team based departmental presentation.
Experiential-Learning 5.3 : Biorhythmic influence in the psychological features of Vata Prakriti
Conduct library, mobile learning, case based learning sesion and compile information regarding Biorhythms of specific features, significance of psychological features mentioned in Kapha Prakriti and prepare a team based departmental presentation.
Experiential-Learning 5.4 : Role of Prakriti in selection for sports, occupation, career guidance for day today inter personal relationship.
Conduct library session etc to Propose the Role of Prakriti in selection for sports, occupation, career guidance, for day today inter personal relationship through detailed literature review include publications. Design the list of Prakriti based career as per your perspective and document. Make an attempt to know Prakriti based working efficiency in different sectors in your working environment.

Experiential-Learning 5.5 : Prakriti & women health with reference to menarche, menstruation, menstrual cycle pattern and menopause.
Conduct interdepartmental lecture considering peer from Prasuti Tantra department to give inputs on Prakriti & women health with reference to menarche, menstruation, menstrual cycle pattern and menopause.
Experiential-Learning 5.6 : Similar terms in context of Prakriti by considering tantrayukti & commentary.
Conduct brain storming group discussions or library sessions to evaluate on similar terms in context of Prakriti by considering tantrayukti & commentator
Experiential-Learning 5.7 : Prakriti and chromatics with reference to clothing, ornaments etc.
Conduct departmental group discussion or presentation to evaluate relation between Prakriti & chromatics with reference to clothing, ornaments etc with orienting the scholars about the topic, after guided literature review, analysis.
Experiential-Learning 5.8 : Prakriti based Dinacharya chart & Diet chart
Conduct detailed literary review & recent works publications on Prakriti based Dinacharya chart & Diet chart using library, mobile sources various research works on Prakriti and present in the department.
Modular Assessment

Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 75 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Each student will be given a published paper on Prakriti to evaluate the applied physiology or clinical physiology points. Assessment of the review based on the summary of the given published research/review paper emphasizing the each components of the research/ review paper. (75 Marks) OR Any practical in converted form can be taken for assessment. (40 Marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as assessment (35 Marks)	6

3A	3B	3C	3D	3E	3F	3G

Course Outcome	Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	Notional learning Hours	Lecture/ Practical Training/ Experiential Learning	Domain/ Sub Domain	Level (Does/Shows how/ Knows how/Know)	Teaching Learning Methods
Module 6 : Body Patterns & Personality						
Module Learning Objectives **(At the end of the module, the students should be able to)** ◦ Interpret the body patterns, personality & personality traits. ◦ Perform & assess body patterns, personality & personality traits using different formats ◦ Evaluate the challenges of body patterns, personality & personality traits.						
M 6 Unit 1 Body Patterns • Different types of Body patterns • Physiological significance of Body patterns • Clinical significance of Body patterns **References:** 8,33,53,54,55,56,62,88,89,90						
3A	**3B**	**3C**	**3D**	**3E**	**3F**	**3G**
CO6	Analyse physiological & clinical significance of different body patterns	3	Lecture	CAN	Knows-how	L&GD,L &PPT
CO6	Evaluate research works on body patterns	5	Experiential-Learning 6.1	CE	Does	LS,ML

M 6 Unit 2 Personality & Personality traits

- Different types of Personality, Personality traits
- Physiological significance of Personality, Personality traits
- Clinical significance of Personality, Personality traits

References: 8,33,49,53,54,55,56,62,65,66,67,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO4	Analyse physiological & clinical significance of different personality & personality traits	2	Lecture	CAN	Knows-how	L&PPT ,L&GD
CO4	Assess Personality, Personality trait using structured format	5	Practical Training 6.1	PSY-GUD	Shows-how	CBL
CO4	Evaluate Personality & personality trait assessment	3	Experiential-Learning 6.2	CE	Does	ML,LS,JC

M 6 Unit 3 Brain activity model

- Different types of Brain activity models
- Physiological significance of Brain activity models etc
- Clinical significance of Brain activity models etc

References: 8,35,41,53,55,62,67,85,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO6,CO8	Assess Brain activity model on basis of Prakriti	5	Practical Training 6.2	PSY-GUD	Shows-how	CBL
CO6,CO8	Evaluate Physiological activity models based on Prakriti	5	Experiential-Learning 6.3	CE	Does	CBL

Practical Training Activity	
Practical Training 6.1 : Personality, Personality trait using structured format	
Teacher will demonstrate the structured format of personality & personality trait assessment. Students will be asked to assess same using above format on 02 individuals & note down the observations.	
Practical Training 6.2 : Brain activity model on basis of Prakriti	
Teacher will demonstrate the structured format of Brain activity model on basis of Prakriti assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.	
Experiential learning Activity	
Experiential-Learning 6.1 : Research works on body patterns	
Conduct literary research using compendium & e-learning resources sources to compile research works on body patterns & do departmental discussion.	
Experiential-Learning 6.2 : Personality & personality trait assessment	
Personality & personality trait assessment will be done by student. Students will be asked to assess using above format on 02 individuals & note down the observations.	
Experiential-Learning 6.3 : Physiological activity models based on Prakriti	
Conduct library sesions, mobile learning, group learning, case based laerning on Physiological activity models based on Prakriti, note down the observation and conduct a departmental discussion.	
Modular Assessment	
Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 25 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured compilation/ project work on different dimensions of body patterns, personality & personality traits & research updates.(25 marks) OR	2

Any practical in converted form can be taken for assessment.(25 marks)
or
Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment.(25 marks)

Semester No : 6

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/Shows how/ Knows how/Know)	3G Teaching Learning Methods

Module 7 : Manasika Prakriti

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the characteristic features of Manasika Prakriti along with objective and subjective parameters.
- Perform Manasika Prakriti Pariksha in both healthy and diseased differentiating between Prakrita and vaikrta characteristics..
- Evaluate and address the challenges of Manasika Prakriti Pariksha

M 7 Unit 1 Basics of Manasika Prakriti

- Basic understanding of Mansika Prakriti
- Domains of Manasika Prakriti Classification
- Applied & Clinical significance of Manasika Prakriti

References: 1,2,3,4,5,6,8,17,18,33,43,62,67,68

3A	3B	3C	3D	3E	3F	3G
CO2	Appraise physiological & clinical significance of Manasika Prakriti & its classification	2	Lecture	CAN	Knows-how	L&PPT ,L&GD
CO2	Assess Manasika Prakriti Pariksha	8	Practical Training 7.1	PSY-GUD	Shows-how	CBL
CO2	Evaluate Clinical signinficance of Manasika Prakriti	6	Experiential-Learning 7.1	CE	Does	CBL

M 7 Unit 2 Satvika Kaaya

- Types of Satvika Kaaya
- Physiological & clinical significance of classification
- Psycho-Somatic relation

References: 1,2,3,4,5,6,33,34,60,62

3A	3B	3C	3D	3E	3F	3G
CO2	Interpret characteristic features of Satvika Kaaya.	2	Lecture	CAN	Knows-how	L,L&GD
CO2	Assess Satvika Manasika Prakriti Pariksha.	4	Practical Training 7.2	PSY-GUD	Shows-how	CBL
CO2	Compare Satvika Manasika Prakriti with different psycho-somatic parameters	6	Experiential-Learning 7.2	CE	Does	LS

M 7 Unit 3 Rajasika Kaaya

- Types of Rajasika Kaaya
- Physiological & clinical significance of classification
- Psycho-Somatic relation

References: 1,2,3,4,5,6,7,8,33,57,62,80,81

3A	3B	3C	3D	3E	3F	3G
CO2	Analyse characteristic features of Rajasika Kaaya.	2	Lecture	CAN	Knows-how	L&PPT ,L&GD
CO2	Assess Rajasika Manasika Prakriti Pariksha	4	Practical Training 7.3	PSY-GUD	Shows-how	CBL
CO2	Compare Rajasika Manasika Prakriti with different psycho-somatic parameters	6	Experiential-Learning 7.3	CE	Does	ML,LS

M 7 Unit 4 Tamasika Kaaya

- Types of Tamasika Kaaya
- Physiological & clinical significance of classification
- Psycho-Somatic relation

References: 1,2,3,4,5,6,7,8,56,62,84,85,86,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO3	Analyse characteristic features of Tamasika Kaaya.	2	Lecture	CAN	Knows-how	L&PPT ,L&GD
CO3	Assess Tamasika Manasika Prakriti Pariksha	4	Practical Training 7.4	PSY-GUD	Shows-how	CBL,BL
CO3	Compare Tamasika Manasika Prakriti with different psycho-somatic parameters	8	Experiential-Learning 7.4	CE	Does	PL,PAL

M 7 Unit 5 Recent advances and research works in Manasika Prakriti

- Recent updates and research works in the field of Manasa Prakriti

- Role of Manasa Prakriti in maintaining health
- Role of Manasa Prakriti in disease manifestation

References: 1,2,3,4,5,62,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO7	Analyse Recent update and research works in the field of Manasika Prakruthi	2	Lecture	CAN	Knows-how	LS,ML

Practical Training Activity

Practical Training 7.1 : Manasika Prakriti Pariksha

Teacher will demonstrate the structured format of Manasika Prakriti Pariksha assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 05 individuals & note down the observations.

Practical Training 7.2 : Satvika Manasika Prakriti Pariksha

Teacher will demonstrate the structured format of Satvika Manasika Prakriti Pariksha assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 05 individuals & note down the observations.

Practical Training 7.3 : Rajasika Manasika Prakriti Pariksha

Teacher will demonstrate the structured format of Rajasika Manasika Prakriti Pariksha assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 05 individuals & note down the observations.

Practical Training 7.4 : Tamasika Manasika Prakriti Pariksha

Teacher will demonstrate the structured format of Tamasika Manasika Prakriti Pariksha assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 05 individuals & note down the observations.

Experiential learning Activity

Experiential-Learning 7.1 : Clinical signinficance of Manasika Prakriti

Conduct peer learning session/guest lecture & Video document on Interaction with the expert from Mano Vijnana & Manasa Roga on applicability of Manasika Prakriti

assessment in maintaining mano svastha, in treating mano vikara
Experiential-Learning 7.2 : Satvika Manasika Prakriti with different psycho-somatic parameters
Conduct detailed evaluation on relation of Satvika Manasika Prakriti with different psycho-somatic parameters through literature, research works & case study.
Experiential-Learning 7.3 : Relation of Rajasika Manasika Prakriti with different psycho-somatic parameters
Conduct detailed evaluation on relation of Rajasika Manasika Prakriti with different psycho-somatic parameters through literature, research works & case study.
Experiential-Learning 7.4 : Relation of Tamasika Manasika Prakriti with different psycho-somatic parameters
Conduct detailed evaluation on relation of Tamasika Manasika Prakriti with different psycho-somatic parameters through literature, research works & case study.

Modular Assessment

Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured compilation/ project work on different dimensions of Manasika Prakriti; research updates (50 marks) OR Any practical in converted form can be taken for assesment (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment.(25 marks)	4

3A Course Outcome	3B Learning Objective (At the end of the (lecture/practical training /experiential learning) session, the students should be able to)	3C Notional learning Hours	3D Lecture/ Practical Training/ Experiential Learning	3E Domain/ Sub Domain	3F Level (Does/Shows how/ Knows how/Kno	3G Teaching Learning Methods

					w)	

Module 8 : Bija, Bija Bhaga, Bija Bhaga Avayava

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret Bija, Bija Bhaga, Bija Bhaga Avayava, the science of genetics explained in Ayurveda.
- Demonstrate Bija, Bija Bhaga, Bija Bhaga Avayava Pariksha using relevant modes of Pariksha.
- Evaluate the vitiation of Bija, Bija Bhaga, Bija Bhaga Avayava Pariksha responsible for congenital diseases

M 8 Unit 1 Bija

- Physiological Significance of Bija
- Clinical Significance of Bija

References: 1,2,3,4,5,8,33,43,62,66

3A	3B	3C	3D	3E	3F	3G
CO1	Analyse the physiological & clinical significance of Bija.	2	Lecture	CAN	Knows-how	L&PPT
CO1	Asess different domains of Pum-Bija considering sperm	4	Practical Training 8.1	PSY-GUD	Shows-how	L_VC,DL
CO4	Evaluate the physiological & clinical significance of Bija	3	Experiential-Learning 8.1	CE	Does	L_VC,D

M 8 Unit 2 Bija Bhaga

- Physiological Significance of Bija Bhaga

- Clinical Significance of Bija Bhaga

References: 1,2,3,4,5,8,33,43,44,53,54,60,62,75

3A	3B	3C	3D	3E	3F	3G
CO1	Analyse the physiological & clnical significance of Bija Bhaga	2	Lecture	CAN	Knows-how	L&PPT
CO4	Evaluate the physiological & clinical significance of Bija Bhaga	3	Experiential-Learning 8.2	CE	Does	L_VC,DL

M 8 Unit 3 Bhija bhaga avayava

- Physiological Significance of Bija Bhaga avayava
- Clinical Significance of Bija Bhaga avayava

References: 1,2,3,4,5,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Analyse the physiological & clnical significance of Bija Bhaga Avayava	2	Lecture	CAN	Knows-how	DL,L_VC
CO3	Demonstrate physiological & clnical significance of Bija Bhaga Avayava	2	Practical Training 8.2	PSY-GUD	Shows-how	DL,L_VC
CO4	Evaluate physiological & clnical significance of Bija Bhaga Avayava	3	Experiential-Learning 8.3	AFT-VAL	Knows-how	L_VC,DL

M 8 Unit 4 Genetic Disorder

- Sngle-gene disorders
- Chromosomal disorders
- Multifactorial disorders

- Mitochondrial Disorders etc

References: 1,2,3,4,5,17,33,43,62,67,68,69,73,74

3A	3B	3C	3D	3E	3F	3G
CO1	Demonstration of genetic disorders	8	Practical Training 8.3	PSY-GUD	Shows-how	DL,L_VC
CO3	Evaluate different types of genetic disorders	9	Experiential-Learning 8.4	CE	Does	DL,L_VC
CO3	Demonstration of DNA isolation from Whole blood by salting out method etc	6	Practical Training 8.4	PSY-GUD	Shows-how	DL

M 8 Unit 5 Recent advances & research works

- Recent updates and research works in the field of Bija, Bijabhaga, Bijabhaga Avayava
- Role of Bija, Bijabhaga, Bijabhaga Avayava in maintaining health
- Role of Bija, Bijabhaga, Bijabhaga Avayava in understanding of pathophysiology of diseases.

References: 1,2,3,4,5,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Analyse Recent updates and research works in the field of Bija, Bija Bhaga, Bija Bhaga Avayava	4	Lecture	CAN	Knows-how	L&PPT ,L_VC
CO4	Evaluate Recent updates and research works in the field of Bija, Bija Bhaga, Bija Bhaga Avayava	8	Experiential-Learning 8.5	CE	Knows-how	JC,L&PPT ,L_VC, D-M,DIS

Practical Training Activity

Practical Training 8.1 : Different domains of Pum-Bija considering sperm

Teacher will demonstrate the parameters to observe in sperms as a part of semen analysis. Students will be asked to assess same using above format on 01 individual & note down the observations.
Practical Training 8.2 : Physiological & clnical significance of Bija Bhaga Avayava
Teacher will demonstrate the physiological & clnical significance of Bija Bhaga Avayava in lab using different videos. Students will note down the observation.
Practical Training 8.3 : Genetic disorders
Teacher will demonstrate genetic disorders in lab using different videos. Students will note down the observation.
Practical Training 8.4 : DNA isolation from Whole blood by salting out method etc
Teacher will demonstrate DNA isolation from Whole blood by salting out method etc in lab using different e-content. Students will note down the observation.
Experiential learning Activity
Experiential-Learning 8.1 : Physiological & clinical significance of Bija
Conduct library sesions, mobile learning, group learning, case based laerning on the physiological & clinical significance of Bija, note down the observation and conduct a departmental discussion.
Experiential-Learning 8.2 : Physiological & clinical significance of Bija Bhaga
Conduct library sesions, mobile learning, group learning, case based laerning on the physiological & clinical significance of Bija bhaga, note down the observation and conduct a departmental discussion.
Experiential-Learning 8.3 : physiological & clnical significance of Bija Bhaga Avayava
Conduct library sesions, mobile learning, group learning, case based laerning on the physiological & clinical significance of Bija Bhaga Avayava, note down the observation and conduct a departmental discussion.
Experiential-Learning 8.4 : Different types of genetic disorders
Conduct library session & mobile learning session with peer assistance to Evaluate & compile the genetic disorders

Experiential-Learning 8.5 : Recent updates and research works in the field of Bija, Bija Bhaga, Bija bhaga Avayava	
Conduct literary research using compendium & e-learning resources sources to compile research works on Bija, Bija Bhaga, Bija Bhaga Avayava & do departmental discussion.	
Modular Assessment	
Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured theory exam comprising of questions pertaining to Bija, Bija bhaga, Bija bhaga Avayava (50marks) OR Any practical in converted form can be taken for assesment (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Paper No : 2 DHATU EVAM MALA VIJNANIYAM

Semester No : 3

Module 9 : Dhatu Poshana Nyaya

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret physiology of perspective of different Dhatuposhana Nyaya
- Assess the Influence of different biological factors on Dhatu Poshana
- Integrate the concept of Dhatu Poshan Nyaya in terms of advanced physiology

M 9 Unit 1 Basics of Dhatu Poshana Nyaya

- Physiological perspective of different Dhatu Poshana Theories
- Applied physiology of different Dhatu Poshana Theories

References: 1,2,3,4,5,6,8,33,35,36,43,56,57,62

3A	3B	3C	3D	3E	3F	3G
CO4	Analyse Physiological perspective of different Dhatu Poshana Theories	1	Lecture	CAN	Knows-how	L&GD,SDL,L&PPT
CO1,CO2	Perform Dhatu Poshana assessment using subjective and objective parameters	4	Practical Training 9.1	PSY-GUD	Shows-how	CBL
CO1,CO2,CO4	Evaluate Applied physiology of different Dhatu Poshana Theories on Bala, Garbhini, Vrudha	6	Experiential-Learning 9.1	CE	Does	CBL

M 9 Unit 2 Factors affecting Dhatu Poshana

- Influence of Agni, Prakriti, on Dhatu Poshana
- Influence of Srotas, Sharira Vriddhikara Bhava, on Dhatu Poshana
- Influence of Life Style, Nutritional Status, etc on Dhatu Poshana

References: 1,2,3,4,5,6,7,8,34,62,65,87

3A	3B	3C	3D	3E	3F	3G
CO4,CO5	Analyse Factors affecting Dhatu Poshana in relation to Agni, Prakriti,Srotas, Sharira Vriddhikara Bhava	1	Lecture	CAN	Knows-how	L,L&PPT ,L&GD
CO1,CO2	Perform Dhatu Poshana affecting factors assessment using structured format	4	Practical Training 9.2	PSY-GUD	Knows-how	CBL

M 9 Unit 3 Applied Physiology of Dhatu Poshana

- Role of Rasayan therapy on Dhatuposhana
- Metabolic Disorders associated with Dhatuposhana
- Nutritional Deficiency associated with Dhatuposhana

References: 1,2,3,4,34,56,93,95

3A	3B	3C	3D	3E	3F	3G
CO4	Analyse the role Rasayana Therapy on Dhatu Poshana	1	Lecture	CAN	Knows-how	L&GD,L, L&PPT
CO1,CO2	Perform Dhatu Poshana assessment in Rasayana Therapy	2	Practical Training 9.3	PSY-GUD	Knows-how	CBL

M 9 Unit 4 Tissue formation

- Tissue formation,

- Differentiation,regeneration
- Mechanisms of Cell adaptation

References: 8,29,56,78,80,81

3A	3B	3C	3D	3E	3F	3G
CO4,CO5	Illustrate tissue formation, Differentiation, aging ,regeneration	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT
CO1,CO2,CO3	Evaluate role of Dhatu Poshana Theories in Tissue formation, Differentiation, regeneration and Mechanisms of Cell adaptation	3	Experiential-Learning 9.2	CE	Does	PL,PAL, DIS

M 9 Unit 5 Recent Updates & advances

- Recent update and research works in the field of Dhatu Poshana Nyaya,
- Role in maintaining health and in understanding of pathophysiology realted to Dhatu and Dhatu Poshana Nyaya.

References: 88,89

3A	3B	3C	3D	3E	3F	3G
CO4	Point out Recent update and research works in the field of Dhatu Poshana Nyaya	1	Lecture	CAN	Knows-how	L&PPT ,L,L&GD
CO4,CO5	Evaluate role of Dhatu Poshana theories in maintaining health and causing of disease and treatment plan	4	Experiential-Learning 9.3	CE	Does	LS

Practical Training Activity

Practical Training 9.1 : Dhatu Poshana assessment using subjective & objective parameters

Teacher will demonstrate the structured format for assessing factors affecting Dhatu Poshana, considering both subjective and objective parameters. Students will then assess two individuals using the same format and record their observations.

Practical Training 9.2 : Dhatu Poshana affecting factors assessment using structured format

Teacher will explain the structured format for assessing factors affecting Dhatu Poshana, considering both subjective and objective parameters. Students will then assess two individuals using the same format and record their observations.	
Practical Training 9.3 : Dhatu Poshana assessment in Rasayana Therapy	
Teacher will demonstrate Dhatu Poshana assessment in Rasayana Therapy considering considering different parameters. students will critically evaluate the interplay between energy intake, metabolic rate, and energy expenditure in humans, and apply this to analyze the physiological basis of obesity and design appropriate intervention strategies such as Rasayan Therapy.	
Experiential learning Activity	
Experiential-Learning 9.1 : Applied physiology of different Dhatu Poshana Theories on Bala, Garbhini, Vrudha	
Conduct case based group discussion/ peer learning to evaluate & document Applied physiology of different Dhatu Poshana Theories on Bala, Garbhini, Vrudha	
Experiential-Learning 9.2 : Evaluate role of Dhatu Poshana Theories in Tissue formation, Differentiation, regeneration and Mechanisms of Cell adaptation	
Conduct case based group discussion/ peer learning to evaluate & document Role of Dhatu Poshana Theories in Tissue formation, Differentiation, regeneration and Mechanisms of Cell adaptation	
Experiential-Learning 9.3 : Dhatu Poshana theories in maintaining health and causing of disease and treatment plan	
Conduct case based group discussion/ peer learning to evaluate & document Dhatu Poshana theories in maintaining health and causing of disease and treatment plan.	
Modular Assessment	
Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 25 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Each student will be given a published paper on Dhatu Poshana Nyaya to evaluate the applied physiology or clinical physiology points. Assessment of the review based on the summary of the given published research/review paper emphasizing the each components of the research/ review paper. (25 marks) OR Any practical in converted form can be taken for assessment.(25 marks) or Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment.(25 marks)	2

Module 10 : Dhatu

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the concept of Dhatu in terms of relevant contemporary physiology perspective.
- Perform the functions & Kshaya-Vriddhi analysis of Dhatus with the help of subjective & objective parameters
- Evaluate applied physiology, reserch works & updates on Dhatu

M 10 Unit 1 Rasa Dhatu

- Physiological and clinical significance of Panchabhautikatva , location, properties ,Pramana,functions & formation (intrauterine and extrauterine) of Rasa Dhatu
- Rasa Dhatu in terms of Microcirculation and the Lymphatic System: Capillary Fluid Exchange, Interstitial Fluid, and Lymph Flow.
- Pathophysiology of Rasa Dhatu-Kshaya & Vriddhi Lakshana

References: 1,2,3,5,6,7,8,33,56,61,62,67,88,89,90,109

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Analyse the Physiological and clinical significance of location, properties, Pramana and functions of Rasa Dhatu.	1	Lecture	CAN	Knows-how	L,SDL,L &PPT ,L&GD
CO1,CO2	Appraise Rasa Dhatu Utpatti (intrauterine and extrauterine) and factors affecting formation of Rasa Dhatu.	1	Lecture	CAN	Knows-how	DIS,L&P PT ,L&G D,L,D

CO2,CO6	Perform Kshaya-Vriddhi assessment of Rasa Dhatu using structured format	4	Practical Training 10.1	PSY-GUD	Shows-how	L,D,DIS, L&GD
CO4,CO6	Evaluate the Shabadavat, Archivat, and Jalavat pathways of Rasa Samvahana, and analyze the functional contributions of Vyan Vayu, Samana Vayu, and Hridaya in its regulation	5	Experiential-Learning 10. 1	CE	Does	L&GD,D, Mnt,D-BED,L_VC

M 10 Unit 2 Rakta Dhatu

- Physiological and clinical significance of location, properties ,Pramana,functions & formation of Rakta Dhatu
- Rakta Dhatu in terms of Red Blood Cell Indices etc
- Pathophysiology of Rakta Dhatu -Kshaya-Vriddhi, Assess Rakta Kshaya Lakshana in patients of Anaemia

References: 1,2,3,4,5,26,56,78,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Appraise Physiological and Clinical significance of location, properties, Pramana and functions of Rakta Dhatu.	1	Lecture	CAN	Knows-how	L,L&PPT ,PBL,L&GD,PER
CO1,CO3,CO5	Analyse Rakta Dhatu in terms of contemporary physiology.	2	Lecture	CAN	Knows-how	L&PPT , L&GD,DIS,D,L_VC
CO2,CO5	Perform Rakta Vridhi kshaya assessment using structured format	2	Practical Training 10.2	PSY-GUD	Shows-how	DIS,L&PPT ,D-M, L,L&GD
CO4,CO6	Evaluate applied physiology of Rakta Dhatu, Rakta Dhatvagni	6	Experiential-Learning 10. 2	CE	Does	PBL,SIM, D,D-M,DIS

CO1,CO2,CO4 ,CO5	Perform and interpret basic hematological tests -HB, WBC count, red blood cell (RBC) count, DC,erythrocyte sedimentation rate (ESR), packed cell volume (PCV), bleeding time, clotting time, and blood grouping	4	Practical Training 10.3	PSY-GUD	Shows-how	D,DL

M 10 Unit 3 Mamsa Dhatu

- Physiological and clinical significance of location, properties ,Pramana,functions & formation of Mamsa Dhatu.
- Mamsa Dhatu in terms of muscle physiology-Skeletal Muscle Contraction -Molecular Mechanism ,Electromyography (EMG) Muscle Contraction
- Pathophysiology of Mamsa Dhatu-Assessment of Kshaya-Vriddhi.

References: 1,2,3,4,5,8,56,57,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Appraise Physiological and clinical significance of location, properties, Pramana of Mamsa Dhatu.	1	Lecture	CAN	Knows-how	L&PPT , DIS,L&G D,L,D
CO1,CO3,CO5	Analyse formation of Mamsa Dhatu considering Muscle fiber formation and repair.	1	Lecture	CAN	Knows-how	D,PrBL,L ,L&PPT ,L&GD
CO2,CO5	Perform Mamsa Vriddhi Kshaya assessment using structured format	4	Practical Training 10.4	PSY-GUD	Shows-how	CBL,PBL ,D,DIS,P ER
CO4,CO6	Evaluate Physiology & applied physiology of Mamsa Dhatu and Mamsa Dhatvagni	6	Experiential-Learning 10. 3	CE	Does	D,ML,L, L_VC,L& PPT

M 10 Unit 4 Meda Dhatu

- Physiological and clinical significance of location, properties,Pramana, functions & formation of Meda Dhatu
- Meda Dhatu in terms of Adipose Tissue etc

- Pathophysiology of Meda Dhatu- Assessment of Kshaya-Vriddhi

References: 1,2,3,4,5,6,7,8,26,35,39,71,72,74,78,79,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Analyse the Physiological and clinical significance of location, properties and Pramana of Meda Dhatu.	1	Lecture	CAN	Knows-how	SIM,L&GD,SDL,PrBL,PER
CO1,CO3,CO5	Appraise formation of Meda Dhatu considering Lipogenesis and Adipogenesis	1	Lecture	CAN	Knows-how	L&GD,TUT,L_VC,L&PPT,L
CO2,CO5,CO8	Perform Meda Vriddhi Kshaya assessment using structured format	4	Practical Training 10.5	PSY-GUD	Shows-how	CBL,D,L&PPT,PBL
CO4,CO6,CO8	Evaluate Physiology, applied physiology of Meda Dhatu, Meda Dhatvagni	5	Experiential-Learning 10.4	CE	Does	PBL,L_VC,SIM,TUT,D

M 10 Unit 5 Asthi Dhatu

- Physiological and clinical significance of location, properties,Pramana, functions & formation of Asthi Dhatu
- Asthi Dhatu in terms of physiology of bone,
- Pathophysiology of Asthi Dhatu-Assessment of Kshaya-Vriddhi

References: 1,2,3,4,5,25,43

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Appraise the Physiological and clinical significance of location and properties praman of Asthi Dhatu.	1	Lecture	CAN	Knows-how	L&GD,L,L&PPT

						,DIS,SDL
CO1,CO3,CO5	Analyse formation of Asthi Dhatu.	1	Lecture	CAN	Knows-how	BS,L&GD,L,REC,SDL
CO2,CO5,CO8	Perform Asthi Vriddhi Kshaya assessment using structured format	4	Practical Training 10.6	PSY-GUD	Shows-how	CBL,D,LRI,SDL,D-BED
CO4,CO6,CO8	Evaluate Physiology, applied physiology of Asthi Dhatu, Asthi Dhatvagni	6	Experiential-Learning 10.5	CE	Does	L&PPT , DIS,CBL,LRI,SIM

M 10 Unit 6 Majja Dhatu

- Physiological and clinical significance of location, properties,Pramana, functions & formation of Majja Dhatu
- Majja Dhatu in terms of Microenvironment of Bone Marrow etc
- Pathophysiology of Majja Dhatu-Assessment of Kshaya-Vriddhi

References: 1,2,3,4,5,6,7,8,43,86,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Analyse Physiological and clinical significance of location and properties of Majja Dhatu.	1	Lecture	CAN	Knows-how	L&PPT ,DIS
CO1,CO3,CO5	Analyse types of Majja in terms of relevant advanced physiology perspective	1	Lecture	CAN	Knows-how	REC,DIS,SDL,L&GD,D-BED
CO2,CO5,CO8	Perform Majja Vriddhi Kshaya assessment using structured format	3	Practical Training 10.7	CAN	Does	SDL,D-BED,RP,SY,D

CO4,CO6,CO8	Evaluate Physiology, applied physiology of Majja Dhatu, Majja Dhatvagni	5	Experiential-Learning 10.6	CE	Does	L&GD,CBL,D,L&PPT ,SDL

M 10 Unit 7 Shukra Dhatu

- Physiological and clinical significance of location, properties,Pramana, functions & formation of Shukra Dhatu
- Shukra Dhatu in terms of Male & Female Sex Hormones,Local Hormones,Basics of Invitro fertilization,Physiological Basis of Contraception.
- Pathophysiology of Shukra Dhatu - Assessment of Kshaya-Vriddhi

References: 1,2,3,4,5,6,7,8,33,39,43,56,62,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Analyse the Physiological and clinical significance of location and properties of Shukra Dhatu.	1	Lecture	CS	Knows-how	JC,L&PPT ,DIS,L&GD,REC
CO2,CO5,CO8	Perform Shukra Dhatu Vriddhi Kshaya assessment using structured format	3	Practical Training 10.8	PSY-GUD	Shows-how	PBL,CBL,D,SY,L&GD
CO3,CO6	Perform semen analysis test to evaluate the quality and quantity of sperm in a semen sample.	2	Practical Training 10.9	PSY-GUD	Shows-how	SIM,LRI,DL

M 10 Unit 8 Applied Physiology of Dhatu

- Pathophysiology of Dhatu Pradoshaja Vikara
- Dhatu Pradoshaja Vikara in terms of pathophysiology
- Recent updates & research works on Dhatu

References: 1,2,3,4,5,6,7,8,34,43,56,62,86,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Analyse applied physiology, recent advances, research works on Dhatu	1	Lecture	CAN	Knows-how	L,REC,JC,DIS,LS
CO4,CO6,CO8	Evaluate applied physiology, recent updates & research works of Dhatu	6	Experiential-Learning 10.7	CE	Does	L&PPT , LRI,SY,PBL,SIM
Practical Training Activity						
Practical Training 10.1 : Kshaya-Vriddhi assessment of Rasa Dhatu using structured format						
Teacher will demonstrate the structured format of Rasa Dhatu Kshaya-Vriddhi assessment considering the subjective and objective parameters on grading/ scoring basis. Students will be asked to assess same using above format on 05 individuals & note down the observations.						
Practical Training 10.2 : Rakta Vridhi kshaya assessment using structured format						
Teacher will demonstrate the structured format of Rakta Dhatu Kshaya-Vriddhi assessment considering the subjective and objective parameters on grading/ scoring basis. Students will be asked to assess same using above format on 05 individuals & note down the observations.						
Practical Training 10.3 : Basic hematological tests -HB, WBC count, red blood cell (RBC) count, DC,erythrocyte sedimentation rate (ESR), packed cell volume (PCV), bleeding time, clotting time, and blood grouping						
Teacher will demonstrate the procedure of hematology practicals including hemoglobin estimation, RBC and WBC counts, differential count, ESR, PCV, bleeding time, clotting time, and blood grouping. The teacher will explain clinical relevance, and guide interpretation of normal and abnormal values. Students will perform tests, record observations, and discuss findings to develop essential skills in hematological testing and analysis.						
Practical Training 10.4 : Mamsa Vriddhi Kshaya assessment using structured format						
Teacher will demonstrate the structured format of Mamsa Dhatu Kshaya-Vriddhi assessment considering the subjective and objective parameters on grading/ scoring basis. Students will be asked to assess same using above format on 05 individuals & note down the observations.						
Practical Training 10.5 : Meda Vriddhi Kshaya assessment using structured format						
Teacher will demonstrate the structured format Meda Dhatu Kshaya-Vriddhi assessment considering the subjective and objective parameters on grading/ scoring basis.						

Students will be asked to assess same using above format on 05 individuals & note down the observations.

Practical Training 10.6 : Asthi Vriddhi Kshaya assessment using structured format

Teacher will demonstrate the structured format of Asthi Dhatu Kshaya-Vriddhi assessment considering the subjective and objective parameters on grading/ scoring basis. Students will be asked to assess same using above format on 05 individuals & note down the observations.

Practical Training 10.7 : Majja Vriddhi Kshaya assessment using structured format

Teacher will demonstrate the structured format Majja Dhatu Kshaya-Vriddhi assessment considering the subjective and objective parameters on grading/ scoring basis. Students will be asked to assess same using above format on 05 individuals & note down the observations.

Practical Training 10.8 : Shukra Dhatu Vriddhi Kshaya assessment using structured format

Teacher will demonstrate the structured format of Shukra Dhatu Kshaya-Vriddhi assessment considering the subjective and objective parameters on grading/ scoring basis. Students will be asked to assess same using above format on 05 individuals & note down the observations.

Practical Training 10.9 : Perform semen analysis test to evaluate the quality and quantity of sperm in a semen sample.

Perform and Interpret semen analysis results to assess male fertility, correlating sperm concentration, motility, morphology, and other semen parameters with underlying physiological processes, reproductive health and systemic conditions.

Experiential learning Activity

Experiential-Learning 10.1 : Shabadavat, Archivat and Jalavat Rasa Samvahana., Analyze the role of Vyan, Samana Vayu and Hridaya in Rasa Samvahan

Conduct a library session to Evaluate Rasa Dhatu with contemporary physiology. Microcirculation and the Lymphatic System: Capillary Fluid Exchange, Interstitial Fluid, and Lymph Flow. Create contents for assessment of functions of Rasa Dhatu with the help of objective tools. Create components of Rasagni in contemporary physiology. Integrative and objective approach to assess the functional status of Rasagni with the help of tools and parameters like Serum Plasma Protein Levels, Immunoglobulin levels, Serum Electrolyte, Sebometer, Skin Moisture Meter, etc.

Experiential-Learning 10.2 : Physiology, applied physiology of Rakta Dhatu, Rakta Dhatvagni

Conduct library sessions, mobile learning, peer learning sessions on Panchabhautikatva of Rakta Dhatu with the help of composition of blood. Create components of

Raktagni in contemporary physiology. Integrative and objective approach to assess the functional status of Raktagni with the help of tools and biochemical parameters like Hemoglobin, Red Blood Indices, Vit. B12, Folic Acid, Erythropoietin, Ferritin, etc.
Experiential-Learning 10.3 : Physiology & applied physiology of Mamsa Dhatu and Mamsa Dhatvagni
Conduct library sessions, mobile learning sessions, and peer learning sessions on identifying the components of Mamsagni in the context of contemporary physiology. Adopt an integrative and objective approach to assess the functional status of Mamsagni using tools and biochemical parameters such as CK-MM, electromyogram (EMG), transmission electron micrograph (TEM), and dynamometer.
Experiential-Learning 10.4 : Physiology, applied physiology of Meda Dhatu, Meda Dhatvagni
Conduct library sessions, mobile learning sessions, peer learning sessions to Create / hypothesize components of Medagni in contemporary physiology. Integrative and objective approach to assess the functional status of Medagni with the help of tools and biochemical parameters like Lipid Profile, 3D-Dexa (Body Fat Percentage), BMR Analyzer, Waist-Hip Ratio, Skinfold Caliper (Skin Fold Thickness),etc
Experiential-Learning 10.5 : Physiology, applied physiology of Asthi Dhatu, Asthi Dhatvagni
Conduct library session, mobile learning sessions, peer learning sessions on Integrative and objective approach to assess the functional status of Asthyagni with the help of tools and biochemical parameters like 3D-Dexa or Bone Densitometer (Bone Mineral Density, Bone Mineral Content), S. Calcium, Vit. D3, Calcitonin, Parathormone, etc.
Experiential-Learning 10.6 : Physiology, applied physiology of Majja Dhatu, Majja Dhatvagni
Conduct library sessions, mobile learning sessions, peer learning sessions on Integrative and objective approach to assess the functional status of Majjagni with the help of tools and biochemical parameters like CBC especially Red Blood Indices, Growth Hormone, Anthropometric, Harvard Step Test, etc.
Experiential-Learning 10.7 : Applied physiology, recent updates & research works of Dhatu
Conduct library session & mobile learning session with peer assistance to Evaluate & compile the recent research works & journal presentation on Influence of Dhatu

Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 75 marks. Keep structured marking pattern. Use different assessment methods in each	6

module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol.
Conduct a structured theory exam comprising of questions pertaining applied physiology of Dhatu. (75 Marks)
OR
Any practical in converted form can be taken for assessment. (40 Marks)
and
Any of the experiential as portfolio/ reflections / presentations can be taken as assessment (35 Marks)

Semester No : 4

Module 11 : Dhatu Saara

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the importance of Saara Pariksha and Elaborate Dhatusara Lakshana.
- Perform Dhatusaarta Pariksha with the help of Subjective/objective parameters using various equipment and instruments.
- Evaluate clinical applicability, recent updates, research works on Dhatu Saara.

M 11 Unit 1 Dhatu Saara

- Comprehensive physiological perspective of Dhatusaarta.
- Saara assessment using advanced techniques
- Hematology analyser, EMG, BMD, multiple parameter skin analyser (derma scan), Sebumeter, moisture meter, pH meter, Semen analyser etc)

References: 1,2,3,4,5,6,7,8,34,62,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO4,CO5 ,CO8	Analyse Dhatu Saara in detail considering subjective & objective parameters	1	Lecture	CAN	Knows-how	L&PPT ,SDL,L&GD,DIS,RE

						C

M 11 Unit 2 Rasa Saara

- Physiological perspective of Rasa Saara Pariksha
- Saara assessment using advanced techniques
- Clinical Applicability by using multiple parameter skin analyser (derma scan)., Sebometer, Moisuremetre etc.

References: 1,2,3,4,5,6,7,8,33,78,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO4,CO5,CO8	Analyse Rasa Saara in detail considering subjective & objective parameters	2	Lecture	CAN	Knows-how	JC,REC,D-BED,CBL,SDL
CO2,CO4,CO5,CO8	Perform Rasa Saara Pariksha using structured format	4	Practical Training 11.1	PSY-GUD	Shows-how	D-BED,CBL,TUT,D
CO2,CO4,CO5,CO8	Evaluate Rasa Saara Pariksha	5	Experiential-Learning 11.1	CE	Does	CBL,PBL,SDL,D-BED

M 11 Unit 3 Rakta Saara

- Physiological perspective of Rakta Saara Pariksha
- Saara assessment using advanced techniques
- Clinical Applicability using Hematology analyser, multiple parameter skin analyser (derma scan) etc

References: 1,2,3,4,5,6,7,8,66,69,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO4,CO5	Analyse Rakta Saara in detail considering subjective & objective parameters	2	Lecture	CAN	Knows-	CBL,SY,

,CO8					how	L&PPT ,REC,RP
CO2,CO4,CO5 ,CO8	Perform Rakta Saara Pariksha using structured format	4	Practical Training 11.2	PSY-GUD	Shows-how	SDL,D-BED,CBL, SIM,DIS
CO2,CO4,CO5 ,CO8	Evaluate Rakta Saara Pariksha	6	Experiential-Learning 11. 2	CE	Does	CBL,SDL ,D-BED,PBL,LRI

M 11 Unit 4 Mamsa Saara

- Physiological perspective of Mamsa Saara Pariksha
- Saara assessment using advanced techniques
- Clinical Applicability using CPET (Cardio-pulmonary exercise test machine and Body plethysmograph etc.

References: 1,2,3,4,5,6,26,35,62,87,88,89,90,96

3A	3B	3C	3D	3E	3F	3G
CO2,CO4,CO5 ,CO8	Analyse Mamsa Saara in detail considering subjective & objective parameters	2	Lecture	CAN	Knows-how	RP,JC,L&GD,CBL, DIS
CO2,CO4,CO5 ,CO8	Perform Mamsa Saara Pariksha assessment using structured format	4	Practical Training 11.3	PSY-GUD	Shows-how	D-BED,CBL,LRI,L ,L&PPT
CO2,CO4,CO5 ,CO8	Evaluate Mamsa Saara Pariksha	5	Experiential-Learning 11. 3	CE	Does	D-BED,LRI,D,CBL ,PBL

M 11 Unit 5 Meda Saara

- Physiological perspective of Meda Saara Pariksha
- Saara assessment using advanced techniques
- Clinical Applicability using 3-DXA BMD, BMI, Total Body Fat etc.

References: 1,2,3,4,5,6,7,8,34,35,43,83,84,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO4,CO5,CO8	Analyse Meda Saara in detail considering subjective & objective parameters	1	Lecture	CAN	Knows-how	SDL,L&GD,REC,SY,RP
CO2,CO4,CO5,CO8	Perform Meda Saara Pariksha assessment using structured format	4	Practical Training 11.4	PSY-GUD	Shows-how	LRI,L&GD,SY,L&PPT ,D
CO2,CO4,CO5,CO8	Evaluate Meda Saara Pariksha	5	Experiential-Learning 11.4	CE	Does	D-BED,LRI,D,CBL,PBL

M 11 Unit 6 Asthi Saara

- Physiological perspective of Asthi Saara Pariksha
- Saara assessment using advanced techniques
- Clinical Applicability using 3-DXA BMD, using CPET (Cardio-pulmonary exercise test machine) and Body plethysmograph etc.

References: 1,2,3,4,5,6,7,8,33,35,43,56,62,74,75,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO4,CO5,CO8	Analyse Asthi Saara in detail considering subjective & objective parameters	2	Lecture	CAN	Knows-how	L&GD,REC,SDL,L&PPT,JC

CO2,CO4,CO5,CO8	Perform Asthi Saara Pariksha assessment using structured format	4	Practical Training 11.5	PSY-GUD	Shows-how	CBL,TUT,SIM,SDL,L&PPT
CO2,CO4,CO5,CO8	Evaluate Asthi Saara Pariksha	5	Experiential-Learning 11.5	CE	Does	D,DIS,PBL,D-BED,L&GD

M 11 Unit 7 Majja Saara

- Physiological perspective of Majja Saara Pariksha
- Saara assessment using advanced techniques
- Clinical Applicability 3-DXA BMD, CPET (Cardio-pulmonary exercise test machine) etc.

References: 1,2,3,4,5,6,7,8,34,43,56,71,72,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO4,CO5,CO8	Analyse Majja Saara in detail considering subjective & objective parameters	2	Lecture	CAN	Knows-how	RP,DIS,SY,REC,CBL
CO2,CO4,CO5,CO8	Perform Majja Saara Pariksha assessment using structured format	4	Practical Training 11.6	PSY-GUD	Shows-how	CBL,L&PPT ,DIS,SDL,TUT
CO2,CO4,CO5,CO8	Evaluate Majja Saara Pariksha	5	Experiential-Learning 11.6	CE	Does	CBL,LRI,SDL,D-BED

M 11 Unit 8 Shukra Saara

- Physiological perspective of Shukra Saara Pariksha
- Saara assessment using advanced techniques

- Clinical Applicability with subjective, objective parameters using Complete Semen analyser & Hormonal essay.

References: 1,2,3,4,5,6,7,8,33,35,43,56,62,71,74,77,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO4,CO5,CO8	Analyse Shukra Saara in detail considering subjective & objective parameters	2	Lecture	CAN	Knows-how	DIS,SDL,REC,L&GD,L
CO2,CO4,CO5,CO8	Perform Shukra Saara Pariksha assessment using structured format	4	Practical Training 11.7	PSY-GUD	Shows-how	SDL,CBL,D,LRI,L_VC
CO2,CO4,CO5,CO8	Evaluate Shukra Saara Pariksha	5	Experiential-Learning 11.7	CE	Does	D-BED,D,LRI,SDL,DIS

M 11 Unit 9 Satva & Sarva Saara

- Physiological perspective of Satva & Sarva Saara Pariksha
- Clinical Applicability with subjective, objective parameters

References: 1,2,3,4,5,6,7,8,33,56,62,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO4,CO5,CO8	Analyse Satva and Sarva Saara in detail considering subjective & objective parameters	1	Lecture	CAN	Knows-how	L,JC,RP,REC,DIS
CO2,CO4,CO5,CO8	Perform Satva and Sarva Saara Pariksha assessment using structured format	2	Practical Training 11.8	PSY-GUD	Shows-how	TUT,DIS,L_VC,CBL,LRI
CO2,CO4,CO5	Evaluate Satva, Sarva Saara Pariksha	3	Experiential-	CE	Does	D-BED,L

,CO8			Learning 11.8			RI,PBL,CBL,SDL

Practical Training Activity

Practical Training 11.1 : Rasa Saara Pariksha using structured format

Teacher will demonstrate the structured format of Rasa Saara Pariksha assessment considering the subjective and objective parameters using scoring/ grading patterns. Students will be asked to assess same using above format on 02 individuals & note down the observations. And/Or can consider Rasa Dhatu Saarata with the help of appropriate tools and biochemical parameters.

Practical Training 11.2 : Rakta Saara Pariksha using structured format

Teacher will demonstrate the structured format of Rakta Saara Pariksha assessment considering the subjective and objective parameters using scoring/grading pattern. Students will be asked to assess same using above format on 02 individuals & note down the observations. And /Or can consider integrative and objective approach to assess Rakta Dhatu Saarata with the help of appropriate tools and biochemical parameters like Hb%, TRBC, Red Blood indices, viz. MCHC, MCH, MCV, PCV (by using Hematology Analyzer), multiple parameter skin analyzer (derma scan), etc.

Practical Training 11.3 : Mamsa Saara Pariksha assessment using structured format

Teacher will demonstrate the structured format of Mamsa Saara Pariksha assessment considering the subjective and objective parameters using scoring/ grading pattern. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Can Consider Integrative and objective approach to assess Mamsa Dhatu Sarata with the help of appropriate tools and biochemical parameters like Cardio-Pulmonary Exercise Test (CPET) machine, Body Plethysmograph, Creatine phosphate, glycogen content, and myoglobin content in muscle fibre, Level of creatine kinase (CK-MM), Electromyography, Mid-Arm & Mid-Thigh Circumference, Hand Grip Dynamometer, etc.

Practical Training 11.4 : Meda Saara Pariksha assessment using structured format

Teacher will demonstrate the structured format of Meda Saara Pariksha assessment considering the subjective and objective parameters using scoring/ pattern. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Can consider Integrative and objective approach to assess Meda Dhatu Sarata with the help of appropriate tools and biochemical parameters like 3-DXA BMD, Total body fat percentage, BMI, BMR, Lipid Profile, Waist-Hip ratio, Skin fold thickness test, Body fat percentage, Abdominal Girth, etc.

Practical Training 11.5 : Asthi Saara Pariksha assessment using structured format

Teacher will demonstrate the structured format of Asthi Saara Pariksha assessment considering the subjective and objective parameters using scoring/ grading patterns. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Can consider Integrative and objective approach to assess Asthi Dhatu Saarata with the help of appropriate tools and biochemical parameters like Bone mineral density by 3D-DEXA scan, Quantitative computerized tomography, Single-energy photon absorptiometry, Cardio-Pulmonary Exercise Test (CPET) machine, Serum calcium, phosphorus and alkaline phosphatase, Serum Parathyroid hormone, Serum calcitonin, Head Circumference, etc.

Practical Training 11.6 : Majja Saara Pariksha assessment using structured format

Teacher will demonstrate the structured format of Majja Saara Pariksha assessment considering the subjective and objective parameters using scoring/ grading pattern. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Can consider Integrative and objective approach to assess Majja Dhatu Saarata with the help of appropriate tools and biochemical parameters like Bone marrow smear examination, 3-DXA BMD, CPET (Cardio-pulmonary exercise test machine), Harvard Step test, Knee and elbow joint Circumference, Western neurological test, etc.

Practical Training 11.7 : Shukra Saara Pariksha assessment using structured format

Teacher will demonstrate the structured format of Shukra Saara Pariksha assessment considering the subjective and objective parameters using scoring/ grading pattern. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Can consider Integrative and objective approach to assess Shukra Dhatu Saarata with the help of appropriate tools and biochemical parameters like complete semen analyser, Hormonal Assay – Testosterone (in males); DHEA-S, Estrogen like Estrone(E1) Estradiol (E2), Estriol(E3), Progesterone (In females), Hip-pelvic Circumference, etc.

Practical Training 11.8 : Satva and Sarva Saara Pariksha assessment using structured format

Teacher will demonstrate the structured format of Satva and Sarva Saara Pariksha assessment considering the subjective and objective parameters using scoring/grading pattern. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Can consider Integrative and objective approach to assess Satva and Sarva Saara with the help of appropriate tools and biochemical parameters like EEG, Mindfulness Attention Awareness Scale, Mini-Mental State Examination (MMSE) or Montreal Cognitive Assessment (MoCA), S. Cortisol, Sleep Quality Assessment, etc.

Experiential learning Activity

Experiential-Learning 11.1 : Rasa Saara Pariksha

Student will attend self learning/library session to Evaluate Rasa Saara Pariksha considering an integrative and objective approach to assess Rasa Dhatu Sarata with the help of appropriate tools and biochemical parameters like multiple parameter skin analyzer (derma scan), sebumeter, Skin Moisture Meter, Cutometer, Blotting Paper Test, Body hair per unit area, Plasma proteins level especially immunoglobulins, Serum electrolyte, Blood glucose, etc.

Experiential-Learning 11.2 : Rakta Saara Pariksha
Student will attend self learning/library session to Evaluate Rakta Saara Pariksha considering Integrative and objective approach to assess Rakta Dhatu Sarata with the help of appropriate tools and biochemical parameters like Hb%, TRBC, Red Blood indices, viz. MCHC, MCH, MCV, PCV (by using Hematology Analyzer), multiple parameter skin analyzer (derma scan), etc.
Experiential-Learning 11.3 : Mamsa Saara Pariksha
Student will attend self learning/library session to Evaluate Mamsa Saara Pariksha considering Integrative and objective approach to assess Mamsa Dhatu Sarata with the help of appropriate tools and biochemical parameters like Cardio-Pulmonary Exercise Test (CPET) machine, Body Plethysmograph, Creatine phosphate, glycogen content, and myoglobin content in muscle fibre, Level of creatine kinase (CK-MM), Electromyography, Mid-Arm & Mid-Thigh Circumference, Hand Grip Dynamometer, etc.
Experiential-Learning 11.4 : Meda Saara Pariksha
Student will attend self learning/library session to Evaluate Meda Saara Pariksha considering Integrative and objective approach to assess Meda Dhatu Sarata with the help of appropriate tools and biochemical parameters like 3-DXA BMD, Total body fat percentage, BMI, BMR, Lipid Profile, Waist-Hip ratio, Skin fold thickness test, Body fat percentage, Abdominal Girth, etc.
Experiential-Learning 11.5 : Asthi Saara Pariksha
Student will attend self learning/library session to Evaluate Asthi Saara Pariksha considering Integrative and objective approach to assess Asthi Dhatu Saarata with the help of appropriate tools and biochemical parameters like Bone mineral density by 3D-DEXA scan, Quantitative computerized tomography, Single-energy photon absorptiometry, Cardio-Pulmonary Exercise Test (CPET) machine, Serum calcium, phosphorus and alkaline phosphatase, Serum Parathyroid hormone, Serum calcitonin, Head Circumference, etc.
Experiential-Learning 11.6 : Majja Saara Pariksha
Student will attend self learning/library session to Evaluate Majja Saara Pariksha considering Integrative and objective approach to assess Majja Dhatu Saarata with the help of appropriate tools and biochemical parameters like Bone marrow smear examination, 3-DXA BMD, CPET (Cardio-pulmonary exercise test machine), Harvard Step test, Knee and elbow joint Circumference, Western neurological test, etc.
Experiential-Learning 11.7 : Shukra Saara Pariksha
Student will attend self learning/library session to Evaluate Shukra Saara Pariksha considering Integrative and objective approach to assess Shukra Dhatu Saarata with the help of appropriate tools and biochemical parameters like complete semen analyser, Hormonal Assay – Testosterone (in males); DHEA-S, Estrogen like Estrone(E1)

Estradiol (E2), Estriol(E3), Progesterone (In females), Hip-pelvic Circumference, etc.

Experiential-Learning 11.8 : Satva, Sarva Saara Pariksha

Student will attend self learning/library session to Evaluate Satva, Sarva Saara Pariksha considering Integrative and objective approach to assess Satva Dhatu Saarata with the help of appropriate tools and biochemical parameters like EEG, Mindfulness Attention Awareness Scale, Mini-Mental State Examination (MMSE) or Montreal Cognitive Assessment (MoCA), S. Cortisol, Sleep Quality Assessment, etc.

Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 75 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Evaluation of summary reports of demonstrations,or bed side observations. The report will be evaluated on the basis of active participation during the practical, observation book detailing the observations during the visit and record-keeping(75 Marks) OR Any practical in converted form can be taken for assessment. (40 Marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as assessment (35 Marks)	6

Module 12 : Oja & Bala

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the applied physiology of Oja, Bala.
- Perform the Ojovikara with the help of subjective & objective parameters.
- Evaluate the concept of Oja, Bala in integrated perspective.

M 12 Unit 1 Applied Physiology of Oja

- Comprehensive physiological perspective and clinical significance of location, appearance, properties, classification, Pramana of Oja
- Functions & formation of Oja (Intra & Extra Uterine), Critical analysis- Oja -Mala or Updahatu

References: 1,2,3,4,5,6,7,43,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Analyse physiological perspective and clinical significance of location, appearance, properties, classification, Pramana of Oja	1	Lecture	CAN	Knows-how	SDL,L&PPT ,L&GD,L,DIS
CO1,CO2,CO4	Perform Ojas Karma assessment using structured format	4	Practical Training 12.1	PSY-GUD	Shows-how	CBL,D-BED
CO1,CO2	Evaluate Functions & formation of Oja & Oja as Mala, Updahatu	6	Experiential-Learning 12.1	CE	Does	PL,PAL,SDL

M 12 Unit 2 Pathophysiology of Oja

- Ojakshaya & Ojovyapad – different Stages, manifestations & assessments,
- Pathophysiology of Ojakshaya Diseases - Pandu, Madhumeha (Diabetes), etc.

References: 1,2,3,4,5,6,7,35,39,41,43,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO3,CO6,CO7	Analyze and identify the general symptomatology and line of treatment for the manifestations of Ojakshaya, Ojavyapat, and Ojavisransa, along with appropriate Ahara, Vihara, and Aushadhi Dravya regimens for balancing Ojas	1	Lecture	CAN	Knows-how	L&PPT , DIS,CBL, SY,RP
CO1,CO2	Perform Oja Vikara assessment using structured format	4	Practical Training 12.2	PSY-GUD	Shows-how	D-BED,CB

						L

M 12 Unit 3 Advanced Physiological Perspective of Oja

- Specific Attributes of B - Lymphocytes, Antibodies- Mechanisms of Actions
- Immunoregulation - Autoimmunity, HLA, Immunodeficiency, Tolerance of the Acquired Immunity - Autoimmune Diseases
- Immunological Techniques - Immunoassays, Immunodiagnostics

References: 8,17,33,34,56,62,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3,CO5	Analyse Immunoregulation - Autoimmunity, HLA, Immunodeficiency, Tolerance of the Acquired Immunity - Autoimmune Diseases	1	Lecture	CAN	Knows-how	L,L&PPT,L_VC
CO2,CO3,CO4,CO5	Perform Immunological Techniques - Immunoassays, Immunodiagnostics	2	Practical Training 12.3	PSY-GUD	Shows-how	DL,LRI,D,L_VC

M 12 Unit 4 Oja, Bala and Vyadhikshamtva

- Applicability ,Differentiate between Oja & Bala
- Types of Vyadhikshamtva ,Assessment of Bala & Bala Vriddhikara Bhava

References: 1,2,3,4,5,33,43,66,67

3A	3B	3C	3D	3E	3F	3G
CO2,CO3,CO7,CO8	Analyse Interrelationship between Ojas, Bala and Vyadhikshamtva	1	Lecture	CE	Does	DIS,L&GD,D,CBL,LRI
CO1,CO2,CO4	Evaluate Vyadhikshamtva , Assessment of Bala & Bala Vriddhikara Bhava	3	Experiential-Learning 12.2	CE	Shows-how	PL,SDL

M 12 Unit 5 Recent advances & research works on Oja & Bala

- Recent update and research works in the field of Ojas & Bala
- Role of Oja & Bala in maintaining health and causing of disease

References: 88,89,90

3A	3B	3C	3D	3E	3F	3G
CO2,CO3,CO6,CO7	Analyse Recent advancement & research works in the field of Ojas & Bala	1	Lecture	CAN	Knows-how	JC,LS,CBL,PER,W
CO4,CO5	Evaluate Role of Oja & Bala in maintaining health and causing of disease and treatment plan.	4	Experiential-Learning 12.3	CE	Does	D-BED,SDL

Practical Training Activity

Practical Training 12.1 : Ojas Karma assessment using structured format

Teacher will demonstrate the structured format of Ojas Karma assessment using structured format considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 12.2 : Oja Vikara assessment using structured format

Teacher will demonstrate the structured format of Oja Vikara assessment using structured format using structured format considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individual & note down the observations.

Practical Training 12.3 : Immunological Techniques - Immunoassays, Immunodiagnostics

Teacher will demonstarate Immunological Techniques - Immunoassays, Immunodiagnostics using video clips or by using other available sources. Students will document the same and submit.

Experiential learning Activity

Experiential-Learning 12.1 : Functions & formation of Oja & Oja as Mala, Updahatu

Student will Conduct case based group discussion/ peer learning to evaluate & document Functions & formation of Oja & Oja as Mala, Updahatu

Experiential-Learning 12.2 : Evaluation of Vyadhikshamtva and Assessment of Bala & Bala Vriddhikara Bhava

Student will Conduct case based group discussion/ peer learning to evaluate & document Vyadhikshamtva ,Assessment of Bala & Bala Vriddhikara Bhava

Experiential-Learning 12.3 : Role of Oja & Bala in maintaining health and causing of disease and treatment plan.

Student will Conduct library session, mobile learning session to evaluate & document Role of Oja & Bala in maintaining health and causing of disease and treatment plan.

Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 25 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured compilation/ project work on different dimensions of Ojas & Bala; doshik interactions, fluctuations; research updates (25 marks) OR Any practical in converted form can be taken for assessment.(25 marks) OR Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment.(25 marks)	2

Semester No : 5

Module 13 : Upadhatu – Part I (Stanya, Artava & Tvak)

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret comprehensive physiological perspective of Stanya, Artava & Tvak
- Perform functions & applied aspects assessment of Updhatus using subjective & objective parameters
- Evaluate research works & recent updates on upadhatu

M 13 Unit 1 Stanya

- Overview of Stanya -formation, nourishment, functions, Kshaya, Vriddhi, and Stanya Pariksha.
- Stanya Updhatu in terms of Breast Milk Synthesis, Secretion & Ejection (Lactogenesis & Lactation)
- Review of Research Publications

References: 1,2,3,4,5,6,7,8,33,34,35,43,56,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyze Stanya Formation, Attributes, Quantity, Panchbhautik composition, Functions, Stanya Pravritti Hetu	2	Lecture	CAN	Knows-how	L&PPT
CO1,CO3,CO8	Analyse the Immunological Components of Human Milk and Their Effect on Immune Development in Infants	2	Lecture	CAN	Knows-how	L&GD,ML
CO4,CO7	Perform Stanya Pariksha using structured format	4	Practical Training 13.1	PSY-GUD	Shows-how	D-BED
CO4	Assess Vridhi & Kshaya of Stanya using structured format	4	Practical Training 13.2	PSY-GUD	Shows-how	
CO1,CO8	Evaluate Stanya Dushti types & their Lakshana	3	Experiential-Learning 13.1	CE	Does	L&GD,CBL,D-BED
CO1	Compile charecteristics of Shuddha Stanya	3	Experiential-Learning 13.2	CE	Does	TBL,SDL
CO1,CO3,CO4	Evaluate & integrate Stanya as an Upadhatu in female	3	Experiential-Learning 13.3	CE	Does	BS,D-BED

CO1,CO3	Evaluate & Integrate concepts of physiology of Lactogenesis and Lactation	2	Experiential-Learning 13.4	CE	Does	SDL,LS

M 13 Unit 2 Artava

- Physiological perspective of Updhatu Artava , Pathophysiology of Artava Vriddhi & Kshaya, Correlation of Artavapravrutti and Artavanivrutti
- Artava in terms of reproductive physiology- Menstrual Cycle, Hormonal regulation, Fertilization, Implantation, Fetoplacental Unit, Pathophysiology
- Review of Research Publications

References: 1,2,3,4,5,6,7,8,62,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyse Artava Formation, Attributes, Quantity, Panchbhautik composition,Functions & differentiate between Artava and Raja	1	Lecture	CAN	Knows-how	D-BED,L&GD,CBL
CO3	Analyze Menstrual Cycle, Ovulation, Fertilization, Implantation, Fetoplacental Unit.	2	Lecture	CAN	Knows-how	L,L&GD,D-BED
CO1,CO4	Assess Artavadusthi using structured format	4	Practical Training 13.3	PSY-GUD	Shows-how	CBL
CO1,CO3	Evaluate & Integrate processes of Rajopravritti, Rajonivritti, Ritukala with Puberty(Menarche),Menopause etc	3	Experiential-Learning 13.5	CE	Does	SY,SDL
CO1,CO3	Evaluate Artava Vridhi & Kshaya Lakshana	2	Experiential-Learning 13.6	AFT-VAL	Knows-how	CD
CO1,CO3,CO5	Evaluate Research Publications on Artava	2	Experiential-Learning 13.	AFT-VAL	Knows-how	LS,JC

			7			

M 13 Unit 3 Tvak

- Physiological perspective of Tvak ,Functional Anatomy, Pathophysiology of Tvak with it's clinical Significance
- Tvak Updhatu in terms of Applied physiology of different layers of Tvak,Varna, Vaivarnyata etc
- Review of Research publications

References: 1,2,3,4,5,6,7,8,33,35,43,50,56,62,71,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Analyze the comprehensive physiological perspective of Tvak	3	Lecture	CAN	Knows-how	L&PPT ,D-BED
CO3,CO5	Demonstrate case studies of Varna & Vaivarnyata	4	Practical Training 13.4	PSY-GUD	Shows-how	D
CO1,CO3,CO5	Assess of Varna in different Deha Prakriti	4	Practical Training 13.5	PSY-GUD	Shows-how	
CO1,CO3,CO4 ,CO5	Evaluate variations in Chhaya and Prabha in Swastha and Aatura with clinical significance	3	Experiential-Learning 13.8	AFT-VAL	Does	D
CO1,CO3,CO5	Evaluate Case reports on Tvak Vikara associated with different skin layers	3	Experiential-Learning 13.9	CE	Does	D
CO1,CO3	Evaluate recent advances & research works on Tvak	2	Experiential-Learning 13.10	CE	Does	JC,IBL

Practical Training Activity

Practical Training 13.1 : Stanya Pariksha using structured format
Perform the physiological and pathological status of Stanya (Breast milk) by assessing the Dosha of breast milk by Jala Pariksha (Dispersion method) & any physicochemical properties like protein estimation, viscosity, pH value,density, etc of at least 6 lactating Mothers & interpret the results
Practical Training 13.2 : Vridhi & Kshaya of Stanya using structured format
Conduct Peer based learning session for Assessment of Vridhi & Kshaya of Stanya of at least 4 lactating mothers in OPD/IPD with the complaint of Stanya Kshaya with the help of structured proforma based on subjective parameters (signs and symptoms) as mentioned in various classical texts
Practical Training 13.3 : Artavadusthi using structured format
Perform peer guided assisted learning sessions on Artavadushti Lakshana(Vataja/Pittaja/Kaphaja) by Shadvidha Pariksha (6-fold examination) along with Biochemical tests - HB% etc in at least 5 female patients with menstrual disorders Dysmenorrhea, Menorrhagia, Amenorrhea Oligomenorrhea, Premenstrual Syndrome, etc.
Practical Training 13.4 : Case studies of Varna & Vaivarnyata
Demonstrate case studies of Varna & Vaivarnyata.Evaluate & assess Prakrit and Vikrit Varna in healthy individuals and patients (Ek Kushtha – psoriasis, Pandu, Kamla, etc) respectively.
Practical Training 13.5 : Assessment of Varna in different Deha Prakriti
Teacher will demonstrate the structured format of assessment of Varna in different Deha Prakriti considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Experiential learning Activity
Experiential-Learning 13.1 : Stanya Dushti types & their Lakshana
Student will Conduct departmental micro presentation to evaluate Stanya Dushti types & their Lakshana
Experiential-Learning 13.2 : Shuddha Stanya Charecteristics
Student will Conduct Team-based learning to compile criteria of Shuddha Stanya as mentioned in different Classical texts
Experiential-Learning 13.3 : Stanya as an Upadhatu in female

Students will compare and critically analyze the existence of Upadhatus, with reference to Stanya Upadhatu, alongside relevant concepts such as hormones	
Experiential-Learning 13.4 : Integrate Lactogenesis and Lactation	
Student will Conduct library sessions to integrate concepts of physiology of Lactogenesis and Lactation with Ayurvedic concepts of Sthanya Nirmana & Sthanya Pravritti	
Experiential-Learning 13.5 : Rajopravritti, Rajonivritti, Ritukala with Puberty(Menarche),Menopause etc	
Student will Conduct symposium to discuss & analyze physiological changes occurring during puberty (menarche), pregnancy & menopause in the light of Ayurveda and reproductive physiology	
Experiential-Learning 13.6 : Artava Vridhi & Kshaya Lakshana	
Students will conduct a peer-assisted learning session to evaluate the Lakshanas of Artava Kshaya & Vridhhi while taking the case history of female patients with PCOS and related conditions.	
Experiential-Learning 13.7 : Research Publications on Artava	
Student will Conduct library sessions to Evaluate Research Publications on Artava	
Experiential-Learning 13.8 : variations in Chhaya and Prabha in Swastha and Aatura with clinical significance	
Student will Conduct peer guided learning sessions to Evaluate variations in Chhaya and Prabha in Swastha and Aatura with clinical significance	
Experiential-Learning 13.9 : Case reports on Tvak Vikara associated with different skin layers	
Student will Conduct team based, case based learning to evaluate Case reports on Tvak Vikara associated with different skin layers & interpret the observations in atleast 3 cases	
Experiential-Learning 13.10 : Recent advances & research works on Tvak	
Student will attend library session, mobile learning session to evaluate recent advances & research works on Tvak	
Modular Assessment	
Assessment method	**Hour**

Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured compilation/ project work on different dimensions of Upadhatu (Stanya, Artava, Tvak) (50marks) OR Any practical in converted form can be taken for assesment (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Module 14 : Upadhatu – Part II (Kandara adi)

Module Learning Objectives
(At the end of the module, the students should be able to)

- Analyse applied physiology related to Updhatu -Kandara, Sira, Vasa, Snayu, Sandhi, Danta, Kesha, Roma, integrating with specific physiology concepts.
- Perform functions of Updhatus using subjective & objective parameters.
- Evaluate research works, recent advances on these Upadhatus.

M 14 Unit 1 Sira & Kandara

- Physiological perspective of Upadhatu Sira & Kandara-Formation, Appearance,Nourishment , Functions, number of Sira & Kandara
- Clinical significance of Sira, Kandara
- Review of Research publications of Sira & Kandara

References: 1,2,3,4,5,6,7,8,33,35,43,49,56,62,64,67,68,79,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Analyze & integrate Sira, Kandara in detail with related physiological perspective	4	Lecture	CAN	Knows-how	D-BED,L &PPT

CO1	Demonstrate the appearance of Sira & Kandara of Vata Prakriti & compare with the other Prakriti	2	Practical Training 14.1	PSY-GUD	Shows-how	
CO1,CO3,CO5	Demonstrate the method of assessment of Kandara Dushti Lakshana	4	Practical Training 14.2	PSY-GUD	Shows-how	CBL,SDL
CO1,CO3,CO5	Evaluate examination of tendon status with tendon related abnormality	3	Experiential-Learning 14.1	CE	Does	CBL
CO1,CO3,CO5	Evaluate Sira Pradoshaj Vikara, Kandara Pradoshaj Vikara & assess presence of Samanya Updhatu Pradoshaj Lakashana	2	Experiential-Learning 14.2	CE	Does	SDL,CBL
CO1,CO6	Evaluate Review research journals, publications on Sira, Khandara	2	Experiential-Learning 14.3	CE	Does	LS

M 14 Unit 2 Vasa, Snayu, Sandhi

- Comprehensive physiological perspective of - Updhatu Vasa, Snayu, Sandhi-Formation, Appearance, Nourishment , Functions, Pramana of Vasa, Snayu,Sandhi
- Clinical significance of Vasa, Snayu, Sandhi
- Review of Research publications of Vasa, Snayu,Sandhi

References: 1,2,3,4,5,6,7,8,17,33,43,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Analyze comprehensive physiology of Vasa & Snayu	3	Lecture	CAN	Knows-how	DIS
CO1	Perform assessment of Snayu Dusthi using structured format	4	Practical Training 14.3	PSY-GUD	Shows-how	D-BED,CBL

CO1,CO3,CO5	Perform assessment of Sandhi and Snayu	4	Practical Training 14.4	PSY-GUD	Shows-how	D-BED
CO1,CO3,CO5	Evaluate Clinical Significance of Sandhi & Snayu	3	Experiential-Learning 14.4	CE	Does	D-BED,CBL
CO1,CO3,CO5	Evaluate and critically analyze the Formation of Snayu from Sira & Justify sandhi as Updahtu	3	Experiential-Learning 14.5	CE	Does	BS,TBL
CO6	Evaluate recent advances, research works about Vasa & Snayu as updhatu ,their clinical significance	2	Experiential-Learning 14.6	CE	Does	JC,LS

M 14 Unit 3 Danta, Kesha, Roma

- Comprehensive physiological perspective of - Updhatu Danta, Kesha, Roma Formation, Appearance,Nourishment , Functions,Pramana of Danta, Kesha, Roma
- Clinical significance of Danta, Kesha, Roma
- Review of Research publications of Danta, Kesha, Roma

References: 1,2,3,4,5,6,7,8,43,56,59,62,64,68,73,76

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Analyze comprehensive physiological aspects of Danta,Kesha & Roma	3	Lecture	CAN	Knows-how	L&PPT
CO1,CO3,CO5	Examine & Assess Kesha, Roma, Nakha Quality in individuals of different Prakriti	6	Practical Training 14.5	PSY-GUD	Shows-how	
CO1,CO3,CO5	Evaluate the quality of Danta (teeth) in Asthi, Majja & Shukra Saara individuals	3	Experiential-Learning 14.7	CE	Does	CBL,PL

CO1	Evaluate Danta, Kesha,Roma critically As Updhatu / Mala	3	Experiential-Learning 14.8	CE	Does	SY
CO1,CO3	Evaluate recent advances, research works on Kesha	3	Experiential-Learning 14.9	AFT-VAL	Knows-how	LS,JC
CO1,CO5	Evaluate Recent advancements in the field of physiology & pathophysiology of Roma & Danta	2	Experiential-Learning 14.10	CE	Does	JC,LS

Practical Training Activity

Practical Training 14.1 : Sira & Kandara of Vata Prakriti & compare with the other Prakriti

Teacher will Demonstrate the appearance of Sira & Kandara in at least 2-3 individuals of Vata Prakriti & compare with the other Prakriti

Practical Training 14.2 : Assessment of Kandara Dushti Lakshana

Teacher will Demonstrate the method of assessment of Kandara Dushti Lakshana in at least 4 cases of Kandara Pradoshaj Vikara like Gradhrasi Roga (Sciatica) etc.& correlate with associated signs and symptoms in terms of pathophysiology.

Practical Training 14.3 : Assessment of Snayu Dusthi using structured format

Teacher will demonstrate the structured format of Snayu Dusthi assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations

Practical Training 14.4 : Assessment of Sandhi and Snayu

Teacher will demonstrate methods to assess joint function and Snayu (ligaments/tendons) health in normal volunteers using techniques such as joint circumference measurement with measuring tape , flexibility tests (e.g., joint range of motion), and strength or stability tests (e.g. squats, stretches)

Practical Training 14.5 : Kesha, Roma, Nakha Quality in individuals of different Prakriti

Teacher will demonstrate the structured format of Kesha, Roma, Nakha Quality in individuals of different Prakriti assessment considering the subjective and objective

parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations
Experiential learning Activity
Experiential-Learning 14.1 : Examination of tendon status with tendon related abnormality
Arrange visits to the physiotherapy unit to examine tendon status in at least 3 cases with tendon tear & analyze the effect of physiotherapy exercises.
Experiential-Learning 14.2 : Sira Pradoshaj Vikara, Kandara Pradoshaj Vikara & assess presence of Samanya Updhatu Pradoshaj Lakashana
Arrange a peer-assisted session to analyze the status of Sira in one case of Sira Pradoshaja Vikara (e.g., Pakshaghata, Siragraha, Avabahuka) and of Kandara in Kandara Pradoshaja Vikara (e.g., Sandhigatavata, Vatarakta, Vishwachi). The student will then identify Samanya Upadhatu Pradoshaja Laksana such as Supti , Stambha , etc, and prepare case reports.
Experiential-Learning 14.3 : Review research journals, publications on Sira, Khandara
Conduct mobile learning, library session to evaluate Review research journals, publications and integration with contemporary science on Sira, Khandara
Experiential-Learning 14.4 : Clinical Significance of Sandhi & Snayu
Evaluate the Clinical Significance of Sandhi & Snayu atleast in 4 patients of sprain & other associated injuries in physiotherapy unit by making case reports
Experiential-Learning 14.5 : Formation of Snayu from Sira & Justify sandhi as Updahtu
Arrange a group activity to critically analyze the Formation of Snayu from Sira & Justify sandhi as Updahtu
Experiential-Learning 14.6 : Recent advances, research works about Vasa & Snayu as updhatu ,their clinical significance
Conduct library session to review recent advances about Vasa & Snayu as updhatu, their clinical significance
Experiential-Learning 14.7 : Danta (teeth) in Asthi, Majja & Shukra Saara individuals
Conduct case based learning, peer assisted learning to Evaluate the quality of Danta (teeth) in Asthi, Majja & Shukra Saara individuals atleast on 3 cases
Experiential-Learning 14.8 : Danta, Kesha,Roma critically As Updhatu / Mala
Arrange a symposium/ group discussion to analyze critically the concept of Danta As Updhatu / Mala.

Experiential-Learning 14.9 : Recent advances, research works on Kesha

Conduct library session/ mobile learning session to evaluate recent advances, research works on Kesha

Experiential-Learning 14.10 : Recent advancements in the field of physiology & pathophysiology of Roma & Danta

Conduct library session to evaluate Recent advancements in the field of physiology & pathophysiology of Roma & Danta

Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured theory exam comprising of questions pertaining applied physiology of Khandaraadi. (50marks) OR Any practical in converted form can be taken for assesment. (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Semester No : 6

Module 15 : Mala

Module Learning Objectives
(At the end of the module, the students should be able to)

- Analyse physiological perspective & applied physiology of Mala- Purisha, Mutra, Sweda
- Perform Kshaya -Vridhi of Purisha,Mutra,Sweda with subjective & objective parameters
- Evaluate Trimala Prakrita & vaikrita Karma Pariksha, Recent advances & research works on Trimala

M 15 Unit 1 Trimala

- Comprehensive physiological perspective of Mala & Kitta Formation, Appearance, Nourishment , Classification, Functions,Pramana
- Clinical significance of Trimala
- Review of Research publications

References: 1,2,3,4,5,6,7,8,9,73,74,75,76,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyse formation of Trimala with its clinical physiology significance	3	Lecture	CAN	Knows-how	LS,L&PPT ,L&GD
CO1,CO3	Evaluate Trimala in detail	9	Experiential-Learning 15.1	CE	Does	DIS,SDL

M 15 Unit 2 Purisha

- Comprehensive physiological perspective of Purisha - Formation, Appearance, Nourishment , Functions, Pramana
- Clinical significance of Purisha
- Review of Research publications

References: 1,2,3,4,5,6,7,8,33,34,57,62,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyse & integrate physiological, pathophysiological, clinical significance of Purisha	4	Lecture	CAN	Knows-how	DIS,L&PPT
CO1,CO3,CO5	Demonstrate Purisha Pariksha (Sama/Nirama) of Ayurveda and Stool examination in healthy and diseased	5	Practical Training 15.1	PSY-GUD	Shows-how	LRI
CO1,CO3	Perform assessment of Kshaya-Vriddhi Lakshana of Purisha using Subjective /Objective parameters	5	Practical Training 15.2	PSY-MEC	Does	PER,DL
CO6	Evaluate assessment Criteria for Vridhhi -Kshay of Purisha Mala with the use of various	3	Experiential-	CE	Does	LS,PAL,

	types of equipment/ instruments		Learning 15.2			CBL
CO6	Evaluate recent advances & research works on Purisha	3	Experiential-Learning 15.3	CE	Does	CBL,JC,LS

M 15 Unit 3 Mutra

- Comprehensive physiological perspective of Mutra - Formation, Appearance, Nourishment , Functions, Pramana
- Clinical significance of Mutra
- Review of Research publications

References: 1,2,3,4,5,6,7,8,35,43,56,57,58,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO6	Analyse & integrate physiological, pathophysiological, clinical significance of Mutra	4	Lecture	CAN	Knows-how	L&PPT
CO1,CO3,CO5	Demonstrate Mutra Pariksha of Ayurveda and Urine examination in healthy and diseased	5	Practical Training 15.3	PSY-GUD	Shows-how	LRI
CO1,CO3,CO5	Perform Assessment of Kshay-Vriddhi of Mutra with the help of Subjective & Objective parameters	5	Practical Training 15.4	PSY-MEC	Does	
CO1,CO3,CO5	Evaluate assessment Criteria for Vridhhi -Kshay of Mutra with the use of various types of equipment/ instruments	6	Experiential-Learning 15.4	CE	Does	LS,ML,PAL,D
CO1,CO3,CO5	Evaluate recent advances & research works on Mutra	6	Experiential-Learning 15.5	CE	Shows-how	D,PAL,LS,ML

M 15 Unit 4 Sweda

- Comprehensive physiological perspective of Sweda - Formation, Appearance, Nourishment , Functions, Pramana
- Clinical significance of Sweda
- Review of Research publications

References: 1,2,3,4,5,6,7,8,9,33,36,43,62,66,67,68,86,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO6	Analyse physiological, pathophysiological, clinical significance of Sweda	4	Lecture	CAN	Knows-how	DIS,L&GD
CO1,CO3,CO5	Observe the process of Swedana Karma in Panchakarma Clinical settings	5	Practical Training 15.5	PSY-GUD	Shows-how	D
CO6	Assess Kshaya and Vriddhi of Sweda	5	Practical Training 15.6	PSY-GUD	Shows-how	
CO6	Evaluate assessment Criteria for Vridhhi -Kshay of Sweda with the use of various types of equipment/ instruments	6	Experiential-Learning 15.6	CE	Does	LS,PL,D,C_L
CO4,CO6	Evaluate recent advances & research works on Sweda	6	Experiential-Learning 15.7	PSY-MEC	Shows-how	SDL,LS,PAL

Practical Training Activity

Practical Training 15.1 : Purisha Pariksha (Sama/Nirama) of Ayurveda and Stool examination in healthy and diseased

Teacher will demonstrate Mala/Purisha Pariksha (Sama/Nirama) and stool examination techniques. Students will then examine samples from at least 3 healthy individuals and 3 cases of gastrointestinal disorders such as IBD or malabsorption disorders

Practical Training 15.2 : Assessment of Kshaya-Vriddhi Lakshana of Purisha using Subjective /Objective parameters

Teacher will demonstrate the structured format of Kshaya-Vriddhi Lakshana of Purisha assessment considering the subjective and objective parameters using scoring/ graded pattern. Students will be asked to assess same using above format on 03 individuals & note down the observations.

Practical Training 15.3 : Mutra Pariksha according to Ayurveda and Urine examination in healthy and diseased
Teacher will demonstrate Mutra Pariksha and urine examination including physical, chemical, and microscopic analysis. Students will perform the same on at least one healthy individual and one case with urinary disorder
Practical Training 15.4 : Assessment of Kshay-Vriddhi of Mutra with the help of Subjective & Objective parameters
Teacher will demonstrate the structured format of Kshay-Vriddhi of Mutra with the help of Subjective & Objective parameters using scoring/graded pattern.Assessment, analysis and reporting of at least 03 cases of Prakruta & Kshya and Vriddhi of Mutra will be done by student
Practical Training 15.5 : Process of Swedana Karma in Panchakarma Clinical settings
Observe, analyse & report the procedure of Swedana Karma in Panchakarma Clinical settings atleast in 3 cases.
Practical Training 15.6 : Demonstration of Kshaya and Vriddhi of Sweda
Teacher will demonstrate the structured format of Prakrit & Vaikrit Karma of Purisha assessment considering the subjective and objective parameters using scoring/ graded patterns. Assessment,analysis and reporting of at least 3 cases of Kshaya and Vriddhi of Sweda will be donme by student
Experiential learning Activity
Experiential-Learning 15.1 : Trimala in detail
Conduct library session/ peer assisted learning on any of the following aspects: Critical Analysis of the concept of Doshas as Mala, Concept of Malayatana,Mala as Dushya,Malagni, Similarities & Dissimilarities between Mala & body Waste products
Experiential-Learning 15.2 : Assessment Criteria for Vridhhi -Kshay of Purisha Mala with the use of various types of equipment/ instruments
Conduct library session/ peer assisted learning on any of the following aspects: analyse & assessment Criteria for Vridhhi -Kshay of Purisha Mala with the use of various types of equipment/ instruments
Experiential-Learning 15.3 : Recent advances & research works on Purisha
Conduct Library sessions/ peer assisted learning/ mobile learning sessions on:recent advances & research works on Purisha
Experiential-Learning 15.4 : Assessment Criteria for Vridhi -Kshaya of Mutra with the use of various types of equipment/ instruments

Conduct library session/ peer assisted learning on any of the following aspects: assessment Criteria for Vridhi -Kshay of Mutra with the use of various types of equipment/ instruments	
Experiential-Learning 15.5 : Recent advances & research works on Mutra	
Conduct Library sessions/ peer assisted learning/ mobile learning sessions on:recent advances & research works on Mutra	
Experiential-Learning 15.6 : Assessment Criteria for Vridhhi -Kshay of Sweda with the use of various types of equipment/ instruments	
Conduct library session/ peer assisted learning on any of the following aspects: assessment Criteria for Vridhhi -Kshay of Sweda with the use of various types of equipment/ instruments	
Experiential-Learning 15.7 : Recent advances & research works on Sweda	
Conduct Library sessions/ peer assisted learning/ mobile learning sessions on:recent advances & research works on sweda	
Modular Assessment	
Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 75 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Each student will be given a published paper on Trimala to evaluate the applied physiology or clinical physiology points. Assessment of the review based on the summary of the given published research/review paper emphasizing the each components of the research/ review paper. (75 Marks) OR Any practical in converted form can be taken for assessment. (40 Marks) Any of the experiential as portfolio/ reflections / presentations can be taken as assessment (35 Marks)	6
Module 16 : Dhatumala	
Module Learning Objectives **(At the end of the module, the students should be able to)** ◦ Interpret the characteristic features, physiological, clinical significance of Dhatumala	

- Perform Dhatumala Pariksha using subjective & objective Parameters
- Evaluate recent advances & research works on Dhatu Mala

M 16 Unit 1 Rasa Dhatu Mala

- Formation, Properties, Quantity, Functions, Pramana, Applied aspect Dhatu Mala of Rasa
- Clinical Significance, Assessment & relevant physiology perspective Perspective of Dhatu Mala of Rasa

References: 1,2,3,4,5,6,7,8,9,34,43,56,60,61,87

3A	3B	3C	3D	3E	3F	3G
CO4,CO6	Analyze Physiological & clinical significance of Rasa Dhatu Mala	1	Lecture	CAN	Knows-how	L&GD
CO1,CO4	Perform Dhatu Mala Prakrita & Vaikrita Karma assessment using structured format	10	Practical Training 16.1	PSY-GUD	Shows-how	DIS
CO5	Evaluate critically the concept of Prakrit Shleshma as Bala and Vikrit Shleshma as Mala (Malarupi Kapha)	2	Experiential-Learning 16. 1	CAN	Does	TPW,LS

M 16 Unit 2 Rakta and Mamsa Dhatu Mala

- Formation, Properties, Quantity, Functions, Pramana, Applied aspect of Dhatu Mala of Rakta & Mamsa Dhatu
- Assessment Clinical Significance, relevant physiology perspective of Dhatu Mala of Rakta & Mamsa Dhatu

References: 1,2,3,4,5,6,7,8,34,43,56,62,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Evaluate & Critically analyze Malarupi Pitta, Ranjak Pitta & Khamala	3	Experiential-Learning 16.	CE	Does	TPW,LS

			2			
CO1,CO2,CO4,CO5	Analyze Physiological & clinical significance of Rakta & Mamsa Dhatu Mala	1	Lecture	CAN	Knows-how	L&GD,DIS

M 16 Unit 3 Meda and Asthi Dhatu Mala

- Formation, Properties, Quantity, Functions, Applied aspect Dhatu Mala of Meda & Ashti Dhatu
- Clinical Significance, Assessment & relevant physiology perspective of Dhatu Mala of Meda & Ashti Dhatu

References: 1,2,3,4,5,6,7,8,53,56,60,61,70,86,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Evaluate Prasweda, Nakha, Roma (Malarupi)	3	Experiential-Learning 16.3	CE	Knows-how	TPW,SDL
CO1,CO2,CO4,CO5	Analyze Physiological & clinical significance of Meda & Asthi Dhatu Mala	1	Lecture	CAN	Knows-how	DIS,L&PPT

M 16 Unit 4 Majja and Shukra Dhatu Mala

- Formation, Properties, Quantity, Functions, Applied aspect Dhatu Mala of Majja & Shukra Dhatu
- Clinical Significance, Assessment, relevant physiology perspective of Dhatumala of Majja & Shukra Dhatu

References: 1,2,3,4,5,6,7,8,35,56,60,86,87,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Evaluate Mala of Majja Dhatu & Shukra Dhatu	3	Experiential-Learning 16.4	CE	Does	TPW
CO1,CO2,CO4	Analyze Physiological & clinical significance of Majja & Shukra Dhatu Mala	1	Lecture	CAN	Knows-	DIS,L&P

,CO5					how	PT

M 16 Unit 5 Recent advances in the field of Dhatu Mala

- Review of research publications on Dhatu Mala

References: 88,89,90

3A	3B	3C	3D	3E	3F	3G
CO4,CO6	Evaluate recent research advances in the field of Dhatumala	2	Experiential-Learning 16.5	AFT-VAL	Knows-how	JC,SDL
CO4,CO5	Analyze recent advances & research works on Dhatu Mala	1	Lecture	CAN	Knows-how	L&PPT ,L,L&GD

Practical Training Activity

Practical Training 16.1 : Dhatu Mala Prakrita & Vaikrita Karma assessment using structured format

Teacher will demonstrate the structured format of Prakrit & Vaikrit Karma of Dhatu Mala assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Experiential learning Activity

Experiential-Learning 16.1 : Concept of Prakrit Shleshma as Bala and Vikrit Shleshma as Mala (Malarupi Kapha)

Conduct library session to Describe & Analyse Critically the concept of Prakrit Shleshma as Bala and Vikrit Shleshma as Mala (Malarupi Kapha) as mentioned in different classical texts and their commentaries

Experiential-Learning 16.2 : Malarupi Pitta, Ranjak Pitta & Khamala

Conduct library sessions to Critical analysis & review of the concept of Malarupi Pitta, Malarupi Ranjak Pitta & Khamala as mentioned in Classical texts,Commentaries with relevant advanced physiology perspective as team project work .

Experiential-Learning 16.3 : Evaluation of Prasweda, Nakha, Roma (Malarupi)
Conduct library sessions to Critically analyze Prasweda, Nakha, Roma (Malarupi) as mentioned in classical texts, their commentaries along with their relevant advanced physiology perspective & also differentiate Prasweda from Sweda as team project work
Experiential-Learning 16.4 : Mala of Majja Dhatu & Shukra Dhatu
Conduct library session to evaluate Critically analyze Mala of Majja Dhatu & Shukra Dhatu, Also discuss Ojas (Malarupi) as mentioned in classical texts, their commentaries along with their advanced physiology perspctive as the team project work
Experiential-Learning 16.5 : Recent research advances in the field of Dhatumala
Conduct library sessions on recent research advances in the field of Dhatu Mala with their applied physiology & clinical significance through review of Research publications
Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 25 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured theory exam comprising of questions pertaining applied physiology of Dhatumala(25 marks) OR Any practical in converted form can be taken for assessment.(25 marks) or Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment.(25 marks)	2

Paper No : 3 KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM

Semester No : 3

Module 17 : Aahara and Nutrition

Module Learning Objectives
(At the end of the module, the students should be able to)

- Describe various categories of food items
- Conduct BMR-Basal Metabolic rate & MET- Metabolic Equivalent of Task calculations
- Identify the different factors responsible for Aahara Pachan

M 17 Unit 1 Aahariya Dravya Parichay

- Food & Nutrition on the basis of Ayurvedic Principles & Planning diets for different life stages, such as adults, pregnant women, nursing mothers, adolescents, and senior citizens.
- Comaprison of Ahariya Dravya & its calorie content
- Role of dietary fibre in digestion
- Calulation of BMR-Basal Metabolic rate & MET- Metabolic Equivalent of Task calculations according to energy expenditure

References: 1,2,3,4,5,8,25,33,34,62,109,125

3A	3B	3C	3D	3E	3F	3G
CO1,CO6	Compare Aahariya Dravya with calorie content available in different habitat used in daily life.	1	Lecture	CE	Know	RLE,LS, C_L
CO1,CO5,CO6	Explain nutritional values, properties, effects of food items and calories required at various stages of life viz age, pregnancy, Lactating female, athlete etc	2	Lecture	CAP	Knows-how	TPW,LS, C_L

CO2,CO4,CO6	Calculate BMR(Basal Metabolic Rate) using various formulas	4	Practical Training 17.1	PSY-GUD	Shows-how	L&PPT ,DIS,SDL
CO2,CO4,CO6	Calculate MET (Metabolic Equivalent of Task) using various formulas	4	Practical Training 17.2	PSY-GUD	Shows-how	DIS,GBL, L&GD
CO2,CO4,CO6	Compose dietary Planning as per various stages of age & gender according to energy expenditure.	4	Experiential-Learning 17. 1	AFT-SET	Does	PL,RLE
CO7	Compose dietary Planning according to Prakriti, Saarata according energy expenditure.	4	Experiential-Learning 17. 2	AFT-SET	Does	IBL,Mnt

M 17 Unit 2 Aahara Parinamakara Bhava and Anna Pachana

- Factors responsible for biotransformation, Metabolism of macronutrients and micronutrients.

References: 1,2,3,4,5,6,7,8,87,109,111,125

3A	3B	3C	3D	3E	3F	3G
CO1,CO4	Describe Aahara Parinamakara Bhava and its significance in Aaharapachan .	1	Lecture	CE	Knows-how	SDL,L&GD,L&PPT
CO2,CO4,CO6	Categorize the food items according Panchabhutitkatwa, Guna, Rasa, Virya, Vipak and functions of Macro & Micronutrients .	4	Practical Training 17.3	PSY-GUD	Does	TPW,FV, LS
CO1,CO2,CO6	Categorize nutritional & fibre content present in food items.	4	Practical Training 17.4	PSY-MEC	Shows-how	LS,PAL,SDL
CO1,CO2,CO4 ,CO7	Develop dietary plans according to life stages, genders, and the individual needs for macro- and micronutrients.	4	Experiential-Learning 17. 3	PSY-ORG	Shows-how	DIS,IBL

CO2,CO5,CO6	Compose dietary Planning according to Prakriti and Saarata, tailored to energy needs and micro, macro nutrient requirements.	4	Experiential-Learning 17.4	PSY-ORG	Shows-how	C_L,IBL
CO2,CO6,CO7	Integrate & create personalized dietary plans according to macro & micro nutrient's need by analysing nutritional fibre content & Panchbhautiktwa, Rasa, Virya , Vipak, Guna etc	2	Experiential-Learning 17.5	PSY-ORG	Shows-how	C_L,IBL, LS

M 17 Unit 3 Introduction to Nutrigenomics

- Basics of Nutrigenomics
- Nutrigenomics & other Omics
- Genetic variations & Nutrient Metabolism

References: 126,127

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Analyze genetic variations affecting nutrient metabolism.	2	Lecture	CC	Knows-how	L&GD,L_VC,L&PPT
CO1,CO2,CO3	Integrate nutrigenomics with other omics disciplines (e.g., epigenomics, metabolomics).	2	Lecture	CC	Knows-how	L&GD,L_VC,L&PPT
CO5,CO7	Evaluate Nutrient-gene interactions & its effects of nutrients on gene expression and function.	4	Experiential-Learning 17.6	AFT-REC	Shows-how	DIS,JC
CO1,CO3,CO7	Evaluate impact of genetic variants on nutrient metabolism and response.	2	Experiential-Learning 17.7	AFT-VAL	Shows-how	JC,DIS

M 17 Unit 4 AI powered nutrition in Ayurveda

- Open Source software for nutrition
- Digital/ application based Dietary Planner .

References: 122,123

3A	3B	3C	3D	3E	3F	3G
CO4,CO5	Discuss various open sources software available for nutritional needs.	2	Lecture	CK	Knows-how	ML,L_VC
CO2,CO5	Prepare dietary planning, nutrient analysis using available open sources software.	4	Practical Training 17.5	PSY-MEC	Shows-how	L_VC,ML,D
CO2,CO5,CO7	Evaluate nutrient deficiencies and excesses by AI-generated nutritional assessments.	2	Experiential-Learning 17.8	AFT-VAL	Does	L_VC,BS,DIS

Practical Training Activity

Practical Training 17.1 : Calculation of BMR (Basal Metabolic Rate) using various formulas

Teacher will instruct the students to record age, sex, weight, height and calculate BMR(Basal Metabolic Rate) using various formulas e.g., Harris-Benedict, Mifflin-St Jeor. Interpret drawn results & understand BMR(Basal Metabolic Rate) values and their implications.

Practical Training 17.2 : Calculation of MET (Metabolic Equivalent of Task) using various formulas

Teacher will discuss the various methods to calculate MET (Metabolic Equivalent of Task) such as Direct and Indirect Measurement, MET formulas or tables etc. Teacher will assign physical activity like walking , jogging , running etc followed by analysis of the results with ratio of the rate of energy expenditure during assigned activity to the rate of energy expenditure at rest.

Practical Training 17.3 : Food items according Panchabhutitkatwa, Guna, Rasa, Virya, Vipak and functions of Macro & Micronutrients .

Teacher will instruct to prepare chart & categorize the food items according Guna, Rasa, Virya ,Vipak and functions to analyse the macro & micro nutrients of food items.Students will present the compiled data.

Practical Training 17.4 : Nutritional & fibre content present in food items.
Teacher will instruct students to prepare chart & categorize the food items according nutritional & fibre content. Analyse the those items on the basis Panchabhautikatwa, Guna, Rasa, Virya, Vipak etc.
Practical Training 17.5 : Dietary planning, nutrient analysis using available open sources software.
Teacher will discuss about various Software available for dietary planning and nutrient analysis. Instruct to select software that aligns as per dietary planning or nutrient analysis. Enter volunteers' dietary needs, preferences, and health goal asper age, gender, pregnancy, lactation etc. Generate nutrient reports and analyse nutrient intake and identify deficiencies.
Experiential learning Activity
Experiential-Learning 17.1 : Dietary Planning as per various stages of age & gender according to energy expenditure.
Students will create personalized dietary plans by analysing Basal Metabolic Rate (BMR) and Metabolic Equivalent of Task (MET) values of 5 volunteers considering factors like age, gender, and athletic status to meet individual energy needs
Experiential-Learning 17.2 : Dietary Planning according to Prakriti, Saarata according energy expenditure.
Students will create personalized dietary plans by analysing Prakruti and Saarata sof volunteers. Considering factors like age, gender, and athletic status to meet individual energy needs. Observations & Dietary plans will be discussed with its significance among teacher, peers & every students.
Experiential-Learning 17.3 : Dietary plans according to life stages, genders, and the individual needs for macro- and micronutrients.
Students will create personalized dietary plans by analysing lab reports such as CBC, Lipid Profile, LFT, KFT, Electrolytes etc. of 5 volunteers considering factors like age, gender, and athletic status to meet individual macro & micronutrients nutrient need.
Experiential-Learning 17.4 : Dietary Planning according to Prakriti and Saarata, tailored to energy needs and micro, macro nutrient requirements.
Students will create personalized dietary plans by analysing lab reports of 5 volunteers considering factors like Prakruti and Saarata to meet individual macro & micronutrients nutrient need.
Experiential-Learning 17.5 : Personalized dietary plans according to macro & micro nutrient need by analysing nutritional fibre content & Panchbhautiktwa, Rasa,

Virya Vipak , Guna etc

Students will integrate and create personalized dietary plans by analyzing nutritional fiber content along with Rasa, Virya, Vipaka, Guna, and Karma, based on Prakriti, Saarata, and various factors such as age, gender, pregnancy, lactation, and athletic status, considering the requirements of both macro- and micronutrients.

Experiential-Learning 17.6 : Nutrient-gene interactions & its effects of nutrients on gene expression and function.

Students will compile 5 research publications related to Nutrient-gene interactions & its effects of nutrients on gene expression and function. Students will prepare presentation on compiled publications followed by discussion with teacher on various tools & methods for analyse DNA assays in detail from open source database of nutrigenomics.

Experiential-Learning 17.7 : Impact of genetic variants on nutrient metabolism and response.

Students will compile 2 research publications related to Impact of genetic variants on nutrient metabolism and response. Students will prepare presentation on compiled publications followed by discussion with teacher on various tools & methods for analyse DNA assays in detail open source database of nutrigenomics.

Experiential-Learning 17.8 : Nutrient deficiencies and excesses by AI-generated nutritional assessments.

Students will be instructed to utilize AI-powered nutritional software to analyze dietary data and generate personalized assessments, identifying potential nutrient deficiencies and excesses according to various status of volunteers e.g age, gender, Prakruti Saarata. Students will interpret AI-generated reports, recognizing patterns and anomalies in nutrient intake to create targeted dietary recommendations.

Modular Assessment

Assessment method	**Hour**
conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. • Each student will be given a a case to disscuss in physiologcal perspective. (50 marks) OR • Any practical in converted form can be taken for assessment.(25 marks) and • Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment.(25 marks)	4

Module 18 : Aahara Vidhi Visheshaytana & Aahara Vidhi Vidhana

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret Aahara Vidhi Visheshaytan & Aahara Vidhi Vidhana.
- Conduct dietary practices that align with the twelve guidelines.
- Evaluate Viruddh Aahar and healthy dietry juices as a Anupan for optimal health.

M 18 Unit 1 Aahara Vidhi Visheshaytana

- Overview of Aahara Vidhi Visheshayatana
- Role of Aahara Vidhi Visheshayatana in maintaing health

References: 1,2,3,4,6,7,48,128,130

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO5	Illustrate Aahara Vidhi Visheshayatana and its significance in digestion absorption and metabolism	2	Lecture	CAP	Knows-how	PER,L&PPT ,IBL
CO1,CO2,CO5	Demonstrate knowledge of the Aahar Vidhi Visheshaytana to analyze various seasons, customs & tradition to consume meal.	2	Practical Training 18.1	PSY-ADT	Shows-how	DIS,LS,IBL
CO1,CO2,CO5	Prepare diet chart based on the knowledge of the eight factors of Ahara Vidhi Visheshayatana.	2	Practical Training 18.2	PSY-MEC	Shows-how	DIS,IBL
CO2,CO4	Appraise the influence of specific dietary regulations in various health conditions (e.g., Obesity Diabetes and Hypertension etc.) in perspective of Dosha, Dushya and Mala.	3	Experiential-Learning 18.1	PSY-GUD	Does	LRI,IBL

CO2,CO4,CO6	Integrate Ayurvedic principles with nutritional science in perspective of nutrition & malabsorption on the basis of WHO data base.	3	Experiential-Learning 18.2	AFT-VAL	Does	PER,L&GD,SDL

M 18 Unit 2 Aahara Vidhi Vidhana

- Aahara Vidhi Vidhan and food consumption practices to enhance healthy digestion & metabolism.
- Food eating habits and personalized dietary modifications

References: 1,2,3,4,5,6,7,130

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO7	Describe Aahar Vidhi Vidhana and its significance in digestion, absorption and metabolism	2	Lecture	CC	Knows-how	DIS,IBL
CO1,CO2,CO4	Demonstrate knowledge of the Aahar Vidhi Vidhana to analyze health status according to various seasons.	2	Practical Training 18.3	PSY-GUD	Shows-how	L&GD,IBL
CO2,CO4,CO6	Prepare daily diary to note the practice Aahar Vidhi Vidhana	2	Practical Training 18.4	PSY-GUD	Shows-how	IBL
CO2,CO4,CO6	Appraise the influence of Aahar Vidhi Vidhana in various health conditions (e.g., Obesity, Diabetes and Hypertension etc) in parspective Dosha, Dushya and Mala.	2	Experiential-Learning 18.3	AFT-RES	Does	C_L,IBL,LRI
CO6	Integrate Ayurvedic principles with nutritional science in perspective of Aahar Vidhi Vidhana.	2	Experiential-Learning 18.4	AFT-RES	Does	C_L,DIS,JC

M 18 Unit 3 Dwadasha Aashana Pravichara

- Dwadasha Ashana Pravichara
- Recent Dietary practices.

References: 1,2,3

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Describe Dwadashan Ashana Pravichar	2	Lecture	CC	Knows-how	LS,BS
CO4,CO7	Demontrate the knoweldge of Dwadasha Ashana Pravichara in perspective of dietetics	4	Practical Training 18.5	PSY-GUD	Shows-how	RLE,CBL
CO2,CO3,CO7	Evaluate Dwadasha Ashana Pravichara	4	Experiential-Learning 18.5	AFT-RES	Does	BS,JC,SY,TPW

M 18 Unit 4 Viruddha Aahara

- Overview of Viruddha Aahara
- Viruddha Aahara & its impact of digestion, absortion and metabolism

References: 1,2,3,4,5,6,7,126,127,128,129,130

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4	Apply concept of incompatible food combinations as per dietary principles and identify specific foods and substances that support daily health and well being.	2	Lecture	CAP	Knows-how	BS,L&PPT ,IBL,L&GD
CO2,CO4,CO6	Compile & record the Virudha Aahar.	2	Practical Training 18.6	PSY-MEC	Shows-how	LS,DIS,C_L
CO7,CO8	Develop a personalized nutrition plan that incorporates daily consumable substances avoiding incompatible food to enhance health.	2	Practical Training 18.7	PSY-ADT	Shows-how	DIS,BS,CBL
CO2,CO4,CO6	Review Published articles on Virudha Aahar.	4	Experiential-Learning 18.	AFT-RES	Shows-how	L&PPT ,JC

			6			
CO2,CO4,CO6	Evaluate compatible and incompatible dietary practices and daily consumable substances to recognize food combinations that support optimal digestion and overall health.	4	Experiential-Learning 18.7	AFT-RES	Does	IBL,LS

M 18 Unit 5 Bioavailability and Absorption of Nutrient

- Bioavailability and nutritional perspectiveis of Peyadi Dravya or Varga/ Anupana
- Bioavailability and a food matrix, liberation, absorption, distribution, metabolism and elimination phases (LADME)

References: 126,127,128,130

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Corroborate the role of Peyaadi Aahrariya Dravya in nutrition and their significance in enhancing the bioavailability of nutrients.	2	Lecture	CAP	Knows-how	L_VC,L&PPT ,JC,LS
CO6,CO7	Compile & record customized Peyaadi Dravya according to individual Prakruti Saarata, Desh, Kaal etc	4	Practical Training 18.8	PSY-MEC	Shows-how	RLE,PAL ,PBL
CO2,CO3,CO5	Discuss the effects of Anupana (Peyaadi Dravya/ Varga) on digestion, absorption and utilization of various nutrients.	4	Experiential-Learning 18.8	AFT-VAL	Does	LS,JC

Practical Training Activity

Practical Training 18.1 : Knowledge of the Aahar Vidhi Visheshaytana to analyze various seasons, customs & tradition to consume meal.

Teacher will instruct students to analyze the properties of different food items based on these various factors, evaluating their suitability for various individual constitutions and situations.

Practical Training 18.2 : Diet chart based on the knowledge of the eight factors of Ahara Vidhi Visheshaytana.

Teacher will instruct the students to identify food items available in respective habitat & Prepare diet chart based on the knowledge of the eight factors of Ahara Vidhi

Visheshaytana.
Practical Training 18.3 : Knowledge of the Aahar Vidhi Vidhana to analyze various seasons, customs & tradition to consume meal.
Teacher will demonstrate knowledge of the Aahar Vidhi Vidhana to analyze health status according to various seasons. Students will analyse impact of these practices in health status in 2 individuals.
Practical Training 18.4 : Daily diary to note the practice Aahar Vidhi Vidhana
Teacher will instruct the students to investigate food consumption habits in present life style & Prepare self recorded daily diary for the one week to note the food consumption habits and record Aahar Vidhi Vidhana daily dairy and discuss the predictive lifestyle disorders.
Practical Training 18.5 : Dwadasha Ashana Pravichara in perspective of dietetics
Teacher will demonstrate the structured format of diet chart considering Dwadasha Ashana Pravichara. Students will be asked to assess same using above format on 02 individuals in various health conditions such as Agni mandya & note down the observations.
Practical Training 18.6 : Compile & record the Virudha Aahar.
Teacher will instruct to students identify incompatible food items combination consumed in present days. Prepare diet chart based on the knowledge of the Nitya sevaniya dravya by avoiding identified incompatible food items combination
Practical Training 18.7 : Personalized nutrition plan that incorporates daily consumable substances avoiding incompatible food to enhance health.
Students will record compatible and incompatible dietary practice of five participants. Students will analyse combinations, by using prepared checklist to identify incompatible foods in their daily diets. Students will prepare tailormade diet plan that incorporate Nity sevaniya Ahariya Dravya .
Practical Training 18.8 : Customized Peyaadi Dravya according to individual Prakruti Saarata, Desh, Kaal etc
Teacher will discuss about the Peyadi dravya / Varga followed by its significance. Teacher will instruct to enlist the Anupan with its Guna, karma, Rasa Virya Vipak etc. Further each student will prepare customized Anupana according to individual Prakruti Saarata, Desh, Kaal etc.
Experiential learning Activity

Experiential-Learning 18.1 : influence of specific dietary regulations in various health conditions (e.g., Obesity Diabetes and Hypertension etc.) in perspective of Dosha, Dushya and Mala.
Students will assess influence of specific dietary regulations of 3 cases in various health conditions (e.g., Obesity Diabetes and Hypertension etc.) & analyse the affected physiological balance in perspective of Dosh, Dhatu and Mala .
Experiential-Learning 18.2 : Ayurvedic principles with nutritional science in perspective of nutrition & malabsorption on the basis of WHO data base.
Students will access the WHO data base to review prevalence of Malnutrition. Student will discuss & note the strategies by integrating Ayurvedic principles with nutritional science. Students will present and justify strategies to rectify physiological pathways, disease progression of malnutrition.
Experiential-Learning 18.3 : Influence of Aahar Vidhi Vidhana in various health conditions (e.g., Obesity, Diabetes and Hypertension etc) in parspective Dosha, Dushya and Mala.
Students will assess influence of Aahar vidhi vidhan amomg 3 cases in various health conditions (e.g., Obesity Diabetes and Hypertension) & analyse the affected physiological in perspective of Dosh, Dhatu and Mala
Experiential-Learning 18.4 : Ayurvedic principles with nutritional science in perspective of Aahar Vidhi Vidhana.
Student will Integrate Ayurvedic principles with nutritional science by reviewing 5 research publications in perspective of Aahar Vidhi Vidhana .
Experiential-Learning 18.5 : Dwadasha Ashana Pravichara
Students will compile 5 research publications related to Dwadasha Ashana Pravichara . Students will prepare presentation on compiled publications followed by discussion with teacher on various model & Dwadasha Ashana Pravichar discussed in research article.
Experiential-Learning 18.6 : Review Published articles on Virudha Aahar.
Students will compile 5 research publications related to Virudha Aahar. Students will prepare presentation on compiled publications followed by discussion with teacher on various tools & methods for followed in research article.
Experiential-Learning 18.7 : Compatible and incompatible dietary practices
Student will interview 2 participants & record their personal eating habits and food combinations. They will prepare a checklist of incompatible pairings. Through group discussions and activities; they'll identify effects on digestion and assess how to apply food compatibility principles to improve eating habits.

Experiential-Learning 18.8 : Effects of Anupana (Peyaadi Dravya/ Varga) on digestion, absorption and utilization of various nutrients.

Students will compile 5 research publications related to Peyadi Dravya/ Varga. they will prepare presentation on compiled publications followed by discussion with teacher on various assessment parameters & methods described to discuss effects of Anupana (Peyadi Dravya/ Varga) on digestion, absorption and utilization of various nutrients.

Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. • Each student will be given a real life scenario to evaluate the applied physiology or clinical physiology points. Student will be mention summary of the given real life scenario emphasizing the each components (50 marks) OR Any practical in converted form can be taken for assessment.(25 marks) and Any of the experiential as portfolio/ reflections / presentations/making charts, models etc can be taken as an assessment.(25 marks)	4

Semester No : 4

Module 19 : Koshtang- Avayaya Parichaya Part -1

Module Learning Objectives
(At the end of the module, the students should be able to)

- Describe functional anatomy of assesary organs & their physiology involved digestion & metabolism
- Conduct Microscopic examination of assessary organs associated with digestion & metabolism
- Examine assessary organs associated in digestion & Metabolism with clinical skills.

M 19 Unit 1 Accessory organs involved in digestive process

- Microscopic structure of accessory organs involved in digestive process e.g. Teeth, Tongue, Glottis, Epiglottis, salivary glands, liver, gallbladder, and pancreas etc in digestion process.
- Significance of functional anatomy.
- Examination of Oral cavity

References: 8,33,34,50,57,58,62,70,108

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Appraise the role of Teeth , Tongue, Glottis, Epiglottis and salivary glands in digestion process.	1	Lecture	CAN	Knows-how	DIS,L_VC
CO1,CO3	Appraise the role of liver, gallbladder and pancreas etc, in digestion process.	2	Lecture	CAN	Knows-how	DIS,L_VC
CO1,CO5	Conduct microscopic histological examination of Teeth &Tongue	1	Practical Training 19.1	PSY-GUD	Shows-how	DL,L_VC
CO1,CO5	Conduct microscopic histological examination of Glottis, Epiglottis, and salivary glands.	2	Practical Training 19.2	PSY-GUD	Does	L_VC,DL
CO1,CO5	Conduct microscopic histological examination of liver, gallbladder, and pancreas .	2	Practical Training 19.3	PSY-GUD	Shows-how	L_VC,DL
CO5,CO6,CO7	Assess examination of Teeth	2	Experiential-Learning 19.1	AFT-REC	Does	L_VC,SIM,D-M,D-BED
CO4,CO5,CO7	Perform oral cavity examination	2	Experiential-Learning 19.2	AFT-RES	Does	SIM,D-BED,D-M,L_VC
CO1,CO3,CO7,CO8	Perform Teeth and Oral cavity examination	2	Practical Training 19.4	PSY-GUD	Shows-how	CBL,D-BED

M 19 Unit 2 Composition, Function Mechanism and regulation of Secretions

- Description of Saliva, gastric, pancreatic, intestinal juices & bile secretions
- Interpratation of Lab Reports.
- Imaging Technique

References: 5,8,10,33,34,50,57,58,62,70,108

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO6	Discuss the Composition, Function , Mechanism and regulation of Secretions of saliva, gastric, pancreatic, intestinal juices & bile secretions.	1	Lecture	CC	Knows-how	L,DIS,L_VC,LS
CO1,CO2,CO6	Discuss the secretory Functions of the Alimentary Tract	1	Lecture	CC	Knows-how	L_VC,L&PPT ,DIS
CO5,CO6,CO7	Assess X-ray and USG imaging techniques focusing digestive organs.	1	Practical Training 19.5	PSY-GUD	Shows-how	L_VC,DL,D-M,PrBL
CO1,CO6	Assess CT and PET scan imaging techniques focusing digestive organs.	2	Practical Training 19.6	PSY-GUD	Shows-how	LRI,L_VC,DL
CO4,CO5,CO6	Interpret the Laboratory reports in preview of digestion process.	4	Experiential-Learning 19.3	AFT-REC	Does	PBL,LRI,PER
CO4,CO5,CO6	Review various kind of assays used in research Articles.	5	Experiential-Learning 19.4	AFT-SET	Does	DIS,JC,PrBL,LS,PAL

Practical Training Activity

Practical Training 19.1 : Histology of Teeth & Tongue

Teacher will demonstrate and exhibit microscopic histological examination of the Teeth and Tongue . Student will identify cellular components and tissue structure of Teeth and Tongue. Student will discuss with mentor/ peer the relationship between structure and function.
Practical Training 19.2 : Histology of Glottis, Epiglottis, and salivary glands.
Teacher will demonstrate and exhibit microscopic histological examination of the Glottis, Epiglottis, and salivary glands. Student will identify cellular components and tissue structure of Glottis, Epiglottis, and salivary glands. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 19.3 : Histology of liver, gallbladder, and pancreas
Teacher will demonstrate and exhibit microscopic histological examination of the liver, gallbladder, and pancreas . Student will identify cellular components and tissue structure of liver, gallbladder, and pancreas student will discuss with mentor/ peer the relationship between structure and function
Practical Training 19.4 : Teeth and Oral cavity examination
Teacher will demonstrate Teeth and Oraal cavity examination including tongue, glotis epiglotts etc an as it is a diagnostic & prognostic tool for GIT. Students will record the findings the color, coating, shape, and moisture levels etc. of oral cavity including tongue, glottis epiglotts etc.
Practical Training 19.5 : X-ray and USG imaging techniques focusing digestive organs.
Teacher will demonstrate the interpretation of abdominal X-ray and USG scan images focusing on key digestive organs such as the stomach, intestines, liver, and pancreas. Students will then analyze selected images to identify abnormalities like gas patterns, masses, or metabolic hotspots and correlate them with digestive disorders.
Practical Training 19.6 : CT and PET scan imaging techniques focusing digestive organs.
Teacher will demonstrate the interpretation of abdominal CT and PET scan images focusing on key digestive organs such as the stomach, intestines, liver, and pancreas. Students will then analyze selected images to identify abnormalities like gas patterns, masses, or metabolic hotspots and correlate them with digestive disorders.
Experiential learning Activity
Experiential-Learning 19.1 : Examination of Teeth
Students will perform 02 cases for examination of teeth and will capture photographs of theeth by following ethics, behaviour & confidentiality of volunteers. Students

will record the findings the teeths's color, coating, shape, and moisture levels etc. Students will presents the findings & discuss digestive health, nutrient deficiencies.

Experiential-Learning 19.2 : Oral cavity examination

Students will perform two cases for oral cavity examination including tongue, glotis epiglotts etc an as it is a diagnostic & prognostic tool for GIT. Students will record the findings the color, coating, shape, and moisture levels etc. of oral cavity including tongue, glottis epiglotts etc. Students will presents the findings & discuss digestive health, nutrient deficiencies.

Experiential-Learning 19.3 : Laboratory reports in preview of digestion process.

Interpret the Laboratory reports in preview of digestion process. Student will Interpret the 5 cases each of Laboratory reports e.g. LFT, Lipid Profile, Electrolytes etc. and they will discuss the pathophysiology involved in complete digestion process.

Experiential-Learning 19.4 : Review various kind of assays used in research Articles.

Students will compile 5 research publications related to digestion process.They will prepare presentation on compiled publications followed by discussion with teacher on various assessment parameters & methods described to discuss significance of respective assay & digestive Process.

Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 25 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. • Evaluation of summary reports of demonstrations, experiments in the lab, or bed side observations, Clinical Examination, Case Presentation, mini-CEX. The report will be evaluated on the basis of active participation during the practical/lab, observation book detailing the observations during the visit/lab, and record-keeping (25 marks) OR Any practical / clinical examination/ bed side Demonstration in converted form can be taken for assesment (25 marks)	2

Module 20 : Koshtang- Avayaya Parichaya Part -2

Module Learning Objectives

(At the end of the module, the students should be able to)

- Interpret the role of the alimentary canal in digestion, absorption, and excretion.
- Conduct microscopic examination the of each part of the alimentary canal
- Evaluate the physiology of dysfunctions of the alimentary canal affect overall health.

M 20 Unit 1 Study of GIT

- Functional anatomy & microscopic structures of GIT .
- Histolgy of GIT

References: 8,9,11,33,34,62,65,108

3A	3B	3C	3D	3E	3F	3G
CO1,CO6	Describe General Principles of Alimentary Tract secretion, absorption and assimilation.	1	Lecture	CC	Knows-how	L_VC,L&PPT ,D-M,DIS
CO1,CO6	Descibe General Principles of GIT Function such as Motility, Nervous Control, and Blood Circulation.	1	Lecture	CC	Knows-how	L_VC,DIS,C_L
CO1,CO3,CO6	Discuss the Autonomic Stimulation of Secretion and Dual effect of sympathetic Stimulation on Alimentary Tract and Glandular Secretion Rates.	1	Lecture	CC	Knows-how	D-M,L_VC,DIS
CO3,CO5	Conduct microscopic histological examination of Oesophagus.	2	Practical Training 20.1	PSY-GUD	Shows-how	DL,D-M
CO1,CO3,CO5	Conduct microscopic histological examination of Stomach and find the difference of microscopic structure at areas of stomach.	4	Practical Training 20.2	PSY-GUD	Shows-how	D-M,DL,L_VC,DIS

CO4,CO5	Conduct microscopic histological examination of Duodenum.	2	Practical Training 20.3	PSY-GUD	Shows-how	DL,D-M
CO1,CO3,CO5	Conduct microscopic histological examination of small Intestine.	2	Practical Training 20.4	PSY-GUD	Shows-how	DL,L_VC
CO1,CO3,CO5	Conduct microscopic histological examination of Caecum.	2	Practical Training 20.5	PSY-GUD	Shows-how	DIS,DL,L_VC,D-M,L&PPT
CO1,CO3,CO5	Conduct microscopic histological examination of Appendix.	2	Practical Training 20.6	PSY-GUD	Shows-how	DL,L_VC,D-M
CO1,CO3,CO5	Conduct microscopic histological examination of Large intestine.	2	Practical Training 20.7	PSY-GUD	Shows-how	DL,D-M,L_VC
CO1,CO3,CO5	Conduct microscopic histological examination of Rectum.	2	Practical Training 20.8	PSY-GUD	Shows-how	D-M,DL,L&GD
CO1,CO3,CO5	Conduct microscopic histological examination of Anus.	2	Practical Training 20.9	PSY-GUD	Shows-how	DL,L_VC,D-M
CO3,CO6	Interpret the histopathological research studies related GIT	2	Experiential-Learning 20.1	AFT-REC	Does	LRI,JC,DIS

M 20 Unit 2 Biochemistry of Macronutrients, micronutrient, Bile pigments & salts

- Biochemistry of Macronutrients
- Biochemistry of Micronutrient
- Biochemistry of Bile pigments & salts

References: 8,9,10,11,12,32,33,62

3A	3B	3C	3D	3E	3F	3G

CO1,CO3	Describe Biochemistry of Macronutrients, Micronutrients, Bile pigments & salts	3	Lecture	CC	Knows-how	TPW,L& PPT ,LS,DIS
CO4,CO5	Perform lab test to investigate the total concentration of Macronutrients , bile Salt & Bile Pigments in Blood & Urine.	4	Practical Training 20.10	PSY-GUD	Shows-how	L_VC,DL
CO4,CO5	Perform lab test to investigate the total concentration of Micronutrients in Blood.	4	Practical Training 20.11	PSY-GUD	Shows-how	PAL,DL
CO4,CO5,CO6	Interpret lab investigations related to Macronutrients , Bile Salt & Bile Pigments in Blood & Urine	3	Experiential-Learning 20.2	AFT-RES	Does	CBL,LRI, DIS
CO4,CO5,CO6	Evaluate the research articles related to lab investigations related to Macronutrient, Bile Salt & Bile Pigments in Blood & Urine	3	Experiential-Learning 20.3	AFT-RES	Does	PER,JC,L &GD
CO4,CO5,CO6	Interpret lab investigations related to Micronutrient in Blood.	3	Experiential-Learning 20.4	AFT-REC	Does	LRI,CBL, L&PPT
CO3,CO6	Evaluate the research articles related to lab investigations pertaing to Micronutrients in Blood.	3	Experiential-Learning 20.5	AFT-SET	Does	JC,DIS

M 20 Unit 3 Digestion and metabolism of proteins, fats and carbohydrates

- Physiology of digestion, absorption & metabolism of proteins.
- Physiology of digestion, absorption & metabolism of fats .
- Physiology of digestion, absorption & metabolism of carbohydrates.

References: 5,6,7,8,9,10,16,20,21,30,34,35,36,53,61,62,66,67,68,70,72,73,75,76,77,80,87

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Describe digestion and metabolism of proteins, fats and carbohydrates.	3	Lecture	CC	Knows-how	C_L,L&PPT ,LS,L_VC
CO5,CO6,CO7	Evaluate the simulation/ virtual Realty techniques available to construct the knowledge of Digestion and metabolism of proteins.	3	Experiential-Learning 20.6	AFT-REC	Does	L_VC,SIM
CO5,CO6,CO7	Evaluate the simulation/ virtual Realty techniques available to construct the knowledge of Digestion and metabolism of fats .	3	Experiential-Learning 20.7	AFT-REC	Does	SIM,L_VC
CO5,CO6,CO7	Evaluate the simulation/ virtual Realty techniques available to construct the knowledge of digestion and metabolism of carbohydrates.	4	Experiential-Learning 20.8	AFT-REC	Does	SIM,L_VC

M 20 Unit 4 Applied physiology of gut & Gut Movement

- Gut motility and motility disorders.
- Clinical Examination of Abdomen

References: 8,33,34,35,62,73,75

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Describe general Principles of Gastrointestinal Function—Motility, Nervous Control, and Blood Circulation.	2	Lecture	CC	Knows-how	BS,DIS,C_L
CO1,CO3	Discuss propulsion and Mixing of Food in the Alimentary Tract.	1	Lecture	CC	Knows-how	RLE,SIM,L_VC,C_L

CO5,CO7	Perform per abdominal examination focusing on the gastrointestinal tract	3	Experiential-Learning 20.9	AFT-REC	Does	L_VC,D-BED,CBL
CO3,CO6	Evaluate the diagnostic clues in cases of Vomiting, Diarrhoea, Constipation , Hepatitis, etc	3	Experiential-Learning 20.10	AFT-SET	Does	L_VC,CBL,D-BED
CO4,CO6	Demonstrate the Per Abdomen clinical examination.	2	Practical Training 20.12	PSY-GUD	Shows-how	D,D-BED,CBL

M 20 Unit 5 Gut - Organ axis

- Gut organ axis in functions with relation to GIT

References: 8,30,33,34,35,62,65

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Describe of gut organ axis in functions with relation to GIT	2	Lecture	CK	Knows-how	C_L,L&PPT ,LS
CO5,CO6	Identify the involved gut and extraintestinal organs related pathways.	3	Experiential-Learning 20.11	AFT-SET	Does	DIS,JC,L_VC

M 20 Unit 6 Physiological Aspect of disorder of GIT

- Pathophysiology involed in Swallowing, or Deglutition,
- Pathophysiology involed in Constipation,
- Pathophysiology involed in Diarrhea,
- Pathophysiology involed in Vomiting

References: 8,10,11,12,13,15,33,34,45

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO8	Evaluate pathophysiology of Disorders of GIT.	1	Lecture	CAN	Knows-how	DIS,IBL, RLE
CO4,CO5,CO8	Analyse general disorders of Gastrointestinal Tract disorders.	2	Experiential-Learning 20.12	AFT-SET	Does	L_VC,RP,D-BED
CO3,CO5,CO8	Analyse the physiology of disorders of swallowing , Oesophagus and Stomach.	2	Experiential-Learning 20.13	AFT-RES	Does	CBL,BL, D-BED
CO3,CO5,CO8	Analyse disorders of the Large Intestine.	2	Experiential-Learning 20.14	AFT-RES	Does	CBL,D-BED,L_VC

Practical Training Activity

Practical Training 20.1 : Microscopic histological examination of Oesophagus.

Teacher will demonstrate and exhibit microscopic histological examination of the Oesophagus. Student will identify cellular components and tissue structure of Oesophagus. Student will discuss with mentor/ peer the relationship between structure and function.

Practical Training 20.2 : Microscopic histological examination of Stomach and find the difference of microscopic structure at areas of stomach.

Teacher will demonstrate and exhibit microscopic histological examination of the areas of stomach. Student will identify cellular components and tissue structure at areas of stomach. Student will discuss with mentor/ peer the relationship between structure and function

Practical Training 20.3 : Microscopic histological examination of Duodenum.

Teacher will demonstrate and exhibit microscopic histological examination of Duodenum. Student will identify cellular components and tissue structure of Duodenum. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 20.4 : Microscopic histological examination of small Intestine.
Teacher will demonstrate and exhibit microscopic histological examination of the small Intestine. Student will identify cellular components and tissue structure of small Intestine. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 20.5 : Microscopic histological examination of Caecum.
Teacher will demonstrate and exhibit microscopic histological examination of the Caecum. Student will identify cellular components and tissue structure of Caecum. Student will discuss with mentor/ peer the relationship between structure, functions.
Practical Training 20.6 : Microscopic histological examination of Appendix.
Teacher will demonstrate and exhibit microscopic histological examination of the Appendix. Student will identify cellular components and tissue structure of Appendix. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 20.7 : Microscopic histological examination of Large intestine.
Teacher will demonstrate and exhibit microscopic histological examination of the Large intestine. Student will identify cellular components and tissue structure of Large intestine. Student will discuss with mentor/ peer the relationship between structure and function.
Practical Training 20.8 : Microscopic histological examination of Rectum.
Teacher will demonstrate and exhibit microscopic histological examination of the Rectum. Student will identify cellular components and tissue structure of Rectum. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 20.9 : Microscopic histological examination of Anus.
Teacher will demonstrate and exhibit microscopic histological examination of the Anus. Student will identify cellular components and tissue structure of Anus. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 20.10 : Lab test to investigate the total concentration of Macronutrients , bile Salt & Bile Pigments in Blood & Urine.
Teacher will discuss & demonstrate the various methods of lab test to investigate total concentration of Macronutrient in Blood for e.g Blood Sugar Levels, GTT, HbA1C,

LFT , Lipidprofile. Teacher will discuss & demonstrate practical to determine abnormal constituents present in urine.
Practical Training 20.11 : Lab test to investigate the total concentration of Micronutrient in Blood.
Teacher will discuss & demonstrate the various methods such as cellular micronutrients assay test, Vit B12, Vit D, Serum Calcium etc to investigate total concentration of micronutrients in Blood
Practical Training 20.12 : Per Abdomen clinical examination.
Teacher will demonstrate the Per Abdomen clinical examination ertaining to gastrointestinal Tract. Teacher will explain and follow SOPs to perform PA examination. Inspection, Palpation, Ausculation & percussion of abdomen will be done & findings will be recorded.
Experiential learning Activity
Experiential-Learning 20.1 : Histopathological research studies related GIT
Student will interpret five Histopathological Laboratory reports related to GIT organs and they will discuss the pathophysiology involved in complete digestion process.
Experiential-Learning 20.2 : Lab investigations related to Macronutrients , Bile Salt & Bile Pigments in Blood & Urine
Students will take 5 cases each to interpret lab investigations related to Macronutrient s, Bile Salt & Bile Pigments in Blood & Urine . Students will record the findings of all investigations and they will discuss the pathophysiology involved in complete digestion process. Students will presents the findings.
Experiential-Learning 20.3 : Research articles related to lab investigations related to Macronutrient, Bile Salt & Bile Pigments in Blood & Urine
Students will compile 5 research publications related to Macronutrient, Bile Salt & Bile Pigments in Blood & Urine. Students will prepare presentation on compiled publications followed by discussion with teacher on lab investigations & methods for followed in research article.
Experiential-Learning 20.4 : Lab investigations related to Micronutrient in Blood.
Students will interpret 5 cases each lab investigations related to Micronutrient in Blood. Students will record the findings of all investigations and they will discuss the pathophysiology involved in complete digestion process. Students will presents the findings.
Experiential-Learning 20.5 : Evaluate the research articles related to lab investigations pertaing to Micronutrients in Blood.
Students will compile 5 research publications related to to Micronutrient . Students will prepare presentation on compiled publications followed by discussion with teacher on lab investigations & methods for followed in research article.

Experiential-Learning 20.6 : Simulation/ virtual Realty techniques available to construct the knowledge of Digestion and metabolism of proteins.
Students will evaluate the available techniques such as simulation/ virtual Realty to construct the knowledge of digestion and metabolism of proteins available at open access. Students will watch the videos based on digestion and metabolism of proteins.
Experiential-Learning 20.7 : Simulation/ virtual Realty techniques technics available to construct the knowledge of Digestion and metabolism of fats .
Students will evaluate the available techniques such as simulation/ virtual to construct the knowledge of Digestion and metabolism of fat available at open access. Students will watch the videos based on Digestion and metabolism of fats.
Experiential-Learning 20.8 : Simulation/ virtual Realty techniques available to construct the knowledge of digestion and metabolism of carbohydrates
Students will evaluate the available techniques such as simulation/ virtual Realty to construct the knowledge of digestion and metabolism of carbohydrates available at open access. Students will watch the videos based on Digestion and metabolism of proteins.
Experiential-Learning 20.9 : Per abdominal examination focusing on the gastrointestinal tract
Students will perform abdominal examinations to evaluateGI cases like vomiting, diarrhoea, constipation, hepatitis, etc. They will follow standard operating procedures (SOPs) to conduct physical abdominal examination, including inspection, palpation, auscultation, and percussion. All findings will be systematically recorded
Experiential-Learning 20.10 : Diagnostic clues in cases of Vomiting, Diarrhoea, Constipation , Hepatitis, etc
Students will perform an abdominal examination of pertaining to Evaluate the diagnostic clues in 3 each cases of Vomiting, Diarrhoea, Constipation , Hepatitis, etc . Students will follow SOPs to perform PA examination. Inspection, Palpation, Ausculation & Purcution of abdomen will be dine & findings will be recorded.
Experiential-Learning 20.11 : Involved gut and extraintestinal organs related pathways.
Students will compile 5 research publications related to Gut organ axis . Students will prepare presentation involved gut and extraintestinal organs related pathways discussed in reseach paper followed by discussion with teacher on lab investigations & methods .
Experiential-Learning 20.12 : General disorders of Gastrointestinal Tract disorders.
Students will examine & interpret lab reports such as CBC, LFT, KFT etc. of 5 cases related to general disorders of gastrointestinal tract. Students will record the findings

of all Systemic examination & lab investigations and they will discuss the gastrointestinal malfunction that have special physiological bases or consequences. Students will presents the findings & discuss digestive health, nutrient deficiencies, and potential imbalances pertaining health condition .

Experiential-Learning 20.13 : Physiology of disorders of swallowing ,Oesophagus and Stomach.

Students will examine & interpret lab reports such as CBC, LFT, KFT etc. of 5 cases related to general disorders of Swallowing , Oesophagus and Stomach.Students will record the findings of all Systemic examination & lab investigations and they will discuss the gastrointestinal malfunction that have special physiological bases or consequences. Students will presents the findings.

Experiential-Learning 20.14 : Disorders of the Large Intestine.

Students will examine & interpret lab reports of 5 cases related to general disorders of Large Intestine. Students will record the findings of all Systemic examination & lab investigations and they will discuss the gastrointestinal malfunction that have special physiological bases or consequences. Students will presents the findings & discuss digestive health, nutrient deficiencies, and potential imbalances pertaining health condition.

Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 75 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. • Evaluation of summary reports of demonstrations, experiments in the lab, or bed side observations, Clinical Examination, Case Presentation, mini-CEX. The report will be evaluated on the basis of active participation during the practical/lab, observation book detailing the observations during the visit/lab, and record-keeping (75 marks) OR • Any practical / clinical examination/ bed side Demonstration in converted form can be taken for assesment (40 marks) and • Any of the experiential as portfolio/ reflections / presentations can be taken as assessment (35 Marks)	6

Semester No : 5

Module 21 : Agni and Koshta

Module Learning Objectives

(At the end of the module, the students should be able to)

- Interpret the role of Agni and Koshta in digestion, absorption, metabolism and immunity with Description of Avasthapaka (stage-wise digestion in the GI tract) and Nishthapaka (tissue-level digestion).
- Perform by comparing Agni assessing tools with that of advanced digestive assessment tools
- Evaluate types of Agni, Koshta and Ama with present-day knowledge

M 21 Unit 1 Jatharagni Paka and Digestive physiology

- Mechanism of Jatharagni Paka - sequential transformation of Aahara and its regulation by Agni (digestive fire).
- Compare Jatharagni activity with gastric secretion, enzyme action, bile release, and intestinal absorption.
- Comparison of Agni Assessment Tools and Digestive Health Questionnaires
- Evaluation of Digestive Efficiency

References: 1,2,3,4,5,6,7,8

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Analyse function of Agni as essential regulator for digestion, nutrient availability and waste elimination.	2	Lecture	CK	Knows-how	L&GD,L_VC,L&PPT
CO1,CO2,CO3	Perform and demonstrate digestive efficiency by comparing Agni assessment tools with advanced digestive assessment tools.	8	Practical Training 21.1	PSY-GUD	Shows-how	D,D-BED
CO1,CO2,CO3,CO4	Evaluate and compare available digestive health questionnaires to assess digestive efficiency	6	Experiential-Learning 21.1	CE	Does	DIS,PL,PAL

M 21 Unit 2 Dhatwagni Paka and Bhutagnipaka

- Sequential Role in Digestion and Metabolism - Jatharagni, Bhutagni, and Dhatwagni in a hierarchical manner for the digestion, transformation, and assimilation of

nutrients.

- Functional Correlation with Digestive Physiology – Interpret Bhutagni as responsible for elemental processing and Dhatwagni as tissue-specific metabolism, comparable to cellular enzymatic and anabolic processes.
- Dhatwagni and Bhutagni in applied physiology.

References: 1,2,3,4,5,6,7,8

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Interpret the role of Dhatwagni relation to digestive physiology.	1	Lecture	CK	Knows-how	L&PPT
CO1,CO2	Interpret the role of *Bhutagni in* digestive physiology.	1	Lecture	CK	Knows-how	L&PPT ,L&GD
CO1,CO2,CO3 ,CO5	Evaluate Dhatwagni and Bhutagni functions with applied physiology	8	Experiential-Learning 21. 2	CC	Does	PL,DIS

M 21 Unit 3 Avasthapaka and Nishtapaka

- Description of Avasthapaka with related stage wise digestive physiology.
- Description of Nishthapaka with related stage wise digestive physiology.
- Phases of digestion and nutrient sensing.

References: 1,2,3,4,5,6,7,8

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO5	Interpret Avasthapaka and Nishtapaka with Digestive physiology.	2	Lecture	CK	Knows-how	DIS
CO1,CO2,CO3	Evaluate concepts of Avasthapaka and Nishtapaka in digestion by analyzing stages of transformation	4	Experiential-Learning 21. 3	CE	Does	JC,LS

M 21 Unit 4 Concept of Ama in Agnimandya

- Ama and Agnimandya – formation of Ama and its role in initiating disease.
- Ama - oxidative stress, free radical accumulation, and poor metabolic detoxification.
- Evaluation of Ama Lakshanas .

References: 1,2,3,4,33,35

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Interpret the concept of Ama and Agnimandya with antioxidants, free radicals and oxidative stress	2	Lecture	CC	Knows-how	L&GD
CO1,CO2,CO3,CO5	Perform the assessment of Ama Lakshana in subjects with Agnimandya	6	Practical Training 21.2	PSY-GUD	Shows-how	D-BED,D
CO1,CO2,CO3,CO5	Evaluate the concepts of Ama and Agnimandya in the context of recent developments, drawing key comparisons with advanced physiological understandings such as endotoxins, metabolic waste, and digestive inefficiencies.	4	Experiential-Learning 21.4	CC	Does	LS,JC

M 21 Unit 5 Koshta and its variations

- Significance of Koshta with understanding of Digestion Patterns.
- Variations in Koshta in GI disorders.
- Dietary Practices for effective functioning of Koshta.

References: 1,2,3,4,5,8

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Analyse the applied physiology of Kostha in relation to pathologies associated with different *Kostha* types	2	Lecture	CAN	Knows-how	L&GD,SIM

CO1,CO2,CO3 ,CO5	Demonstrate and assess Koshta to enhance knowledge in digestion and nutrient absorption in normal and organ-transplanted individuals.	6	Practical Training 21.3	PSY-GUD	Shows-how	TBL,CBL ,D-BED
CO1,CO2,CO3 ,CO5	Assess Koshta and correlate it with the underlying pathophysiological mechanisms	4	Experiential-Learning 21.5	CAP	Does	CBL,D-BED

Practical Training Activity

Practical Training 21.1 : Digestive efficiency by comparing Agni assessment tools with advanced digestive assessment tools.

Teacher will demonstrate the method of using advanced digestive health questionnaires (e.g., DQLQ, GSRS, PAC-SYM) and Agni assessment tools. Students will critically evaluate these tools through analysis and compare their applicability in assessing digestive efficiency in two individuals.

Practical Training 21.2 : Assessment of Ama Lakshana in subjects with Agnimandya

Teacher will demonstrate how to identify Ama Lakshana through clinical observation and classical descriptions in individuals with Agnimandya. Students will then perform assessments of two case profiles to recognize signs of Ama and document their findings.

Practical Training 21.3 : Assessment of Koshta to enhance knowledge in digestion and nutrient absorption in normal and organ-transplanted individuals.

Teacher will demonstrate assessment of Koshta types using standardized assessment tools and relate them with digestion and nutrient absorption in one healthy and one organ-transplanted individual. Students will then apply a comparative assessment to analyze differences in digestive patterns between the two cases.

Experiential learning Activity

Experiential-Learning 21.1 : Digestive health questionnaires to assess digestive efficiency

Students will critically evaluate various digestive health questionnaires (e.g., DQLQ, GSRS, PAC-SYM) through analysis and compare with agni assessment tools. They will compare their structure, focus areas, and applicability in assessing digestive efficiency.

Experiential-Learning 21.2 : Dhatwagni and Bhutagni functions with applied physiology

Students will discuss the functions of Dhatwagni and Bhutagni in four sessions of two hours each, drawing connections with contemporary concepts of metabolic and tissue-specific physiology. They will evaluate and engage in peer discussions on how these *agnis* contribute to nutrient transformation and tissue nourishment, and will compile detailed notes based on their discussions.	
Experiential-Learning 21.3 : Concepts of Avasthapaka and Nishtapaka in digestion by analyzing stages of transformation	
Students will evaluate the concepts of Avasthapaka and Nishtapaka in journal club session by analyzing research articles and classical texts that describe the sequential stages of digestion. They will discuss and interpret the transformation of food at each stage,relating Ayurvedic principles with advanced physiology.	
Experiential-Learning 21.4 : Concepts of Ama and Agnimandya in the context of recent developments, drawing key comparisons with advanced physiological understandings such as endotoxins, metabolic waste, and digestive inefficiencies.	
Students will evaluate the concepts of Ama and Agnimandya by comparing Ayurvedic descriptions with advanced physiology parallels such as endotoxins, metabolic waste, and digestive inefficiencies. They will participate in a journal club and library-based activity to critically review relevant literature and document the findings.	
Experiential-Learning 21.5 : Assessment of Koshta and correlate it with the underlying pathophysiological mechanisms	
Students will list various methods of Koshta assessment from classical texts and summarize their relevance to related pathophysiological conditions, such as constipation, irritable bowel syndrome (IBS), or diarrhea. They will analyze 2 case examples to correlate *Koshta* types with clinical presentations and functional digestive disorders.	
Modular Assessment	
Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured theory exam comprising of questions pertaining to Agni ,Avasthapaka , Nishta pak ,koshta ,Ama and applied physiology (50marks) OR Any practical in converted form can be taken for assesment -CBL / Problem based assessment/DOPS,OSPE . (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Module 22 : Grahani and Pittadhara Kala

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the applied physiological roles of Grahani and Pittadhara Kala in digestion and absorption with physiological parallels
- Demonstrate the physiological assessment of digestive efficiency and rrelate findings with possible dysfunctions in Grahani and Pittadhara Kala.
- Evaluate and Design a personalized digestive health prebiotic and probiotic option based on Dosha status and Prakriti.

M 22 Unit 1 Grahani, Pittadhara Kala and role in digestive health

- Anatomical and functional understanding of Grahani and Pittadhara Kala with reference to intestine and gut mucosa.
- Role of Jatharagni and Pittadhara Kala in digestion, absorption, and transformation of food substances and disease manifestation .
- Evaluation of functional significance of Grahani

References: 1,2,3,4,5,6,7,8,35

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Analyse the Sthana and role of Grahani & Pittadhara Kala in maintaining digestive health	2	Lecture	CE	Knows-how	L&GD
CO1,CO2,CO3 ,CO5	Perform and analyze the Sthana of Grahani and Pittadhara Kala	6	Practical Training 22.1	PSY-GUD	Shows-how	D
CO1,CO2,CO3 ,CO5	Evaluate functional significance of Grahani Sthana and Pittadhara kala	6	Experiential-Learning 22. 1	CC	Does	D-M

M 22 Unit 2 Impact of Takra Prayaga on Grahani and digestion

- Effect of prebiotics and probiotics – on growth of healthy gut bacteria, improving the overall function of Grahani

- Role and impact of Takra on Grahani and digestion.
- Personalized application of Takra, prebiotic, and probiotic for functioning of Pittadhara Kala

References: 1,2,3,4,5,119

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Analyze the therapeutic role of *Takra* in enhancing the functional integrity of *Grahani*	2	Lecture	CK	Knows-how	C_L
CO1,CO2,CO3,CO5	Perform, analyse, and list prebiotics and probiotics for the effective functioning of grahani	6	Practical Training 22.2	PSY-MEC	Shows-how	TBL
CO1,CO2,CO5	Design Personalized Prebiotics and Probiotics for the efficient functioning of Grahani and Pithadhara Kala	8	Experiential-Learning 22.2	CE	Does	SDL,TPW

M 22 Unit 3 Applied physiology of Grahani and Pittadhara Kala

- Description of applied physiology of Grahani and Pittadhara Kala
- Impaired Grahani and Pittadhara Kala leading to poor digestion
- Recognizing compatible and incompatible foods to maintain Grahani functions

References: 1,2,3,4,5,6,7,8,35,49,53,78,87,95,118,119

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Correlate Grahani with metabolic processes	3	Lecture	CE	Knows-how	L&GD
CO1,CO2,CO5	Analyse Applied Physiology of Gastrointestinal (GI) Disorders about Grahani and Pittadhara Kala	4	Practical Training 22.3	PSY-GUD	Shows-how	D,D-BED
CO1,CO2,CO5	Evaluate the applied physiology of Grahani and Pittadhara Kala in GI disorders	6	Experiential-Learning 22.	CAP	Does	D-BED,TBL,D

			3			

M 22 Unit 4 Grahani and Pittadhara Kala with recent advancement of gut microbiota

- Gut microbiota in maintaining gut health
- Role of fermented food commonly used by individuals with healthy digestion
- Recent advances in microbiome research, proteomics, and metabolomics, which highlight personalized gut function and metabolic response.

References: 1,2,3,38,123,131,136,137

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Interpret the role of Grahani and Pittadhara Kala with recent advancement of gut microbiota	3	Lecture	CE	Knows-how	L&GD
CO1,CO2,CO3	Perform and list out fermented food usage among individuals with healthy digestion.	4	Practical Training 22.4	PSY-ADT	Shows-how	IBL
CO1,CO2,CO3 ,CO5	Evaluate the concept of Grahani and Pittadhara Kala with the recent development of microbiome analysis, proteomics, and metabolomics	6	Experiential-Learning 22.4	CC	Does	LS,DIS

Practical Training Activity

Practical Training 22.1 : Sthana of Grahani and Pittadhara Kala

Teacher will demonstrate the possible anatomical location (Sthana) of *Grahani* and Pittadhara Kala using charts and models to aid visual understanding. Students will then perform group activities to create their own charts and models

Practical Training 22.2 : Perform, analyse, and list prebiotics and probiotics for the effective functioning of grahani

The teacher will demonstrate and display common prebiotic and probiotic items. Students as a team will observe, identify, and list these items while discussing their effects on digestion

Practical Training 22.3 : Applied Physiology of Gastrointestinal (GI) Disorders about Grahani and Pittadhara Kala

The teacher will demonstrate a case of Grahani Roga by correlating the applied Grahani function. Students will then observe and analyze disturbances of Grahani and disease manifestations, and discuss the role of grahani in disease manifestation.
Practical Training 22.4 : List out fermented food usage among individuals with healthy digestion.
The teacher will display pictures of commonly used fermented foods and discuss their role in supporting healthy digestion through gut flora enhancement. Students will observe, identify, and assess the relevance of these foods in individuals with balanced Grahani function.
Experiential learning Activity
Experiential-Learning 22.1 : Significance of Grahani Sthana and Pittadhara kala
Students will collaboratively map Grahani Sthana and Pittadhara Kala with corresponding gastrointestinal structures.Facilitate a guided discussion to evaluate their clinical relevance.
Experiential-Learning 22.2 : Prebiotics and Probiotics for the efficient functioning of Grahani and Pithadhara Kala
Each student will create personalized prebiotic and probiotic plan based on a single individual's digestive profile to support the efficient functioning of Grahani and Pittadhara Kala, in a session of 4 hours. Conclude with a class discussion to evaluate the rationale behind the plan of each student and its relevance in maintaining digestive balance and preventing Grahani disorders.
Experiential-Learning 22.3 : Applied physiology of Grahani and Pittadhara Kala in GI disorders
Students will evaluate the applied physiology of Grahani and Pittadhara Kala through analysis of the predominance of Grahani dosha in GI disorders. Facilitate a discussion on how dysfunctions in these sites contribute to digestive pathologies based on dosha variations.
Experiential-Learning 22.4 : Concept of Grahani and Pittadhara Kala with the recent development of microbiome analysis, proteomics, and metabolomics
Students will evaluate concepts of Grahani and Pittadhara Kala by correlating them with recent advances in microbiome analysis, proteomics, and metabolomics through curated video presentations. Follow this with a guided discussion to evaluate how these advanced tools and techniques support the Ayurvedic understanding of digestion, nutrient assimilation, and gut health.
Modular Assessment

Assessment method	**Hour**

Conduct a structured Modular assessment. Assessment will be for 50 marks. A structured marking pattern will be followed. Different assessment methods will be used for each module throughout the semester. A record of the structured assessment patterns will be maintained. The modular grade point will be calculated as per the standard protocol Conduct a structured theory exam comprising of questions pertaining applied physiology ofapplications of *Grahani* , *Pittadhara Kala,*gut microbiota , host physiology and metabolomics.(50marks) OR Any practical in converted form can be taken for assesment-skill assessment and discussion . (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Semester No : 6

Module 23 : Dasha Pranayatana, Hrudaya and Agni

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the role Dasha Pranas for health with special reference to cardiac health and supportive role of Agni
- Perform appropriate measures and interventions for enhancing Prana (Pranavardhaka) by enhancing Agni
- Design personalized preventive cardiology strategies based on Ayurvedic principles

M 23 Unit 1 Dasha Pranayatana and supportive role of Agni

- Role of Dasha Pranas for health with special reference to cardiac health
- Measures for enhancing Prana (Pranavardhaka) with support of Agni
- Preventive cardiology strategies based on Ayurvedic principles

References: 1,8,74,87,112,113,114

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyse the supportive role of Agni in Dasha Pranayatana	2	Lecture	CK	Knows-how	DIS,L&GD
CO1,CO3,CO5	Analyze applied physiology of Tri Marma of Dasha Pranayatana	4	Practical Training 23.1	PSY-MEC	Shows-how	CBL,D-BED
CO1,CO3	Evaluate the functional significance of Dasha Pranayatana	8	Experiential-Learning 23.1	CS	Does	JC,DIS

M 23 Unit 2 Arthodasha Mahamuliyam

- Functional anatomy and physiology of Hrudaya
- Hrudayshrita Ghataka and its role in physiology
- Hrudayaghata Lakshnas and its applied aspects

References: 1,8,10,112,113,114

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyse the functional anatomy and physiology of Hrudaya	3	Lecture	CK	Knows-how	L_VC,D-M
CO1,CO3,CO5	Analyse Hrudayshrita Ghatak and its role in physiology	4	Practical Training 23.2	PSY-GUD	Shows-how	DIS,D-BED,D
CO1,CO3,CO5	Evaluate Hrudayaghata Lakshana and its applied aspects	4	Experiential-Learning 23.2	CE	Does	DIS,SDL

M 23 Unit 3 Hrudaya and Dasha Dhamani

- Synonyms of Hrudaya and its physiology

- Differentiate Sira, Dhamani and Srotas
- Applied physiology of Sira and Dhamani

References: 1,2,3,8,16,21,33,34

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyse the description of synonyms of Hrudaya with physiological hints	2	Lecture	CK	Knows-how	DIS,L&PPT
CO1,CO3	Analyse and differentiate Sira, Dhamani and Srotas in the context of Hrudaya	6	Practical Training 23.3	PSY-MEC	Shows-how	DIS,D-M
CO1,CO3	Evaluate applied physiology of Sira and Dhamani	8	Experiential-Learning 23.3	CC	Does	SDL,TBL

M 23 Unit 4 Parirakshana of Hrudaya

- Role of lifestyle for Hrudaya Prirakshana
- Food and lifestyle for effective Hrudaya Parirakshana
- Effective functioning of Prana ,Bala, Brumhana , Ananda, Harshana and Ayana

References: 1,2,3,112,113,114

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Perform and compile food items and lifestyle practices essential for effective Hrudaya Parirakshana	6	Practical Training 23.4	PSY-GUD	Shows-how	D
CO1,CO3	Interpret the role of life style for Hrudaya Parirakshana	3	Lecture	CAN	Knows-how	L_VC,DIS
CO1,CO3	Evaluate the effective functioning of Prana, Bala, Brimhana, Ananda, Harshana, and Ayana	6	Experiential-Learning 23.	CC	Does	SDL,PAL,C_L

			4			

Practical Training Activity

Practical Training 23.1 : Applied physiology of Tri- Marma of Dasha Pranayatana through case-based demonstration

Teacher will demonstrate one case each involving trauma to Hrudaya, Basti, and Shiro Marma—key components of Dasha Pranayatana. Students will observe and analyze the applied physiological responses and interpret Ayurvedic rationale for prognosis

Practical Training 23.2 : Hrudayshrita Ghatak and its role in physiology

Teacher will demonstrate by listing the six anga (Hrudayashrita Ghataka) including Gyanendriya, Indriyarth, Aatman, Mana, Manovishaya, and Hrudaya with their functional associations. Students will analyze their integrated role in governing physiological processes such as perception, cognition, and emotional regulation.

Practical Training 23.3 : Difference between Sira, Dhamani and Srotas in the context of Hrudaya

Teacher will demonstrate with models and charts of Sira, Dhamani, and Srotas to explain their structural features, pathways, and anatomical distinctions. Students will analyze and differentiate their physiological roles in circulation, transport, and systemic integration

Practical Training 23.4 : Food items and lifestyle practices essential for effective Hrudaya Parirakshana

Teacher will demonstrate with a list of food items and lifestyle practices that support Hrudaya Parirakshana, including Hrudaya Priya Aahara, Ojovardhaka Dravyas, and activities that promote Prasannata of the Srotas. Students will assess and compile tables on the relevance of these practices in maintaining cardiovascular health.

Experiential learning Activity

Experiential-Learning 23.1 : Functional significance of Dasha Pranayatana

Students will List and evaluate the functional significance of Dasha Pranayatana , Tri-Marma, Kantha (throat), Rakta, Shukra, Ojas, and Guda—by correlating each with relevant structures and functions in physiology. They will then support the analysis with evidence from PubMed-indexed journals to evaluate parallels in neurovascular, endocrine, reproductive, and immune systems.

Experiential-Learning 23.2 : Hrudayaghata Lakshnas and its applied aspects

Students will discuss and present the Hrudayaghata Lakshana with applied elements such as Murchha and Marana, based on Ayurvedic references. They will correlate these with cardiac emergencies to enhance integrative clinical reasoning.

Experiential-Learning 23.3 : Applied physiology of Sira and Dhamani

Students will make compilation evaluating the applied physiology of Sira and Dhamani, focusing on their structural and functional attributes in the context of Hrudaya . They will correlate these with vascular pathologies such as atherosclerosis, thrombosis, and hypertension

Experiential-Learning 23.4 : Effective functioning of Prana, Bala, Brimhana, Ananda, Harshana, and Ayana

Students will make a listing and discuss the effective functioning of Prana, Bala, Brimhana, Ananda, Harshana, and Ayana . They will evaluate their physiological relevance

Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 50 marks . A structured marking pattern will be followed. Different assessment methods will be used for each module throughout the semester. A record of the structured assessment patterns will be maintained. The modular grade point will be calculated as per the standard protocol Conduct a-Vivo Voce / discussion exam comprising of questions- physiology of Pranayatana, Hridaya, and Hridayashrita Bhavas, and supportive role of Agni (50marks) OR Any practical in converted form can be taken for assesment-skill assessment and discussion . (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Module 24 : Ayu and Agni

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the concept of Ayu and describe the factors favorable for Ayu like Agni (life span) and their Ayurvedic relevance.
- Perform methods of Ayu Pareeksha.
- Evaluate Ayurvedic parameters of Ayu Pareeksha with approaches to health assessment.

M 24 Unit 1 Concept of Ayu with evidences of healthy practices

- Definition and Dimensions of Ayu.
- Factors Contributing to Long and Healthy Ayu like Agni.
- Effectiveness of individual health routines by comparing them with classical Ayurvedic guidelines.

References: 1,2,3,4,5,6,7,60,112

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyse concept of Ayu in detail with evidence of healthy practices to maintain life	2	Lecture	CK	Knows-how	L&GD,L&PPT
CO1,CO3	Perform and analyse the concept of Ayu by identifying classical parameters and correlating them with daily health practices	4	Practical Training 24.1	PSY-GUD	Shows-how	C_L,DIS
CO1,CO3	Evaluate the effectiveness of individual'shealth routines by comparing them with Ayurvedic guidelines for healthy aging	8	Experiential-Learning 24.1	CC	Does	DIS,PrBL,IBL

M 24 Unit 2 Rasayana and Dhatu Samya concept

- Concept of Rasayan aimed at promoting longevity.
- Identification of herbs with rasayana properties and their validated anti-aging properties.
- Rasayana therapies to enhance tissue nourishment and rejuvenation.

References: 1,2,3

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Explain the concept of Rasayana aimed at promoting longevity	3	Lecture	CK	Knows-how	PER

CO1,CO3	Perform, and analyze commonly used Rasayana herbs and their validated anti-aging properties.	4	Practical Training 24.2	PSY-ADT	Shows-how	JC,LS,D
CO1,CO3,CO6	Evaluate Rasayana therapies to enhance tissue nourishment and rejuvenation based on the bioavailability of nutrients and promote longevity.	6	Experiential-Learning 24.2	CC	Does	TBL,DIS

M 24 Unit 3 Ayu, Agni and genetic /programmed aging

- Concept of Ayu as a predetermined lifespan influenced by Prakriti.
- Genetic theories of aging.
- Relationship between Ayu, Agni and aging.

References: 1,2,3,6,7,113

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Analyse genetic theories of Aging	3	Lecture	CK	Knows-how	DIS
CO1,CO4,CO6	Analyse genetic theories of aging and correlate them with the Ayurvedic concept of ?yu and Agni	6	Experiential-Learning 24.3	PSY-ADT	Does	C_L,SIM,L_VC
CO1,CO2,CO3	Perform and analyse the relationship between Ayu, Agni, and aging	8	Practical Training 24.3	CC	Shows-how	DIS,SDL

M 24 Unit 4 Ayu and Cellular Senescence

- Ayurvedic concept of Ayu in relation to the biological process of cellular senescence.
- Biological process of cellular senescence and its role in aging.
- Functional impact of aging with Ayu decline.

References: 1,2,3,62,112,113,114

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO6	Analyse applied aspects of aging in research, regenerative medicine, and cancer biology	2	Lecture	CK	Knows-how	L&GD,DIS
CO1,CO3,CO6	Evaluate the role of Panchakarma in delaying aging and cellular senescence	6	Experiential-Learning 24.4	CC	Does	JC,BS,C_L,DIS
CO1,CO2,CO6	Perform morphological differences between aged and non-aged stained cells to understand cellular features of aging.	4	Practical Training 24.4	PSY-GUD	Shows-how	L_VC,DL,D

Practical Training Activity

Practical Training 24.1 : Concept of Ayu by identifying classical parameters and correlating them with daily health practices

The teacher will demonstrate the classical parameters of Ayu in two healthy volunteers. Students will list and analyse the Dinacharya, Ritucharya and Agni of each volunteer to correlate with signs of Ayu such as Bala, Oja, and Indriyasthirata.

Practical Training 24.2 : Perform, and analyze commonly used Rasayana herbs and their validated anti-aging properties.

Teacher will demonstate commonly used 6 Rasayana herbs such as Amalaki, Guduchi, Ashwagandha.Students will then analyze the validated anti-aging properties of each herb using documented evidence from research studies and correlate them with their classical Rasayana effects.

Practical Training 24.3 : Analysis of the relationship between Ayu, Agni, and aging

Teacher will demonstrate biological aging signs in a volanteer and students will assess Agni type and status in 3 peers or volunteers. They will then compare the real chronological age with visible aging signs (skin, stamina, hair, sleep) to analyze how Agni influences Ayu and biological aging.

Practical Training 24.4 : Morphological differences between aged and non-aged stained cells to understand cellular features of aging.

Teacher will demonstrate stained microscopic slides or video clippings of aged and non-aged cells (e.g., fibroblasts or buccal cells), highlighting key morphological features such as nuclear changes, cytoplasmic vacuolization, and cell size variation. Students will then examine the samples, record their observations, compare cellular characteristics, and correlate them with features of aging and cellular senescence.

Experiential learning Activity	
Experiential-Learning 24.1 : Effectiveness of individual's health routines by comparing them with Ayurvedic guidelines for healthy aging	
Students will interact with 2 healthy volunteers above the age of 80. Assess Agni and document their daily and seasonal health routines, dietary habits, mental practices, and lifestyle. Students will then evaluate these practices against classical Ayurvedic guidelines for maintaining Ayu.	
Experiential-Learning 24.2 : Evaluate Rasayana therapies to enhance tissue nourishment and rejuvenation based on the bioavailability of nutrients and promote longevity.	
Students as a team will prepare and present seminar sessions with Rasayana therapies that enhance tissue nourishment and rejuvenation. They will evaluate how these therapies improve nutrient bioavailability and promote longevity by integrating classical Ayurvedic principles with current scientific findings.	
Experiential-Learning 24.3 : Analyse genetic theories of aging and correlate them with the Ayurvedic concept of ?yu and Agni	
Student will analyse genetic theories of aging and correlate them with the Ayurvedic concept of ?yu and Agni using curated video clippings on telomere shortening and DNA repair mechanisms.. Students will reflect on these by comparing them with Ayurvedic views on *Agni bala* and *?yu*,	
Experiential-Learning 24.4 : Evaluate the role of Panchakarma in delaying aging and cellular senescence	
Students will engage in journal reading and brainstorming sessions based on documented pre- and post-therapy changes in patients undergoing Panchakarma procedures (such as *Rasayana Basti* or *Virechana*), and compile and discuss clinical indicators related to rejuvenation and cellular vitality.	
Modular Assessment	
Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 50 marks. A structured marking pattern will be followed. Different assessment methods will be used for each module throughout the semester. A record of the structured assessment patterns will be maintained. The modular grade point will be calculated as per the standard protocol Conduct a structured exam of Ayu , its determinants like Agni , and the factors that enhance longevity and quality of life-Vivo Voce /Q&A /DOPS OR Any practical in converted form can be taken for assesment-skill assessment and discussion . (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Paper No : 4 SATVA ATMA INDRIYAADI VIJNANIYAM

Semester No : 3

Module 25 : Dharaniya and Adharaniya Vega

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the features of Dharaniya and Adharaniya Vega, its physiological basis,related subjective & objective parameters for assessment.
- Perform Pariksha over Svastha and Rogi using Trividha Pariksha and standard formats, differentiate Prakrita and Vaikrita features using subjective & objective parameters.
- Evaluate the influence of Dharaniya, Adharaniya Vega on mind and body, explain its role in prevention & proneness of disease.

M 25 Unit 1 Physiological Perspective of Dharaniya Vega

- The Mana-Sharira Sambandha and its role in regulating urges.
- The physiological changes triggered by the suppression or proper management of Dharaniya Vega.
- The impact of controlling or releasing these urges on mental health and physical health.

References: 1,2,3,4,5,8,33,49,96

3A	3B	3C	3D	3E	3F	3G
CO4,CO5	Analyse physiological significance of Dharaniya Vega.	2	Lecture	CAN	Knows-how	L&PPT ,L,L&GD
CO4,CO5	Assess Dharaniya Vega using a structured format.	5	Practical Training 25.1	PSY-GUD	Shows-how	CBL,D,D-BED,PBL
CO4,CO5	Evaluate the role of Dharaniya Vega in maintaing health.	7	Experiential-Learning 25.	CE	Does	PBL,SDL ,L&GD,C

			1			BL,LRI

M 25 Unit 2 Advanced and Applied Physiology of Dharaniya Vega

- The Doshik manifestation of emotional urges and their physiological outcomes.
- The role of emotional intelligence in regulating Dharaniya Vega and its role in maintaining emotional and physical balance.
- Clinical case study on how the suppression of natural urges may lead to disease condition

References: 1,2,3,4,5,33,49,96

3A	3B	3C	3D	3E	3F	3G
CO4,CO5	Analyse clinical significance of Dharaniya Vega.	2	Lecture	CAN	Knows-how	L&PPT , REC,L& GD,L
CO4,CO5	Assess stress levels and assemble the Dharaniya Vega responsible.	5	Practical Training 25.2	PSY-GUD	Shows-how	D-BED,C BL,DIS,P BL,D
CO4,CO5	Evaluate physiology of emotions and emotional intelligence	3	Experiential-Learning 25. 2	CS	Does	L&GD,D, DIS,SDL, CBL

M 25 Unit 3 Physiological Perspective of Adharaniya Vega

- The physiological and psychological interplay between Mana-Sharira Sambandha and the suppression of these natural urges.
- The potential physical and mental health consequences of ignoring or suppressing Adharaniya Vega.

References: 1,2,3,4,5,8,33,49,96

3A	3B	3C	3D	3E	3F	3G
CO4,CO5	Analyse physiological significance on Adharaniya Vega.	2	Lecture	CAN	Knows-how	REC,SDL ,L&GD,L

						&PPT ,L
CO4,CO5	Assess symptoms of Adharaniya Vega.	5	Practical Training 25.3	CE	Does	DIS,SDL, CBL,D,Pr BL
CO4,CO5	Evaluate role of Adharaniya Vega in maintaing health.	4	Experiential-Learning 25. 3	CS	Does	L&GD,S DL,CBL, LRI,D

M 25 Unit 4 Advanced and Applied Physiology of Adharaniya Vega

- The significance of natural urges such as hunger, thirst, sleep, and sexual urges, and how their suppression leads to physiological imbalance.
- Case study to explain the physiological connection between repressed emotions and different disorders.
- Clinical relevance: Understanding the Dharaniya & Adharaniya Vega

References: 1,2,3,4,5,7,8,9,15,16,17,18,33,96

3A	3B	3C	3D	3E	3F	3G
CO4,CO5	Analyse clinical significance of Adharaniya Vega.	2	Lecture	CAN	Knows-how	L&PPT , REC,L,L &GD,JC
CO4,CO5	Assess stress levels and assemble the dharaniya Vega responsible using structured format.	5	Practical Training 25.4	PSY-GUD	Shows-how	D,SDL,C BL,DIS,P BL
CO4,CO5	Evaluate physiology of Yawning, Crying, Laughing, Grief, Belching etc.	6	Experiential-Learning 25. 4	CE	Does	SDL,PBL ,L&PPT , CBL,L& GD

M 25 Unit 5 Research Works on Dharaniya and Adharaniya Vega

- Advanced studies linking emotional suppression and psycho-neuro-immunology (PNI), exploring the physiological effects of unresolved Vega on the immune system and chronic disease progression.
- Research on Ayurvedic treatments to relieve suppressed urges and restore balance.
- Recent clinical trials and studies exploring the mind-body connection and role of Vega management in improving health.

References: 131,132,133,134

3A	3B	3C	3D	3E	3F	3G
CO6	Analyse recent advances in Vega & its role in maintaing health and understanding of pathophysiology of desease.	2	Lecture	CAN	Knows-how	L&GD,L, L&PPT
CO6	Evaluate recent advances in the field of Dharaniya & Adharaniya Vega	6	Experiential-Learning 25.5	CE	Does	PER,SDL ,DIS,JC, ML

Practical Training Activity

Practical Training 25.1 : Assessment of Dharaniya Vega.

Teacher will demonstrate the structured format for Assessing Dharaniya Vega considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations

Practical Training 25.2 : Assessment of stress levels and Dharaniya Vega responsible

Teacher will demonstrate the structured format to assess stress levels and assemble the Dharaniya Vega responsible, considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 25.3 : Assessment of symptoms of Adharaniya Vega.

Teacher will demonstrate the structured format for Assessing Adharaniya Vega considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations

Practical Training 25.4 : Assessment of Stress levels and Dharaniya Vega responsible

Teacher will demonstrate the structured format to assess stress levels and assemble the Dharaniya Vega responsible, considering the subjective and objective parameters.

Students will be asked to assess same using above format on 02 individuals & note down the observations.

Experiential learning Activity

Experiential-Learning 25.1 : Role of Dharaniya Vega in maintaing health.

Dharaniya Vega assessment technique considering the subjective and objective parameters will be done by the student. Student will be asked to note down the observations, corelate & analyse its role in maintaing health and have a departmental discussion.

Experiential-Learning 25.2 : Evaluate emotions and physiology of emotional intelligence

Assessment of emotional well-being and emotional intelligence will be done by the student. Student will be asked to note down the observations, Analyze the effect of Dharaniya Vega on emotional well-being and emotional intelligence.

Experiential-Learning 25.3 : Evaluate Adharaniya Vega in maintaing health.

Adharaniya Vega assessment technique considering the subjective and objective parameters will be done by the student. Student will be asked to note down the observations, analyse its role in in maintaing health and have a departmental discussion.

Experiential-Learning 25.4 : Evaluate Physiology of Yawning, Crying, Laughing, Grief, Belching etc

Conduct departmental seminar sessions where students will present on Physiology of Yawning, Crying, Laughing, Grief, Belching etc with Doshik understanding.

Experiential-Learning 25.5 : Recent advances in the field of Dharaniya & Adharaniya Vega

Conduct a detailed literature review on recent advances in the field of Dharaniya & Adharaniya Vega by students and have a dpeartmental discussions. Note down the outcome points of departmental discussion & generate a detailed report.

Modular Assessment

Assessment method	**Hour**
Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured theory exam comprising of questions pertaining applied physiology of Dharaniya & Adharaniya Vega (50marks) OR	4

Any practical in converted form can be taken for assesment (25 marks)
and
Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)

Module 26 : Indriya

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret Physiological description & inter-relationship of Shabda, Sparsha, Rupa, Rasa, Gandha. Description of Pancha Panchaka.
- Perform practical observation on Pratyaksha Jnana Utpathi, Pratyaksha Bhadaka Bhava with reference to all Jnanendriya; Samanya - Vishesha Karma of Karmendriya in Swastha and Aatura.
- Evaluate practical utility of inter-relationship of Shabda, Sparsha, Rupa, Rasa, Gandha, Pratyaksha Jnana Utpathi, Pratyaksha Bhadaka Bhava wrt all Jnanendriya, Samanya - Vishesha Karma of Karmendriya in Swastha and Aatura.

M 26 Unit 1 Jnanendriya and Panchapanchaka

- Indriya: Sensory organs and their physiological roles.
- Indriyadishtana: The site of action for each sensory organ.
- Indriyabuddhi: The perception and cognitive processes associated with sensory input.
- Mahabhuta and Tanmatra: The elemental qualities influencing each sensory function & other aspects of Panchapanchaka

References: 1,2,3,4,5,33,49,96,112

3A	3B	3C	3D	3E	3F	3G
CO4,CO8	Interpret physiological description & inter-relationship of Shabda, Rupa, Rasa, Gandha. Description of Panchapanchaka.	2	Lecture	CAN	Knows-how	L,L&PPT ,L&GD
CO4,CO8	Assess Pratyaksha Badhaka Bhava considering Jnanendriya.	2	Practical Training 26.1	PSY-GUD	Shows-how	D-BED,JC

CO4,CO8	Evaluate different dimensions of preventive care, pathophysiology, examinations of Jnanendriya.	8	Experiential-Learning 26.1	AFT-CHR	Does	ML,JC,BS

M 26 Unit 2 Physiological and Clinical Aspects of Jnanendriya

- Visual system
- Auditory system
- Taste perception
- Olfaction
- Somatosensory functions

References: 1,2,3,4,5,6,7,16,18,29,32,35,41,112

3A	3B	3C	3D	3E	3F	3G
CO4,CO8	Analyse physiological and clinical aspects of Jnanendriya	2	Lecture	CAN	Knows-how	L_VC,D,DIS,L
CO4,CO8	Assess the functioning of sense organs using structured format.	8	Practical Training 26.2	AFT-CHR	Does	TBL,CBL
CO4,CO8	Evaluate Jnanendriya assessment techniques.	3	Experiential-Learning 26.2	CE	Does	SDL,PL,CBL,DIS

M 26 Unit 3 Sarva Indriyanam Nayanam Pradhanam.

- The anatomical and functional primacy of vision among the Indriyas.
- Applied Physiology related to eye
- The role of Pratyaksha Pramana in diagnosing disorders and the significance of sight in overall sensory and cognitive health.

References: 1,2,3,4,5,16,18,32,33,96,112

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret Physiological & clinical significance of Sarva Indriyanam Nayanam Pradhanam.	2	Lecture	CAN	Knows-how	L,L&GD
CO1,CO3	Evaluate Sarva Indriyanam Nayanam Pradhanam	3	Experiential-Learning 26.3	CE	Does	PL,ML,SDL
CO5	Demonstrate the clinical examination of eyes to elicit different function of eyes	6	Practical Training 26.3	AFT-CHR	Does	CBL,D-BED

M 26 Unit 4 Advanced physiological description of Karmendriya.

- The physiological significance of Karmendriya
- Clinical significance of Karmendriya
- Physiological Signifiance of Vak Utpatti

References: 1,2,3,4,5,6,7,8,9,29,32,33,41,45,49,96,112

3A	3B	3C	3D	3E	3F	3G
CO4	Analyse physiological & clinical significance of karmendriya.	2	Lecture	CAN	Knows-how	L&GD,D
CO4	Assess Samanya & Vishesha Karma of Karmendriya.	4	Practical Training 26.4	PSY-GUD	Shows-how	TBL,CBL
CO4	Evaluate Vaikrita Karma of Karmendriya	3	Experiential-Learning 26.4	CE	Does	CBL,PL,SDL,PBL
CO1,CO2,CO3	Evaluate physiological significnace of Vak-utpatti	3	Experiential-Learning 26.5	CE	Does	ML,LS

M 26 Unit 5 Research works on Jnanendriya and Karmendriya

- The latest findings on neuroplasticity and sensory-motor function restoration.
- Contemporary clinical trials on Ayurvedic treatments for sensory and motor impairments.
- The role of sensory-motor evaluation in early diagnosis of neurodegenerative diseases.

References: 131,132,133,134

3A	3B	3C	3D	3E	3F	3G
CO6	Analyse Recent update and research works on Jnanendriya, Karmendriya.	2	Lecture	CAN	Knows-how	L,L&GD
CO6	Evaluate recent update and research works in the field of Jnanendriya, Karmendriya, its role in maintaining health and causing disease.	6	Experiential-Learning 26.6	CE	Does	BS,ML,DIS,LS

Practical Training Activity

Practical Training 26.1 : Assessment of Pratyaksha Badhaka Bhava considering Jnanendriya.

Teacher will demonstrate the structured format of Jnanendriya Pratyaksha Badhaka Bhava assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 01 individual & note down the observations.

Practical Training 26.2 : Functioning of sense organs using structured format

Teacher will demonstrate the structured format of functioning of sense organs assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 healthy individuals & note down the observations.

Practical Training 26.3 : Demonstrate the clinical examination of eyes

Teacher will demonstrate the structured format of examination of eye considering the subjective and objective parameters to perform clinical examination of eyes. Students will be asked to assess same using above format on 01 individual & note down the observations.

Practical Training 26.4 : Assessment of Samanya & Vishesha Karma of Karmendriya

Teacher will demonstrate the structured format for Samanya & Vishesha Karma of Karmendriya assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Experiential learning Activity
Experiential-Learning 26.1 : Preventive care, pathophysiology, examinations of Jnanendriya
Conduct peer learning to evaluate & perform video documentation on interaction with the experts from shalakya tantra to know different dimensions of pathophysiology, examinations with reference to Jnanendriya. Note down the points and submit to department.
Experiential-Learning 26.2 : Jnanendriya assessment techniques.
Jnanendriya assessment technique considering the subjective and objective parameters will be done by the student on patients. Student will be asked to note down the observations, analyse on the basis of Dosha and have a departmental discussion.
Experiential-Learning 26.3 : Evaluate Sarva Indriyanam Nayanam Pradhanam
Conduct peer learning to evaluate & perform Interaction with the experts from shalakya department on clinical & therapeutic justification of Sarva Indriyanam Nayanam Pradhanam
Experiential-Learning 26.4 : Vaikrita Karma of Karmendriya
Conduct peer learning to evaluate & perform Interaction with the experts from Kayachikitsa department related to Vaikrita Karma of Karmendriya.Interact regarding the preventive care to be taken regarding Karmendriya. Note down the points and submit to department.
Experiential-Learning 26.5 : Physiological significnace of Vak-utpatti
Conduct library session and mobile learning to evaluate physiology of Vak utpatti & Nyaya related to Vak utpatti considering physiology of speech.
Experiential-Learning 26.6 : Evaluate recent update and research works in the field of Jnanendriya, Karmendriya, its role in maintaining health and causing disease.
Conduct library session and mobile learning to evaluate Recent update and research works in the field of Jnanendriya, Karmendriya, its role in maintaining health and causing disease.
Modular Assessment

Assessment method	Hour
Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Evaluation of summary reports of all demonstrated practicals, conducted experential learning: The report will be evaluated on the basis of active participation during practical, experential learning, observation book detailing and record-keeping. (50marks) OR Any practical in converted form can be taken for assesment (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Semester No : 4

Module 27 : Manas and Atma

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret the physiological and clinical dimension on definition, location, properties, functions, objects & Nyaya of Mana & Manovaha Srotas, physiological description on definition, characteristic features of Atma.
- Perform clinical examination to substantiate location, properties, functions, objects, Nyaya of Mana, considering objective parameters
- Evaluate neuroplasticity, cognitive psychology, neural basis for social behaviour, description brain development across life, neuropharmacology and its application in Ayurveda. Evaluate and elicit characteristic features of brain dead and heart dead with objective evidences.

M 27 Unit 1 Applied Basics of Mana Physiology & applied physiology of following points related to Mana

- Definition of Mana
- Location of Mana
- Properties of Mana

References: 1,2,3,4,5,6,7,8,9,13,16,17,18,21,22,29,33,35,41,49,96,112

3A	3B	3C	3D	3E	3F	3G
CO1	Analyse physiological & clinical significance of Definition, Location and properties of Manas.	2	Lecture	CAN	Knows-how	L&PPT ,L,L_VC
CO1	Evaluate Location & properties of Manas	7	Experiential-Learning 27.1	CE	Does	CBL,SDL

M 27 Unit 2 Domains of Mana

- Manoartha and Manovishaya.
- Physiology of learning, memory, and motivation.
- Learning disabilities, Influence of gadgets on Mana

References: 1,2,3,4,5,6,8,9,13,16,17,18,21,22,29,33,35,41,49,96,112

3A	3B	3C	3D	3E	3F	3G
CO5	Analyse physiological & clinical significance on functions & objects of Manas.	3	Lecture	CE	Knows-how	DIS,L&GD,L&PPT ,L
CO5	Assess properties and objects of Manas using structured format	3	Practical Training 27.1	PSY-GUD	Shows-how	CBL
CO5,CO7,CO8	Assess influence of mobile usage, screen time, alcohol addiction on functions of Manas using structured format	2	Practical Training 27.2	PSY-GUD	Shows-how	CBL
CO5	Evaluate neuroplasticity & its relation with Manas.	3	Experiential-Learning 27.2	CE	Does	ML,TBL, LS,SDL

CO5	Evaluate physiology of learning, memory, and motivation with Ayurvedic concepts	4	Experiential-Learning 27.3	CE	Does	LS,ML,SDL,BS

M 27 Unit 3 Physiology and pathophysiology of Manovaha Srotas

- Physiology & Pathophysiology of Manovaha Srotas
- Guru Vyadita & Laghu Vyaditha
- Emotions & emotional Intelligence

References: 1,2,3,4,5,7,8,9,16,18,21,22,29,32,33,35,41,49,51,52,53,96,112

3A	3B	3C	3D	3E	3F	3G
CO4	Interpret physiology & pathophysiology of Manovaha Srotas.	3	Lecture	CAN	Knows-how	L&GD,L&PPT
CO4	Assess sattva Sara in relation to Prakriti using structured format.	3	Practical Training 27.3	PSY-GUD	Shows-how	CBL,TBL
CO1,CO4	Assess Guru Vyadit & Laghu Vyadita using structured format.	2	Practical Training 27.4	PSY-GUD	Shows-how	CBL,TBL
CO4	Evaluate emotional intelligence & its significance in Ayurveda.	7	Experiential-Learning 27.4	CE	Does	LS,DIS,BL,BS

M 27 Unit 4 Theories related to Mana.

- Applied physiology of different theories related to Mana
- Deergha Sashkuli Nyaya
- Shatapatra Suchi Vyadhi Nyaya etc

References: 1,2,3,4,5,6,7,8,9,16,18,21,22,29,32,33,35,41,49,51,52,53,96,112

3A	3B	3C	3D	3E	3F	3G
CO6	Interpret physiological & pathophysiological significance of theories related to Manas.	2	Lecture	CAN	Knows-how	L_VC,L&GD,L
CO6	Assess Nyayas related to Manas using structured format	5	Practical Training 27.5	PSY-GUD	Shows-how	CBL
CO6	Evaluate in detail on Cognitive psychology.	3	Experiential-Learning 27.5	CE	Does	SDL
CO6	Evaluate in detail on brain heart interactions.	3	Experiential-Learning 27.6	CE	Does	ML,LS

M 27 Unit 5 Physiology of Atma. Physiology & applied physiology of following points related to Atma

- Definition of Atma
- Properties of Atma
- Characteristic features of Atma

References: 1,2,3,4,5,6,7,8,9,11,14,16,17,18,20,29,33,41,49,96,112

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret physiological significance of definition, properties & characteristic features of Atma.	2	Lecture	CAN	Knows-how	L&GD,L
CO1	Assess characteristic features of Atma using structured format.	5	Practical Training 27.6	PSY-GUD	Shows-how	TBL,CBL
CO1	Evaluate Physiological Perspective of Atma	6	Experiential-Learning 27.	CE	Does	TBL

			7			

M 27 Unit 6 Physiology of death. Detailed physiology, features and objective parameters for assessment of

- Cardiac Death
- Brain Death

References: 1,2,3,4,5,6,7,8,9,11,12,14,16,17,18,19,21,22,25,29,32,33,41,49,53,96,112

3A	3B	3C	3D	3E	3F	3G
CO3	Interpret physiology of death, heart dead & brain dead.	2	Lecture	CE	Knows-how	L&PPT ,L,L&GD
CO3,CO8	Assess characteristic features of brain dead and heart dead.	5	Practical Training 27.7	PSY-GUD	Shows-how	SIM,CBL
CO3,CO5	Evaluate research works on brain dead & heart dead	3	Experiential-Learning 27.8	CE	Does	JC,LS

M 27 Unit 7 Signs of life Detailed physiology different characteristic and objective features to assess

- Signs of life
- ECG, pupillary reaction, Pulse etc.
- Daivavyapashraya Chikitsa.

References: 1,2,3,4,6,7,8,9,10,11,12,14,16,17,18,19,21,22,25,29,32,33,41,49,51,53,96,112

3A	3B	3C	3D	3E	3F	3G
CO6	Interpret objective parameters like reflexes, ECG etc. for existence of life.	1	Lecture	CE	Knows-how	L,L_VC, L&GD,L

						&PPT
CO4,CO6,CO8	Assess clinical signs of life using inspection, palpation & related objective parameters	5	Practical Training 27.8	PSY-GUD	Shows-how	D-BED,CBL,DIS
CO2,CO6,CO8	Evaluate significance of Daivavyapashraya Chikitsa.	3	Experiential-Learning 27.9	CE	Does	DIS,LS,TBL

Practical Training Activity

Practical Training 27.1 : Assessment of properties and objects of Manas using structured format

Teacher will demonstrate the structured format of properties and objects of Manas assessment considering the subjective and objective parameters using scoring/grading system. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 27.2 : Assessment of influence of mobile usage, screen time, alcohol addiction on functions of Manas

Teacher will demonstrate the structured format of influence of mobile usage, screen time, alcohol addiction on functions of Manas assessment considering the subjective and objective parameters using scoring/ grading pattern. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 27.3 : Sattva Sara in relation to Prakriti using structured format.

Teacher will demonstrate the structured format of Sattva Sara & Prakriti assessment. Students will be asked to assess same using above format on 01 individual & note down the observations.

Practical Training 27.4 : Assessment Guru Vyadita & Laghu Vyadit using structured format

Teacher will demonstrate the structured format of Guru Vyadit & Laghu Vyadit assessment considering the subjective and objective parameters using scoring/ grading pattern. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 27.5 : Nyayas related to Manas

Teacher will demonstrate the structured format of Nyayas related to Manas assessment considering the subjective and objective (e.g Discrimination test, Coordination test etc) parameters using gradng/ scoring pattern. Students will be asked to assess same using above format on 01 individual & note down the observations.

Practical Training 27.6 : Characteristic features of Atma using structured format.

Teacher will demonstrate the structured format of Characteristic features of Atma assessment considering the subjective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Practical Training 27.7 : Assessment of characteristic features of brain dead and heart dead
Teacher will demonstrate (Simulation based/ scenario based) the structured format of brain dead and heart dead assessment considering the relevant parameters. Students will be asked to assess same using above format on 01 patient in & note down the observations.
Practical Training 27.8 : Assessment of clinical signs of life using inspection, palpation & related objective parameters.
Teacher will assess signs of life using inspection, palpation & related objective parameters like ECG, Pulse oximeter etc on patients. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Experiential learning Activity
Experiential-Learning 27.1 : Evaluate Location & properties of Manas
Location & properties of Manas assessment technique considering the subjective and objective parameters will be done by the student. Student will be asked to note down the observations, analyse on the same and have a departmental discussion
Experiential-Learning 27.2 : Neuroplasticity & its relation with Manas.
Student will select 1 recent publication on Neuroplasticity & its relation with Manas. Student has to go through the publication in detail and do a micro journal presentation in department.
Experiential-Learning 27.3 : Physiology of learning, memory, and motivation with Ayurvedic concepts
Student will analayse Physiology of learning, memory, and motivation, including learning disability etc & related ayurveda points. All the points should be noted down & conduct a departmental group dicussion.
Experiential-Learning 27.4 : Emotional intelligence & its significance in Ayurveda.
Student will analyse Emotional intelligence & its significance in Ayurveda. All the points should be noted down & conduct a departmental group dicussion.
Experiential-Learning 27.5 : Cognitive (Evaluation) psychology.

Students will Conduct group discussions or departmental presentation to evaluate & document on Cognitive psychology.	
Experiential-Learning 27.6 : Brain heart interactions	
Student will Conduct Literary review using library & mobile resource to evaluate & compile in detail on recent advances in brain heart interactions & do micro-presentation in department.	
Experiential-Learning 27.7 : Physiological Perspective of Atma	
Student will Conduct team based learning on Physiological Perspective of Atma by finding the correlation between Ayurveda Lakshana mentioned followed by departmental presentation as a team.	
Experiential-Learning 27.8 : Evaluate Research works on brain dead & heart dead	
Student will Conduct group discussions or departmental presentation to evaluate & compile the research works on brain death & heart death.	
Experiential-Learning 27.9 : Significance of Daivavyapashraya Chikitsa.	
Student will Evaluate Significance of Daivavyapashraya Chikitsa by conducting team based learning followed by departmental presentation as a team.	
Modular Assessment	
Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 75 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured compilation/ project work on different dimensions of Mansa, Atma; different Nyaya; research updates (75 Marks) OR Any practical in converted form can be taken for assessment. (40 Marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as assessment (35 Marks)	6
Module 28 : Buddhi	

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret Buddhi and their Vibhramsha.
- Perform practical observation on eliciting different types of Pradnyaparadha done in day to day routine, utilization of modern gadgets and its influence over Buddhi.
- Evaluate practical utility of evidences regarding the influence of Ayurveda & other therapeutics over Developmental, concentration & attention related disorders.

M 28 Unit 1 Physiological and applied description on Buddhi

- Jnana Utpatti
- Vak Utpatti.
- The neurological basis of Buddhi
- Clinical implications of Buddhi

References: 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,20,21,22,29,32,33,35,41,49,51,52,53,96,112

3A	3B	3C	3D	3E	3F	3G
CO6	Analyse physiology of Buddhi & its role in Jnana utpatti, Vak utpatti	1	Lecture	CAN	Knows-how	L&GD,L &PPT
CO6,CO7	Assess influence of modern gadgets on Buddhi using structured format	4	Practical Training 28.1	PSY-GUD	Shows-how	TPW,CBL
CO6	Evaluate significance of Ayurveda treatments on Buddhi	3	Experiential-Learning 28.1	CE	Does	PL,SDL,LS
CO6	Evaluate significance of different therapeutics on Buddhi.	3	Experiential-Learning 28.	CE	Does	LS,BL,ML

			2			

M 28 Unit 2 Advanced Physiological Perspective of Buddhi

- Learning, Intelligence, functional cortical areas
- Brain in communication
- Language input and output
- Clinical relevance

References: 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,20,21,22,29,32,33,35,41,49,51,52,53,96,112

3A	3B	3C	3D	3E	3F	3G
CO5	Interpret Physiology of Learning, Intelligence, functional cortical areas, brain in communication, Language input and output	2	Lecture	CAN	Knows-how	L&GD,L&PPT ,L_VC
CO5	Assess Intelligent quotient based on Prakruti using structured format	3	Practical Training 28.2	PSY-GUD	Shows-how	CBL
CO5	Evaluate influence of Artificial Intelligence on Human Intelligence	1	Experiential-Learning 28.3	AFT-CHR	Does	ML,DIS

M 28 Unit 3 Dravya influencing Buddhi

- Food, medicines, drugs which cross blood brain barrier
- Food imparts positive and negative effects on Buddhi
- Ayurvedic herbs that enhance Buddhi

References: 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,20,21,22,26,29,32,33,35,41,49,51,53,96,112

3A	3B	3C	3D	3E	3F	3G
CO5	Analyse influence of Medhya Rasayana & Madakari Dravya on Buddhi.	2	Lecture	CAN	Knows-	L&PPT

					how	,L&GD
CO5,CO8	Assess level of intellect in healthy individuals & alcoholics.	3	Practical Training 28.3	PSY-GUD	Shows-how	TPW,CBL
CO5	Evaluate research works on influence of Medhya Rasayana & Madakari Dravya on intelligence.	3	Experiential-Learning 28.4	CE	Does	LS,ML,BS

M 28 Unit 4 Research works on Buddhi

- Recent updates & Research works on Buddhi
- Significance of Buddhi in maintaining health and understanding of pathophysiology of disease

References: 131,132,133,134

3A	3B	3C	3D	3E	3F	3G
CO6	Evaluate role of buddhi in maintaining health, causing disease.	3	Experiential-Learning 28.5	CE	Does	PL,PER

Practical Training Activity

Practical Training 28.1 : Modern gadgets on Buddhi using structured format

Teacher will demonstrate the structured format of influence of modern gadgets on Buddhi assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 01 individual & note down the observations.

Practical Training 28.2 : Intelligent quotient based on Prakruthi using structured format

Teacher will demonstrate the structured format of Intelligent quotient based on Prakruti assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 28.3 : Level of intellect in healthy individuals & alcoholics.

Teacher will demonstrate the structured format of Level of intellect in healthy individuals & alcoholics considering the subjective and objective parameters. Students will be asked to assess same using above format.(simulated, scenario based learning can be opted)	
Experiential learning Activity	
Experiential-Learning 28.1 : significance of Ayurveda treatments on Buddhi	
Student will Conduct peer learning and video documentation to evaluate Evidence based description on mode of action & efficacy of Ayurveda treatments on Buddhi.	
Experiential-Learning 28.2 : significance of different therapeutics on Buddhi.	
Student will conduct library session to review on significance of different therapeutics like Yoga, Mudra, Aroma, mandala art therapy on Buddhi. All the points should be noted down & have a departmental group dicussion.	
Experiential-Learning 28.3 : Influence of Artificial Intelligence on Human Intelligence	
Student will conduct library session to review on Influence of Artificial Intelligence on Human Intelligence. All the points should be noted down & have a departmental group dicussion.	
Experiential-Learning 28.4 : Research works on influence of Medhya Rasayana & Madakari Dravya on intelligence.	
Student will Conduct library & mobile learning sessions to evaluate & compile the recent research works on influence of Medhya Rasayana & Madakari Dravya on intelligence.	
Experiential-Learning 28.5 : Role of buddhi in maintaining health, causing disease.	
Student will Conduct Inter departmental cluster seminar/ discussion with peers from Roganidana & Kaya Chikitsa department on role of buddhi in maintaining health, causing disease.	
Modular Assessment	
Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 25 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol.	2

Each student will be given a published paper on Buddhi to evaluate the applied physiology or clinical physiology points. Assessment of the review based on the summary of the given published research/review paper emphasizing the each components of the research/ review paper. (25 marks)
OR
Any practical in converted form can be taken for assessment.(25 marks)
OR
Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment.(25 marks)

Semester No : 5

Module 29 : Dhruti, Smruti

Module Learning Objectives
(At the end of the module, the students should be able to)

1. Interpret Dhruti, Smruti and their Vibhramsha.
2. Perform practical observation on eliciting Pradnyaparadha, mode of utilization of modern gadgets and its influence over Dhruti, Smruti.

3. Evaluate practical utility of evidences regarding the influence of Panchakarma& other therapeutics over Developmental, concentration & attention related disorders.

M 29 Unit 1 Dhi & Dhruti Vibramsha

- Details on Dhruti
- Physiology of Motivation, especially involving the limbic system, dopaminergic pathways
- Dhruti Vibhramsha , neural physiology and its related physiological aspects with clinical significance

References: 1,2,3,4,5,8,9,10,13,14,19,23,26,27,31,33,34,35,38,40,41,42,43,44,49,51,52,53,58,59,60,96,112

3A	3B	3C	3D	3E	3F	3G

CO5	Interpret physiology of Dhriti with its clinical application.	2	Lecture	CAN	Knows-how	L&PPT ,L&GD
CO5,CO8	Assess influence of modern gadgets on Dhriti using structured format	5	Practical Training 29.1	PSY-GUD	Shows-how	ML,IBL, CBL
CO4,CO5	Evaluate effects of Panchakarma on Dhriti	4	Experiential-Learning 29. 1	CAN	Does	PL,SDL
CO4,CO5	Evaluate influence of diffferent theapeutics on Dhriti.	3	Experiential-Learning 29. 2	CE	Does	CBL,SDL
CO1,CO3	Interpret physiology of Dhriti Vibhramsha with its clinical application.	2	Lecture	CC	Knows-how	GBL,RP

M 29 Unit 2 Smruti & Smruti Vibhramsha.

- Smruti and its functional classifications.
- Structural and functional insights into memory & its related physiology, their role in transferring thoughts and memory consolidation.
- Smruti Vibhramsha and its clinical manifestations

References: 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,29,32,33,35,41,49,53,96,112

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO5	Interpret physiology of Smruti & memory	2	Lecture	CAN	Knows-how	L&GD,BS,L_VC
CO5,CO7,CO8	Assess influence of modern gadgets on Smruti using structured format	5	Practical Training 29.2	PSY-GUD	Shows-how	ML,D-BED,CBL
CO3,CO5,CO6	Evaluate effects of Panchakarma on Smruti	4	Experiential-	CAN	Does	SDL,PL

			Learning 29.3			
CO5,CO7,CO8	Evaluate influence of different therapeutics on Smruti.	3	Experiential-Learning 29.4	AFT-CHR	Does	CBL,SDL

M 29 Unit 3 Pradnyaparadha.

- Types of Pradnyaparadha.
- Lifestyle-related disorders.
- Role of Pradnyaparadha in Tridosha Prakopa & its influence on Dhatu & Mala

References: 1,2,3,4,5,6,7,8,9,10,13,14,16,17,18,21,22,26,29,31,32,33,35,38,41,43,44,49,51,53,58,60,96,112

3A	3B	3C	3D	3E	3F	3G
CO3,CO5	Interpret Pradnyaparadha with its clinical application.	2	Lecture	CAN	Knows-how	L&PPT,L&GD
CO5,CO8	Analyse role of Pradnyaparadha in vitiating Dosha, Dhatu, Mala considering Diet & Lifestyle.	5	Practical Training 29.3	PSY-GUD	Shows-how	CBL,IBL
CO1,CO5	Evaluate verses of Pradnyaparadha under Panchavayava Vakya	3	Experiential-Learning 29.5	CE	Does	DIS,SDL,BS
CO5	Evaluate Achara Rasayana & its clinical significance	3	Experiential-Learning 29.6	AFT-CHR	Does	LS,ML

M 29 Unit 4 Influence of Social networking usage Dhriti, Smruthi

- Social Networking Usage(SNU), Types of Social Networking Usage
- Influences of SNU on Dhruti and Smruti

References: 128,131,132

3A	3B	3C	3D	3E	3F	3G
CO3,CO7	Interpret influence of social networking usage on sense organs, intelligence, memory, learning & motivation	2	Lecture	CAN	Knows-how	L&GD,L &PPT
CO3,CO7	Assess effect of Social Networking Usage on memory using standard format	5	Practical Training 29.4	AFT-CHR	Does	ML,CBL
CO3,CO7	Evaluate recent research works on Influence of social networking usage	3	Experiential-Learning 29.7	CE	Does	PAL,LS,SDL
CO3,CO5,CO7	Evaluate influence of social networking usage on memory	3	Experiential-Learning 29.8	CAN	Does	PER,PAL,BS,SDL,PL

Practical Training Activity

Practical Training 29.1 : Influence of modern gadgets on Dhriti using structured format

Teacher will demonstrate the structured format of Influence of modern gadgets on Dhriti assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 29.2 : Influence of modern gadgets on Smruti using structured format

Teacher will demonstrate the structured format of Influence of modern gadgets on Smruti assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 29.3 : Role of Pradnyaparadhan vitiating Dosha, Dhatu, Mala considering Diet & Lifestyle.

Teacher will demonstrate the structured format of role of Pradnyaparadha in vitiating Dosha, Dhatu, Mala considering Diet & Lifestyle factor & including the relevant parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 29.4 : Social Networking Usage on memory using standard format

Teacher will demonstrate the standard format of Social Networking Usage & Memory assessment. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Experiential learning Activity
Experiential-Learning 29.1 : Effects of Panchakarma on Dhriti
Conduct peer learning to evaluate Evidence based description: Interaction with the experts on mode of action & effects of Panchakarma on Dhriti. Note down the points and submit in department.
Experiential-Learning 29.2 : Influence of diffferent theapeutics on Dhriti.
Conduct a library session to Evaluate influence of Yoga, Mudra, Aroma, mandala art etc therapeutics on Dhriti by a detailed literatutre review, research works, publications. Note down and submit the points to the department.
Experiential-Learning 29.3 : Evaluate effects of Panchakarma on Smruti
Conduct peer learning and video documentation to evaluate evidence based description: Interaction with the experts from Panchakarma department on mode of action & effects of Panchakarma on Smruti.
Experiential-Learning 29.4 : Influence of different therapeutics on Smruti.
Conduct a library session to Evaluate influence of Yoga, Mudra, Aroma, Mandala art etc therapeutics on Smruti by a detailed literatutre review, research works & publications. Note down and submit the points to the department.
Experiential-Learning 29.5 : Verses of Pradnyaparadha under Panchavayava Vakya
Interpret verses of Pradnyaparadhaunder Panchavayava Vakya and present as departmental Shloka seminar
Experiential-Learning 29.6 : Achara Rasayana & its clinical significance
Conduct library session to evaluate Evidence based description, Literary review and research works on the Achara Rasayana. Note down the points and do group discussion.
Experiential-Learning 29.7 : Recent research works on Influence of social networking usage

Conduct library session & mobile learning session with peer assistance to Evaluate & compile the recent research works & journal presentation on Influence of social networking usage on sense organs, intelligence, memory, learning & motivation

Experiential-Learning 29.8 : Influence of social networking usage on memory

Conduct Peer learning session to evaluate influence of social networking usage on memory from peers of Roga Nidana & Manasa Roga

Modular Assessment

Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured theory exam comprising of questions pertaining applied physiology of Dhruti, Smruti (50marks) OR Any practical in converted form can be taken for assesment (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Module 30 : Nidra, Svapna

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret Definition, Classification, Physiological & clinical significance of Nidra, sleep; classification and physiology of Svapnotpatti, dream analysis & Interpretation of Dreams in terms of Ayurveda, Physiological & Pathological dreams in Ayurveda perspective.
- Perform practical observation on influence of Nidra on different parameters of psycho-somatic health, examination on analysing sleep cycle in each stage, analysing dreams using assessment scales.
- Evaluate effect of Nidra Vega Dharana on health. Description of Arishtha Svapna, dream analysis & interpretation of dreams, analysing sleep cycle and wave pattern in each stage.

M 30 Unit 1 Nidra

- Nidra Utpatti
- Nidra Bheda, theories of sleep
- Sleep cycle and related objective parameters

References: 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,25,26,29,30,32,33,35,39,41,44,45,46,47,48,49,51,52,53,54,96,112

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Interpret Definition, Classification of Nidra and Tandra	2	Lecture	CAN	Knows-how	L&PPT ,L_VC
CO1	Assess influence of Nidra on different parameters of psycho-somatic health.	3	Experiential-Learning 30.1	CE	Does	TBL,CBL

M 30 Unit 2 Physiological significance on Nidra with evidence. In terms of Ayurveda, Physiology, case scenario, research works.
Physiological relation of Nidra with

- Sukha, Pusthi,
- Bala, Vrushata,
- Dyana

References: 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,25,26,29,30,32,33,35,39,41,44,45,46,47,48,49,51,52,53,54,96,112

3A	3B	3C	3D	3E	3F	3G
CO6	Interpret physiological significance of Nidra	1	Lecture	CAN	Knows-how	L,L&GD
CO6	Assess benefits and ill effects of Nidra using structured format	8	Practical Training 30.1	PSY-GUD	Shows-how	CBL

CO6	Evaluate knowledge, awareness points related to Nidra	6	Experiential-Learning 30.2	CE	Does	SDL

M 30 Unit 3 Clinical significance of Nidra with evidence.

- In terms of Ayurveda, Physiology, case scenario, research works
- Applied Physiological relation of Nidra with Dukha, Karshya, Abala, Kleebata, Dnyana, Adnyana

References: 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,23,24,25,26,29,30,32,33,35,39,41,42,43,44,45,46,47,48,49,51,52,53,54,96,112

3A	3B	3C	3D	3E	3F	3G
CO5	Interpret clinical significance of Nidra	2	Lecture	CAN	Knows-how	L_VC,L&PPT
CO4,CO5	Assess relation of Nidra Vegadharana with reference to mobile screen time and its effect on various aspects of Nidra using structured format.	6	Practical Training 30.2	PSY-GUD	Shows-how	LS,CBL,D-BED
CO5	Evaluate effect of Nidra Vegadharana on Quality of Life.	3	Experiential-Learning 30.3	CE	Does	SDL,CBL

M 30 Unit 4 Svapna

- Svapna Utpatti
- Svapna Bheda with Theories of Dream

References: 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,25,26,29,30,32,33,35,39,41,44,45,46,47,48,49,51,52,53,54,96,112

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret definition, classification and physiology of Svapnotpatti	2	Lecture	CAN	Knows-how	L&GD,L,L&PPT

CO1,CO4	Evaluate & experience dreams using virtual reality videos available online and categorize it under specific type of Svapna	3	Experiential-Learning 30.4	CE	Does	BL,D-BED
CO1	Evaluate knowledge, awareness related to Svapna	3	Experiential-Learning 30.5	CE	Does	SDL,BS

M 30 Unit 5 Interpretation of Svapna.

- Interpretation of svapna and related physiology of dreams.

References: 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,25,26,29,30,32,33,35,39,41,44,45,46,47,48,49,51,52,53,54,96,112

3A	3B	3C	3D	3E	3F	3G
CO6	Analyse interpretation of dreams.	1	Lecture	CAN	Knows-how	L&GD
CO2,CO6	Assess types of Svapna using structured format	6	Practical Training 30.3	PSY-GUD	Shows-how	CBL,LS
CO1,CO2,CO6	Evaluate & intergrate concept of Svapna in physiological & pathological perspective.	6	Experiential-Learning 30.6	CAN	Does	SDL,PrBL

M 30 Unit 6 Research work on Nidra & Svapna

- Recent advances and research work in field of Nidra.
- Recent advances and research work in field of Svapna.

References: 1,2,3,4,5,6,7,8,9,13,14,15,16,17,18,19,20,21,22,25,26,29,30,32,33,35,39,41,44,45,46,47,48,49,51,52,53,54,96,112

3A	3B	3C	3D	3E	3F	3G

CO5	Analyse clinical significance of svapna in Swastha & Aatura	2	Lecture	CAN	Knows-how	L_VC,L& PPT
CO5,CO6	Evaluate recent research works on Nidra and Svapna	2	Experiential-Learning 30.7	CAN	Does	JC,CBL

Practical Training Activity

Practical Training 30.1 : Benefits and ill effects of Nidra using structured format

Teacher will demonstrate the structured format of benefits and ill effects of Nidra assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 30.2 : Nidra Vegadharana with reference to mobile screen time and its effect on various aspects of Nidra using structured format.

Teacher will demonstrate the structured format of Nidra Vegadharana with reference to mobile screen time and its effect on various aspects of Nidra assessment considering subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 30.3 : Types of Svapna using structured format

Teacher will demonstrate the structured format of types of Svapna assessment considering the subjective and objective parameters and note the impact of svapna on physiopgical parameters such as heart rate, Blood pressure, etc. Students will be asked to assess same using above format on 02 individuals.

Experiential learning Activity

Experiential-Learning 30.1 : Influence of Nidra on different parameters of psycho-somatic health.

Conduct a library session to Evaluate influence of Nidra on different parameters of psycho-somatic health.by a detailed literatutre review, research works & publications. Note down points.

Experiential-Learning 30.2 : Knowledge, awareness points related to Nidra

Conduct library session & mobile learning to evaluate & compile general points/queries related to Nidra (knowledge, awareness), generate digiatal survey form, do online survey and report.

Experiential-Learning 30.3 : Effect of Nidra Vegadharana on Quality of Life.
Student will evaluate format for assesment of Nidra Vegadharana & Quality of Life assessment scale. Students will be using above format on 02 individuals & note down the observations.
Experiential-Learning 30.4 : To evaluate & experience dreams using virtual reality videos available online and categorize it under specific type of Svapna
Conduct group discussion, blended learning to evaluate & experience dreams using virtual reality videos available online and categorize it under specific type of Svapna.
Experiential-Learning 30.5 : Knowledge, awareness related to Svapna
Conduct group discussion & mobile learning to evaluate & compile general points/queries related to Svapna (knowledge, awareness), generate form (digital form), gather responses from10 individuals and report.
Experiential-Learning 30.6 : Evaluate & intergrate concept of Svapna in physiological & pathological perspective.
Perform project work to evaluate & intergrate concept of Svapna in physiological & pathological perspective.
Experiential-Learning 30.7 : Recent research works on Nidra and Svapna
Conduct library session & mobile learning session with peer assistance to Evaluate & compile the recent research works & journal presentation on Influence of Nidra (sleep) and Svapna (dreams)
Modular Assessment

Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured compilation/ project work on different dimensions of Nidra, Svapna & research updates. (50marks) OR Any practical in converted form can be taken for assesment (25 marks) and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	4

Semester No : 6

Module 31 : Ashtavidha, Dashavidha Pariksha

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret role of Ashtavidha, Dashavidha Pariksha in differentiating Svastha & Athura.
- Perform practical examination on screening and describing Ashtavidha, Dashavidha Pariksha.
- Evaluate and interpret variation of Naadi, Satmya, Satva, Aahara Shakti, Vyayama Shakti Pariksha in reference to Kala, Vaya, Rutu, Garbhini Adi Avastha.

M 31 Unit 1 Applied Approach on Ashtavidha Pariksha

- Detailed physiological description of :
  - Nadi – including pulse recording techniques and insights from cardiovascular physiology
  - Jihwa – clinical signs in systemic illness, oral health markers
  - Mala & Mutra – relation with digestive and renal physiology; integration of stool and urine analysis
  - Shabda & Sparsha – relevance in auscultation and palpation; early detection of systemic disorders
  - Drik – ocular markers of systemic diseases
  - Akriti – observational diagnosis, constitutional markers

Role in differentiating Swastha and Aatura individuals

- Examination of Ahara Shakti:
  - Correlation with BMR (basal metabolic rate), digestive efficiency, and nutrient assimilation
- Examination of Vyayama Shakti:
  - Assessment of physical endurance, strength, and exercise tolerance
- Contextual analysis of capacity based on:

- Physiological conditions (e.g., puberty, pregnancy, geriatrics)
- Vaya and Kala considerations
- Relevance in designing diet plans, activity levels, and recovery protocols

References: 1,2,3,4,5,8,17,34,38,43,51

3A	3B	3C	3D	3E	3F	3G
CO6	Analyse Nadi, Jihwa, Mala, Mutra, Shabda, Sparsha, Drik & Akriti Pariksha	2	Lecture	CAN	Knows-how	L&GD,L &PPT
CO1,CO5,CO6	Assess Nadi, Jihwa, Mala, Mutra, Shabda, Sparsha, Drik & Akriti Pariksha	5	Practical Training 31.1	PSY-GUD	Shows-how	CBL,D-BED
CO6	Evaluate Nadi, Jihwa, Mala, Mutra, Shabda, Sparsha, Drik & Akriti Pariksha	7	Experiential-Learning 31.1	CE	Does	BS,LS,ML
CO2,CO4	Analyse relation of Aahara and Vyayama Shakti in relation to different physiological condition, Vaya, Kaala and Garbhini	2	Lecture	CAN	Knows-how	L&GD,L &PPT

M 31 Unit 2 Applied approach on Dashavidha Pariksha

- Physiological interpretation of:
  - Prakriti, Vikriti, Sara, Samhanana, Pramana, Satmya, Satva, Aahara Shakti, Vyayama Shakti and Vaya
- Use of these parameters in tailoring clinical decisions, such as:
  - Predicting response to therapy
  - Determining dosage and route of administration
- Differentiation of individualized health status and disease susceptibility using integrative and advanced tools.

References: 1,2,3,4,5,6,7,8,30,34,43,57,58,62

3A	3B	3C	3D	3E	3F	3G
CO5	Analyse each parameters of Dashavidha Pariksha	2	Lecture	CAN	Knows-	L&PPT

					how	
CO5,CO6	Assess parameters of Dashavidha Pariksha	5	Practical Training 31.2	PSY-GUD	Shows-how	CBL,D-BED
CO5	Evaluate recent research works & updates on each parameters of Dashavidha Pariksha	7	Experiential-Learning 31.2	AFT-CHR	Does	LS,BS,ML

M 31 Unit 3 Detailed Prakriti, Awastha based Nadi Pariksha.

- Dosha Anusara, Vaya Anusara, Kala Anusara Nadi Pariksha
- Nadi Pariksha at various stages e.g. Aahara Sevana, Garbhini, Vyayama, Nidra and Ritu etc

References: 1,2,3,4,5,6,7,8,60,61,65,66,72

3A	3B	3C	3D	3E	3F	3G
CO2,CO5	Analyse Dosha Anusara, Vaya Anusara, Kala Anusara Nadi Pariksha	2	Lecture	CAN	Knows-how	L&PPT,L&GD
CO5	Assess Dosha anusara, Vaya Anusara, Kala anusara Naadi Pariksha in relation to Prakriti	5	Practical Training 31.3	PSY-GUD	Shows-how	CBL
CO1,CO5,CO6	Evaluate Dosha anusara, Vaya Anusara, Kala anusara Naadi Pariksha	7	Experiential-Learning 31.3	AFT-CHR	Does	LS,BS,ML

M 31 Unit 4 Detailed approach on Samhanana Satmya and Satva Pariksha.

- Examination of:
  - Samhanana as an index of physical strength and immunity
  - Satmya and its influence on metabolism and tolerance
  - Satva with emphasis on psycho-physiological assessments
- Relevance in different conditions:

- Vaya
- Kala
- Garbhini

References: 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,25,26,29,30,32,33,35,39,41,44,45,46,47,48,49,51,52,53,54,96,112

3A	3B	3C	3D	3E	3F	3G
CO4	Analyse relation of Satmya, Satva Pariksha in relation to different physiological condition: Vaya, Kaala, Garbhini	2	Lecture	CAN	Knows-how	L&PPT ,L&GD
CO1,CO4	Assess Satmya, Satva Pariksha in relation to different physiological condition:Vaya, Kaala, Garbhini	5	Practical Training 31.4	PSY-GUD	Shows-how	CBL,D-BED
CO4,CO6	Evaluate recent research works and updates on Satmya, Satva Pariksha in relation to different physiological condition: Vaya, Kaala, Garbhini etc.	5	Experiential-Learning 31.4	CE	Does	JC,LS,PAL

Practical Training Activity

Practical Training 31.1 : Nadi, Jihwa, Mala, Mutra, Shabda, Sparsha, Drik & Akriti Pariksha

Teacher will demonstrate the structured format of Nadi, Jihwa, Mala, Mutra, Shabda, Sparsha, Drik & Akriti Pariksha assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 31.2 : Parameters of Dashavidha Pariksha

Teacher will demonstrate the structured format of Parameters of Dashavidha Pariksha assessment considering the subjective and objective parameters except Vikriti. Students will be asked to assess same using above format on 02 individuals & note down the observations.

Practical Training 31.3 : Dosha anusara, Vaya Anusara, Kala anusara Naadi Pariksha in relation to Prakriti

Teacher will demonstrate Manual and Instrument based Naadi Pariksha on healthy individuals considering parameters like Dosha anusara, Vaya Anusara, Kala anusara, different stages of digestion; before, during & after Vyayama, Yoga, Pranayama; Rutu Kaala, Srava Kaala, Grabhini, Prasava Naadi Pariksha. Each Student will allotted with 2 specific condition on which student has to observe & compare Naadi Pariksha readings of 02 subjects, as per Manual and Instrument method.

Practical Training 31.4 : Satmya, Satva Pariksha in relation to different physiological condition: Vaya, Kaala, Garbhini
Teacher will demonstrate the structured format of Satmya & satva Pariksha and Perform Relation of Satmya, Satva Pariksha in relation to different physiological condition: Vaya, Kaala, Garbhini considering the subjective and objective parameters. Students will be asked to assess same using above format on 02 individuals & note down the observations.
Experiential learning Activity
Experiential-Learning 31.1 : Nadi, Jihwa, Mala, Mutra, Shabda, Sparsha, Drik & Akriti Pariksha
Conduct Library sessions and mobile learning sessions and evaluate Detailed physiological description on Nadi, Jihwa, Mala, Mutra, Shabda, Sparsha, Drik & Akriti including Pulse examination, Examination of tongue, stool test, urine test, voice and auscultation, Palpation, Examination of eye and general appearance.Note down the points & have a group discussion.
Experiential-Learning 31.2 : Recent research works & updates on each parameters of Dashavidha Pariksha
Conduct library session & mobile learning to Evaluate Detailed description on recent research works & updates on each parameters of Dashavidha Pariksha & conduct a micro departmental presentation
Experiential-Learning 31.3 : Dosha anusara, Vaya Anusara, Kala anusara Naadi Pariksha
Evaluate Dosha anusara, Vaya Anusara, Kala Anusara Nadi Pariksha considering parameters like different stages of digestion; before, during & after Vyayama, Yoga, Pranayama; Rutu Kaala, Srava Kala, Grabhini, Prasava etc. Each Student will allotted with 2 specific physiological conditions on which student has to observe & compare Naadi Pariksha readings of many subjects, as per Manual and Instrument method.
Experiential-Learning 31.4 : Recent research works and updates on Satmya, Satva Pariksha in relation to different physiological condition: Vaya, Kaala, Garbhini etc.
Evaluate recent research works and updates on Satmya, Satva Pariksha in relation to different physiological condition: Vaya, Kaala, Garbhini etc. and submit the compiled work.
Modular Assessment

Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different	4

assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol.
Evaluation of summary reports of all demonstrated practicals, conducted experential learning: The report will be evaluated on the basis of active participation during practical, experential learning, observation book detailing and record-keeping. (50marks)
OR
Any practical in converted form can be taken for assesment (25 marks)
and
Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)

Module 32 : Swathya Rakshana: Preventive Physiology

Module Learning Objectives
(At the end of the module, the students should be able to)

- Interpret role of specific Indian tradition / customs in maintaining health. Role of alternative therapies over Sharira, Manas and Indriya.
- Perform practical examination on screening and describing the relation between different tradition/customs followed and status of health.
- Evaluate and interpret in the relation between different tradition/customs followed and status of health, Role of alternate therapies over Sharira, Manas & Indriya, different altitude, environmental & working conditions.

M 32 Unit 1 Indian traditions & customs in maintaining health.

- Role of different Indian tradition and influence of those customs on Doshik and Swasthya status and its role in preventing chronic diseases.
- Impact of these customs on Dosha balance, Agni, and immune modulation
- Application in preventing lifestyle disorders such as diabetes, obesity, hypertension
- Clinical relevance: Behavioral routines as preventive interventions

References: 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,29,30,31,32,33,35,41,44,45,46,47,48,49,51,53,54,96,112,138

3A	3B	3C	3D	3E	3F	3G

CO6	Analyse the role of specific indian tradition / customs in maintaining health.	2	Lecture	CAN	Knows-how	L&PPT , L&GD,IBL
CO6	Assess relation between different tradition/customs followed and status of health.	6	Practical Training 32.1	PSY-GUD	Shows-how	D-BED,FV,CBL,ML
CO6	Compose role of specific Indian tradition / customs in maintaining health.	7	Experiential-Learning 32.1	CAN	Does	SDL

M 32 Unit 2 Physiological influence of Samanya and Vishesha –customs.

- Role of Samanya (customs celebrated all over india)and Vishesha (region specific customs) in Indian tradition
- Influence of those customs on Doshik and Swastha status
- Role in preventing chronic diseases

References: 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,29,30,31,32,33,35,41,44,46,47,48,51,52,53,54,96,112,138

3A	3B	3C	3D	3E	3F	3G
CO5	Interpret physiological basis of Samanya – common customs/ tradition, Visesha – state/region wise special customs including Samskara.	2	Lecture	CAN	Knows-how	L&PPT ,L&GD
CO5	Assess opinion of public regarding influence of Traditions on Health status	6	Practical Training 32.2	PSY-GUD	Shows-how	CBL
CO5,CO7	Evaluate & document effect of Swarnamrutaprashana Samskara	7	Experiential-Learning 32.2	CAN	Does	LS,CBL, TPW

M 32 Unit 3 Alternative therapy influence on Sharira, Mana, Indriya and Satvavajaya Chikitsa.

- Impact of therapies such as yoga, meditation, music therapy, color therapy, aroma therapy, and Mandala art

- Effect on neurophysiology, hormonal regulation, and emotional stability
- Role in different therapies especially for stress-related and psychosomatic disorders

References: 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,29,30,31,32,33,35,41,44,45,46,47,48,49,51,52,53,54,96,112,138

3A	3B	3C	3D	3E	3F	3G
CO5	Interpret role of music, aroma, yoga, mudra therapy, mandala art, chromotherapy over Sharir, Manas and Indriya	2	Lecture	CAN	Knows-how	L&GD,L &PPT
CO5	Assess effect of alternate therapy on Sharir, Manas and Indriya	8	Practical Training 32.3	PSY-GUD	Shows-how	RLE,CBL
CO5	Evaluate effect of alternate therapy on Sharir, Manas and Indriya.	7	Experiential-Learning 32. 3	CE	Does	FV,IBL, ML,LS

M 32 Unit 4 Swasthya Rakshana with reference to Aviation, deep sea and Hyperbaric condition

- Physiological challenges: hypoxia, pressure changes, altered circadian rhythm, fluid-electrolyte shifts
- Strategies for:
    - Pilots and crew (aviation medicine)
    - Divers and submariners (barophysiology)
- Application of preventive methods or tools to maintain Swasthya

References: 2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,138

3A	3B	3C	3D	3E	3F	3G
CO3,CO7,CO8	Analyse physiological basis for the precautions to be considered before Aviation, entering deep sea and hyperbaric condition.	2	Lecture	CE	Does	L&GD,L &PPT
CO3,CO7,CO8	Assess physiological changes in Aviation, entering deep sea and hyperbaric condition.	2	Experiential-Learning 32. 4	PSY-GUD	Shows-how	FV,BL,C _L,RLE

M 32 Unit 5 Swsthya Rakshana with reference to Exercise, Sports.

- Understanding the physiological effects of exertion, oxidative stress, micro-injuries, and recovery cycles
- Role of tailored diet, Rasayana use, mental conditioning, and recovery protocols
- Guidelines based on Vaya, Prakriti, Kala for exercise suitability
- Preventive insights for avoiding sports injuries, overtraining syndrome, and mental burnout

References: 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,29,30,31,32,33,35,41,44,45,46,47,48,49,51,52,53,54,96,112,138

3A	3B	3C	3D	3E	3F	3G
CO3	Analyse Preventive points to be considered before Exercise and sports	2	Lecture	CAN	Knows-how	L&GD,L &PPT
CO3	Evaluate Preventive points to be considered before Exercise and sports considering its physiology basis and its role in preventing chronic diseases	3	Experiential-Learning 32.5	CE	Does	ML,LS,SDL

Practical Training Activity

Practical Training 32.1 : Relation between different tradition/customs followed and status of health.

Teacher will demonsatrate relation between different tradition/customs followed and status of health by Selecting a questionnaire to elicit health/ Swasthya status; design yes/no based structured questionnaire on the any one tradition/customs. Students will conduct the assessment on 05 individuals and try to build the relation between customs & health status.

Practical Training 32.2 : Influence of Traditions on Health status

Teacher will prepare structured proforma to collect the details from public regarding influence of Traditions on Health status. Gather the response from 05 individuals, submit to department & have a group discussion.

Practical Training 32.3 : Effect of alternate therapy on Sharir, Manas and Indriya

Teacher will demonstrate the influence of Mandala Art , Mudra therapy, Yoga therapy, Aroma therapy, Color therapy Music therapy (any 1 of the above) and its influence on Sharira (body), Manas (mind), and Indriya (senses) as a case observation

Experiential learning Activity	
Experiential-Learning 32.1 : Role of specific Indian tradition / customs in maintaining health.	
Conduct mobile learning session followed by group discussion to evaluate self-documentary video recording on specific Indian tradition / customs in maintaining health.	
Experiential-Learning 32.2 : Effect of Swarnamrutaprashana Samskara	
Conduct case based group discussion/ peer learning to evaluate & document on effect of Swarnamrutaprashana Samskara on physiology of development of body, mind & immunity	
Experiential-Learning 32.3 : Effect of alternate therapy on Sharir, Manas and Indriya.	
Conduct mobile learning followed by group discussion to evaluate & collect evidences from different online sources regarding the effects of alternate therapy on Sharir, Manas and Indriya.	
Experiential-Learning 32.4 : Physiological changes in Aviation, entering deep sea and hyperbaric condition.	
Students will assess physiological changes before and after exposure to aviation, deep-sea diving, and hyperbaric conditions through a video-based study that integrates Ayurvedic and advanced physiology perspective.	
Experiential-Learning 32.5 : Preventive points to be considered before Exercise and sports considering its physiology basis and its role in preventing chronic diseases	
Conduct library or mobile learning session on Preventive points to be considered before Exercise and sports considering its physiology basis and its role in preventing chronic diseases.	
Modular Assessment	
Assessment method	**Hour**
Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment methods in each module for the semester. Keep record of the structured pattern used for assessment. Calculate the Modular grade point as mentioned in standard protocol. Conduct a structured theory exam comprising of questions pertaining to Swathya Rakshana: Preventive Physiology (50marks) OR Any practical in converted form can be taken for assesment (25 marks)	4

and Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment. (25 marks)	

Table 4 : Practical Training Activity

(*Refer table 3 of similar activity number)		
Practical No*	**Practical name**	**Hours**
1.1	Vata Dosha Guna based on Generalized physiological and clinical significance of Vata Dosha	4
1.2	Vata Sanchaya Lakshana in Swastha and Aatura	4
1.3	Assessment of Pancha Vidha Vata Dosha Karma	3
1.4	Assessment Motor & sensory system related to Vata Bheda.	4
1.5	Influence of Ahara - Vihara on Vata Dosha Karm	5
2.1	Pitta Dosha Guna based on Generalized physiological and clinical significance	4
2.2	Assessment of Pitta Sanchaya Lakshana	4
2.3	Assessment of Pancha Vidha Pitta Dosha Karma	3
2.4	Assessment of Systemic examination related to Pitta Bheda.	3
2.5	Influence of Aahara on Pitta Dosha Karma	3
2.6	Influence of Vihara on Pitta Dosha Karma	3

3.1	Assessment of Kapha Dosha Guna based on Generalized physiological and clinical significance	4
3.2	Assessment of Kapha Sanchaya Lakshana	4
3.3	Assessment of Pancha VidhaKapha Dosha Karma	4
3.4	Systemic examination related to Kapha Bheda.	4
3.5	Influence of Aahara - Vihara on Kapha Dosha Karma	4
4.1	Histology of endocrine glands	5
4.2	Diabetes Mellitus & its hormonal basis	5
4.3	Hypothyroidism by feedback mechanisms and identify Ayurvedic equivalents.	5
4.4	PCOS with it's harmonal basis & lifestyle management	5
5.1	Guna based Vata Prakriti Pariksha	4
5.2	Guna based Pitta Prakriti Pariksha	4
5.3	Guna based Kapha Prakriti Pariksha	4
5.4	Prakriti Pariksha using structured format	3
5.5	Prakriti Pariksha using structured format	7
5.6	Bhautika Prakriti Pariksha using structured format	4
5.7	Anukatva of Prakriti using structured format	4
6.1	Personality, Personality trait using structured format	5
6.2	Brain activity model on basis of Prakriti	5
7.1	Manasika Prakriti Pariksha	8
7.2	Satvika Manasika Prakriti Pariksha	4

7.3	Rajasika Manasika Prakriti Pariksha	4
7.4	Tamasika Manasika Prakriti Pariksha	4
8.1	Different domains of Pum-Bija considering sperm	4
8.2	Physiological & clnical significance of Bija Bhaga Avayava	2
8.3	Genetic disorders	8
8.4	DNA isolation from Whole blood by salting out method etc	6
9.1	Dhatu Poshana assessment using subjective & objective parameters	4
9.2	Dhatu Poshana affecting factors assessment using structured format	4
9.3	Dhatu Poshana assessment in Rasayana Therapy	2
10.1	Kshaya-Vriddhi assessment of Rasa Dhatu using structured format	4
10.2	Rakta Vridhi kshaya assessment using structured format	2
10.3	Basic hematological tests -HB, WBC count, red blood cell (RBC) count, DC,erythrocyte sedimentation rate (ESR), packed cell volume (PCV), bleeding time, clotting time, and blood grouping	4
10.4	Mamsa Vriddhi Kshaya assessment using structured format	4
10.5	Meda Vriddhi Kshaya assessment using structured format	4
10.6	Asthi Vriddhi Kshaya assessment using structured format	4
10.7	Majja Vriddhi Kshaya assessment using structured format	3
10.8	Shukra Dhatu Vriddhi Kshaya assessment using structured format	3
10.9	Perform semen analysis test to evaluate the quality and quantity of sperm in a semen sample.	2
11.1	Rasa Saara Pariksha using structured format	4
11.2	Rakta Saara Pariksha using structured format	4

11.3	Mamsa Saara Pariksha assessment using structured format	4
11.4	Meda Saara Pariksha assessment using structured format	4
11.5	Asthi Saara Pariksha assessment using structured format	4
11.6	Majja Saara Pariksha assessment using structured format	4
11.7	Shukra Saara Pariksha assessment using structured format	4
11.8	Satva and Sarva Saara Pariksha assessment using structured format	2
12.1	Ojas Karma assessment using structured format	4
12.2	Oja Vikara assessment using structured format	4
12.3	Immunological Techniques - Immunoassays, Immunodiagnostics	2
13.1	Stanya Pariksha using structured format	4
13.2	Vridhi & Kshaya of Stanya using structured format	4
13.3	Artavadusthi using structured format	4
13.4	Case studies of Varna & Vaivarnyata	4
13.5	Assessment of Varna in different Deha Prakriti	4
14.1	Sira & Kandara of Vata Prakriti & compare with the other Prakriti	2
14.2	Assessment of Kandara Dushti Lakshana	4
14.3	Assessment of Snayu Dusthi using structured format	4
14.4	Assessment of Sandhi and Snayu	4
14.5	Kesha, Roma, Nakha Quality in individuals of different Prakriti	6
15.1	Purisha Pariksha (Sama/Nirama) of Ayurveda and Stool examination in healthy and diseased	5

15.2	Assessment of Kshaya-Vriddhi Lakshana of Purisha using Subjective /Objective parameters	5
15.3	Mutra Pariksha according to Ayurveda and Urine examination in healthy and diseased	5
15.4	Assessment of Kshay-Vriddhi of Mutra with the help of Subjective & Objective parameters	5
15.5	Process of Swedana Karma in Panchakarma Clinical settings	5
15.6	Demonstration of Kshaya and Vriddhi of Sweda	5
16.1	Dhatu Mala Prakrita & Vaikrita Karma assessment using structured format	10
17.1	Calculation of BMR (Basal Metabolic Rate) using various formulas	4
17.2	Calculation of MET (Metabolic Equivalent of Task) using various formulas	4
17.3	Food items according Panchabhutitkatwa, Guna, Rasa, Virya, Vipak and functions of Macro & Micronutrients .	4
17.4	Nutritional & fibre content present in food items.	4
17.5	Dietary planning, nutrient analysis using available open sources software.	4
18.1	Knowledge of the Aahar Vidhi Visheshaytana to analyze various seasons, customs & tradition to consume meal.	2
18.2	Diet chart based on the knowledge of the eight factors of Ahara Vidhi Visheshaytana.	2
18.3	Knowledge of the Aahar Vidhi Vidhana to analyze various seasons, customs & tradition to consume meal.	2
18.4	Daily diary to note the practice Aahar Vidhi Vidhana	2
18.5	Dwadasha Ashana Pravichara in perspective of dietetics	4
18.6	Compile & record the Virudha Aahar.	2
18.7	Personalized nutrition plan that incorporates daily consumable substances avoiding incompatible food to enhance health.	2
18.8	Customized Peyaadi Dravya according to individual Prakruti Saarata, Desh, Kaal etc	4
19.1	Histology of Teeth & Tongue	1

19.2	Histology of Glottis, Epiglottis, and salivary glands.	2
19.3	Histology of liver, gallbladder, and pancreas	2
19.4	Teeth and Oral cavity examination	2
19.5	X-ray and USG imaging techniques focusing digestive organs.	1
19.6	CT and PET scan imaging techniques focusing digestive organs.	2
20.1	Microscopic histological examination of Oesophagus.	2
20.2	Microscopic histological examination of Stomach and find the difference of microscopic structure at areas of stomach.	4
20.3	Microscopic histological examination of Duodenum.	2
20.4	Microscopic histological examination of small Intestine.	2
20.5	Microscopic histological examination of Caecum.	2
20.6	Microscopic histological examination of Appendix.	2
20.7	Microscopic histological examination of Large intestine.	2
20.8	Microscopic histological examination of Rectum.	2
20.9	Microscopic histological examination of Anus.	2
20.10	Lab test to investigate the total concentration of Macronutrients , bile Salt & Bile Pigments in Blood & Urine.	4
20.11	Lab test to investigate the total concentration of Micronutrient in Blood.	4
20.12	Per Abdomen clinical examination.	2
21.1	Digestive efficiency by comparing Agni assessment tools with advanced digestive assessment tools.	8
21.2	Assessment of Ama Lakshana in subjects with Agnimandya	6
21.3	Assessment of Koshta to enhance knowledge in digestion and nutrient absorption in normal and organ-transplanted individuals.	6

22.1	Sthana of Grahani and Pittadhara Kala	6
22.2	Perform, analyse, and list prebiotics and probiotics for the effective functioning of grahani	6
22.3	Applied Physiology of Gastrointestinal (GI) Disorders about Grahani and Pittadhara Kala	4
22.4	List out fermented food usage among individuals with healthy digestion.	4
23.1	Applied physiology of Tri- Marma of Dasha Pranayatana through case-based demonstration	4
23.2	Hrudayshrita Ghatak and its role in physiology	4
23.3	Difference between Sira, Dhamani and Srotas in the context of Hrudaya	6
23.4	Food items and lifestyle practices essential for effective Hrudaya Parirakshana	6
24.1	Concept of Ayu by identifying classical parameters and correlating them with daily health practices	4
24.2	Perform, and analyze commonly used Rasayana herbs and their validated anti-aging properties.	4
24.3	Analysis of the relationship between Ayu, Agni, and aging	8
24.4	Morphological differences between aged and non-aged stained cells to understand cellular features of aging.	4
25.1	Assessment of Dharaniya Vega.	5
25.2	Assessment of stress levels and Dharaniya Vega responsible	5
25.3	Assessment of symptoms of Adharaniya Vega.	5
25.4	Assessment of Stress levels and Dharaniya Vega responsible	5
26.1	Assessment of Pratyaksha Badhaka Bhava considering Jnanendriya.	2
26.2	Functioning of sense organs using structured format	8
26.3	Demonstrate the clinical examination of eyes	6
26.4	Assessment of Samanya & Vishesha Karma of Karmendriya	4

27.1	Assessment of properties and objects of Manas using structured format	3
27.2	Assessment of influence of mobile usage, screen time, alcohol addiction on functions of Manas	2
27.3	Sattva Sara in relation to Prakriti using structured format.	3
27.4	Assessment Guru Vyadita & Laghu Vyadit using structured format	2
27.5	Nyayas related to Manas	5
27.6	Characteristic features of Atma using structured format.	5
27.7	Assessment of characteristic features of brain dead and heart dead	5
27.8	Assessment of clinical signs of life using inspection, palpation & related objective parameters.	5
28.1	Modern gadgets on Buddhi using structured format	4
28.2	Intelligent quotient based on Prakruthi using structured format	3
28.3	Level of intellect in healthy individuals & alcoholics.	3
29.1	Influence of modern gadgets on Dhriti using structured format	5
29.2	Influence of modern gadgets on Smruti using structured format	5
29.3	Role of Pradnyaparadhan vitiating Dosha, Dhatu, Mala considering Diet & Lifestyle.	5
29.4	Social Networking Usage on memory using standard format	5
30.1	Benefits and ill effects of Nidra using structured format	8
30.2	Nidra Vegadharana with reference to mobile screen time and its effect on various aspects of Nidra using structured format.	6
30.3	Types of Svapna using structured format	6
31.1	Nadi, Jihwa, Mala, Mutra, Shabda, Sparsha, Drik & Akriti Pariksha	5
31.2	Parameters of Dashavidha Pariksha	5

31.3	Dosha anusara, Vaya Anusara, Kala anusara Naadi Pariksha in relation to Prakriti	5
31.4	Satmya, Satva Pariksha in relation to different physiological condition: Vaya, Kaala, Garbhini	5
32.1	Relation between different tradition/customs followed and status of health.	6
32.2	Influence of Traditions on Health status	6
32.3	Effect of alternate therapy on Sharir, Manas and Indriya	8

Table 5 : Experiential learning Activity

(*Refer table 3 of similar activity number)		
Experiential learning No*	**Experiential name**	**Hours**
1.1	Published literature on Clinical significance of Vata Vriddhikar Aahar and Vihara	6
1.2	Kshaya and Vriddhi of Vata Dosha.	5
1.3	Vata Vikara based on Vata Dosha Bheda	5
1.4	Technological integration and advancements in Vata assessment with various equipments	2
1.5	Vata Dosha Guna and Karma and its Correlation with pulse wave analysis, neurophysiological tests, gait analysis, autonomic response tests, HRV (Heart Rate Variability), EMG, etc	5
1.6	Assessment Criteria for Prakopa of Vata dosha using various equipments	3
2.1	Kshaya and Vriddhi of Pitta Dosha.	5
2.2	Pitta Vikara based on Pitta Dosha Bheda	5
2.3	Technological integration and advancements in Pitta assessment with various equipments	5
2.4	Pitta dosha guna and Karma and its Correlation with Thermal imaging, Enzyme and hormone assays (liver, thyroid, pancreas). HRV (Heart Rate Variability) for stress-metabolic interactions and Optical coherence tomography (OCT) and other vision assessment tools	5
2.5	Assessment Criteria for Prakopa of Pitta dosha using various equipments	6
3.1	Published literature on Clinical significance of Kapha Vriddhikar Aahar and Vihara	6
3.2	Kshaya and Vriddhi of Kapha Dosha.	5
3.3	Kapha Vikara based on Kapha Dosha Bheda	5
3.4	Technological integration and advancements in Kapha assessment with various equipments	3
3.5	Kapha Dosha Guna and Karma with Body composition analysis	2

3.6	Kapha dosha guna and Karma and its Correlation with Pulmonary function tests (mucus production, surfactant activity), CSF analysis, Imaging of joint lubrication (MRI of synovial spaces), Biomarkers of anabolic state: GH, IGF-1, lipid panels, Body composition analysis (fat mass, muscle mass, water retention) etc	3
3.7	Assessment Criteria for Prakopa of Kapha Dosha using various equipments	2
4.1	Bidirectional Communication Pathways	10
4.2	Stress, Inflammation, and Immune Regulation	6
4.3	Research Perspectives of Neuro-immuno-endocrinology	10
5.1	Biorhythmic influence in the psychological features of Vata Prakriti	6
5.2	Biorhythmic influence in the psychological features of Vata Prakriti	6
5.3	Biorhythmic influence in the psychological features of Vata Prakriti	6
5.4	Role of Prakriti in selection for sports, occupation, career guidance for day today inter personal relationship.	3
5.5	Prakriti & women health with reference to menarche, menstruation, menstrual cycle pattern and menopause.	3
5.6	Similar terms in context of Prakriti by considering tantrayukti & commentary.	3
5.7	Prakriti and chromatics with reference to clothing, ornaments etc.	3
5.8	Prakriti based Dinacharya chart & Diet chart	9
6.1	Research works on body patterns	5
6.2	Personality & personality trait assessment	3
6.3	Physiological activity models based on Prakriti	5
7.1	Clinical signinficance of Manasika Prakriti	6
7.2	Satvika Manasika Prakriti with different psycho-somatic parameters	6

7.3	Relation of Rajasika Manasika Prakriti with different psycho-somatic parameters	6
7.4	Relation of Tamasika Manasika Prakriti with different psycho-somatic parameters	8
8.1	Physiological & clinical significance of Bija	3
8.2	Physiological & clinical significance of Bija Bhaga	3
8.3	physiological & clnical significance of Bija Bhaga Avayava	3
8.4	Different types of genetic disorders	9
8.5	Recent updates and research works in the field of Bija, Bija Bhaga, Bija bhaga Avayava	8
9.1	Applied physiology of different Dhatu Poshana Theories on Bala, Garbhini, Vrudha	6
9.2	Evaluate role of Dhatu Poshana Theories in Tissue formation, Differentiation, regeneration and Mechanisms of Cell adaptation	3
9.3	Dhatu Poshana theories in maintaining health and causing of disease and treatment plan	4
10.1	Shabadavat, Archivat and Jalavat Rasa Samvahana., Analyze the role of Vyan, Samana Vayu and Hridaya in Rasa Samvahan	5
10.2	Physiology, applied physiology of Rakta Dhatu, Rakta Dhatvagni	6
10.3	Physiology & applied physiology of Mamsa Dhatu and Mamsa Dhatvagni	6
10.4	Physiology, applied physiology of Meda Dhatu, Meda Dhatvagni	5
10.5	Physiology, applied physiology of Asthi Dhatu, Asthi Dhatvagni	6
10.6	Physiology, applied physiology of Majja Dhatu, Majja Dhatvagni	5
10.7	Applied physiology, recent updates & research works of Dhatu	6
11.1	Rasa Saara Pariksha	5
11.2	Rakta Saara Pariksha	6

11.3	Mamsa Saara Pariksha	5
11.4	Meda Saara Pariksha	5
11.5	Asthi Saara Pariksha	5
11.6	Majja Saara Pariksha	5
11.7	Shukra Saara Pariksha	5
11.8	Satva, Sarva Saara Pariksha	3
12.1	Functions & formation of Oja & Oja as Mala, Updahatu	6
12.2	Evaluation of Vyadhikshamtva and Assessment of Bala & Bala Vriddhikara Bhava	3
12.3	Role of Oja & Bala in maintaining health and causing of disease and treatment plan.	4
13.1	Stanya Dushti types & their Lakshana	3
13.2	Shuddha Stanya Charecteristics	3
13.3	Stanya as an Upadhatu in female	3
13.4	Integrate Lactogenesis and Lactation	2
13.5	Rajopravritti, Rajonivritti, Ritukala with Puberty(Menarche),Menopause etc	3
13.6	Artava Vridhi & Kshaya Lakshana	2
13.7	Research Publications on Artava	2
13.8	variations in Chhaya and Prabha in Swastha and Aatura with clinical significance	3
13.9	Case reports on Tvak Vikara associated with different skin layers	3
13.10	Recent advances & research works on Tvak	2
14.1	Examination of tendon status with tendon related abnormality	3

14.2	Sira Pradoshaj Vikara, Kandara Pradoshaj Vikara & assess presence of Samanya Updhatu Pradoshaj Lakashana	2
14.3	Review research journals, publications on Sira, Khandara	2
14.4	Clinical Significance of Sandhi & Snayu	3
14.5	Formation of Snayu from Sira & Justify sandhi as Updahtu	3
14.6	Recent advances, research works about Vasa & Snayu as updhatu ,their clinical significance	2
14.7	Danta (teeth) in Asthi, Majja & Shukra Saara individuals	3
14.8	Danta, Kesha,Roma critically As Updhatu / Mala	3
14.9	Recent advances, research works on Kesha	3
14.10	Recent advancements in the field of physiology & pathophysiology of Roma & Danta	2
15.1	Trimala in detail	9
15.2	Assessment Criteria for Vridhhi -Kshay of Purisha Mala with the use of various types of equipment/ instruments	3
15.3	Recent advances & research works on Purisha	3
15.4	Assessment Criteria for Vridhi -Kshaya of Mutra with the use of various types of equipment/ instruments	6
15.5	Recent advances & research works on Mutra	6
15.6	Assessment Criteria for Vridhhi -Kshay of Sweda with the use of various types of equipment/ instruments	6
15.7	Recent advances & research works on Sweda	6
16.1	Concept of Prakrit Shleshma as Bala and Vikrit Shleshma as Mala (Malarupi Kapha)	2
16.2	Malarupi Pitta, Ranjak Pitta & Khamala	3
16.3	Evaluation of Prasweda, Nakha, Roma (Malarupi)	3

16.4	Mala of Majja Dhatu & Shukra Dhatu	3
16.5	Recent research advances in the field of Dhatumala	2
17.1	Dietary Planning as per various stages of age & gender according to energy expenditure.	4
17.2	Dietary Planning according to Prakriti, Saarata according energy expenditure.	4
17.3	Dietary plans according to life stages, genders, and the individual needs for macro- and micronutrients.	4
17.4	Dietary Planning according to Prakriti and Saarata, tailored to energy needs and micro, macro nutrient requirements.	4
17.5	Personalized dietary plans according to macro & micro nutrient need by analysing nutritional fibre content & Panchbhautiktwa, Rasa, Virya Vipak , Guna etc	2
17.6	Nutrient-gene interactions & its effects of nutrients on gene expression and function.	4
17.7	Impact of genetic variants on nutrient metabolism and response.	2
17.8	Nutrient deficiencies and excesses by AI-generated nutritional assessments.	2
18.1	influence of specific dietary regulations in various health conditions (e.g., Obesity Diabetes and Hypertension etc.) in perspective of Dosha, Dushya and Mala.	3
18.2	Ayurvedic principles with nutritional science in perspective of nutrition & malabsorption on the basis of WHO data base.	3
18.3	Influence of Aahar Vidhi Vidhana in various health conditions (e.g., Obesity, Diabetes and Hypertension etc) in parspective Dosha, Dushya and Mala.	2
18.4	Ayurvedic principles with nutritional science in perspective of Aahar Vidhi Vidhana.	2
18.5	Dwadasha Ashana Pravichara	4
18.6	Review Published articles on Virudha Aahar.	4
18.7	Compatible and incompatible dietary practices	4
18.8	Effects of Anupana (Peyaadi Dravya/ Varga) on digestion, absorption and utilization of various nutrients.	4

19.1	Examination of Teeth	2
19.2	Oral cavity examination	2
19.3	Laboratory reports in preview of digestion process.	4
19.4	Review various kind of assays used in research Articles.	5
20.1	Histopathological research studies related GIT	2
20.2	Lab investigations related to Macronutrients , Bile Salt & Bile Pigments in Blood & Urine	3
20.3	Research articles related to lab investigations related to Macronutrient, Bile Salt & Bile Pigments in Blood & Urine	3
20.4	Lab investigations related to Micronutrient in Blood.	3
20.5	Evaluate the research articles related to lab investigations pertaing to Micronutrients in Blood.	3
20.6	Simulation/ virtual Realty techniques available to construct the knowledge of Digestion and metabolism of proteins.	3
20.7	Simulation/ virtual Realty techniques technics available to construct the knowledge of Digestion and metabolism of fats .	3
20.8	Simulation/ virtual Realty techniques available to construct the knowledge of digestion and metabolism of carbohydrates	4
20.9	Per abdominal examination focusing on the gastrointestinal tract	3
20.10	Diagnostic clues in cases of Vomiting, Diarrhoea, Constipation , Hepatitis, etc	3
20.11	Involved gut and extraintestinal organs related pathways.	3
20.12	General disorders of Gastrointestinal Tract disorders.	2
20.13	Physiology of disorders of swallowing ,Oesophagus and Stomach.	2
20.14	Disorders of the Large Intestine.	2
21.1	Digestive health questionnaires to assess digestive efficiency	6

21.2	Dhatwagni and Bhutagni functions with applied physiology	8
21.3	Concepts of Avasthapaka and Nishtapaka in digestion by analyzing stages of transformation	4
21.4	Concepts of Ama and Agnimandya in the context of recent developments, drawing key comparisons with advanced physiological understandings such as endotoxins, metabolic waste, and digestive inefficiencies.	4
21.5	Assessment of Koshta and correlate it with the underlying pathophysiological mechanisms	4
22.1	Significance of Grahani Sthana and Pittadhara kala	6
22.2	Prebiotics and Probiotics for the efficient functioning of Grahani and Pithadhara Kala	8
22.3	Applied physiology of Grahani and Pittadhara Kala in GI disorders	6
22.4	Concept of Grahani and Pittadhara Kala with the recent development of microbiome analysis, proteomics, and metabolomics	6
23.1	Functional significance of Dasha Pranayatana	8
23.2	Hrudayaghata Lakshnas and its applied aspects	4
23.3	Applied physiology of Sira and Dhamani	8
23.4	Effective functioning of Prana, Bala, Brimhana, Ananda, Harshana, and Ayana	6
24.1	Effectiveness of individual's health routines by comparing them with Ayurvedic guidelines for healthy aging	8
24.2	Evaluate Rasayana therapies to enhance tissue nourishment and rejuvenation based on the bioavailability of nutrients and promote longevity.	6
24.3	Analyse genetic theories of aging and correlate them with the Ayurvedic concept of ?yu and Agni	6
24.4	Evaluate the role of Panchakarma in delaying aging and cellular senescence	6
25.1	Role of Dharaniya Vega in maintaing health.	7
25.2	Evaluate emotions and physiology of emotional intelligence	3
25.3	Evaluate Adharaniya Vega in maintaing health.	4

25.4	Evaluate Physiology of Yawning, Crying, Laughing, Grief, Belching etc	6
25.5	Recent advances in the field of Dharaniya & Adharaniya Vega	6
26.1	Preventive care, pathophysiology, examinations of Jnanendriya	8
26.2	Jnanendriya assessment techniques.	3
26.3	Evaluate Sarva Indriyanam Nayanam Pradhanam	3
26.4	Vaikrita Karma of Karmendriya	3
26.5	Physiological significnace of Vak-utpatti	3
26.6	Evaluate recent update and research works in the field of Jnanendriya, Karmendriya, its role in maintaining health and causing disease.	6
27.1	Evaluate Location & properties of Manas	7
27.2	Neuroplasticity & its relation with Manas.	3
27.3	Physiology of learning, memory, and motivation with Ayurvedic concepts	4
27.4	Emotional intelligence & its significance in Ayurveda.	7
27.5	Cognitive (Evaluation) psychology.	3
27.6	Brain heart interactions	3
27.7	Physiological Perspective of Atma	6
27.8	Evaluate Research works on brain dead & heart dead	3
27.9	Significance of Daivavyapashraya Chikitsa.	3
28.1	significance of Ayurveda treatments on Buddhi	3
28.2	significance of different therapeutics on Buddhi.	3

28.3	Influence of Artificial Intelligence on Human Intelligence	1
28.4	Research works on influence of Medhya Rasayana & Madakari Dravya on intelligence.	3
28.5	Role of buddhi in maintaining health, causing disease.	3
29.1	Effects of Panchakarma on Dhriti	4
29.2	Influence of diffferent theapeutics on Dhriti.	3
29.3	Evaluate effects of Panchakarma on Smruti	4
29.4	Influence of different therapeutics on Smruti.	3
29.5	Verses of Pradnyaparadha under Panchavayava Vakya	3
29.6	Achara Rasayana & its clinical significance	3
29.7	Recent research works on Influence of social networking usage	3
29.8	Influence of social networking usage on memory	3
30.1	Influence of Nidra on different parameters of psycho-somatic health.	3
30.2	Knowledge, awareness points related to Nidra	6
30.3	Effect of Nidra Vegadharana on Quality of Life.	3
30.4	To evaluate & experience dreams using virtual reality videos available online and categorize it under specific type of Svapna	3
30.5	Knowledge, awareness related to Svapna	3
30.6	Evaluate & intergrate concept of Svapna in physiological & pathological perspective.	6
30.7	Recent research works on Nidra and Svapna	2
31.1	Nadi, Jihwa, Mala, Mutra, Shabda, Sparsha, Drik & Akriti Pariksha	7
31.2	Recent research works & updates on each parameters of Dashavidha Pariksha	7

31.3	Dosha anusara, Vaya Anusara, Kala anusara Naadi Pariksha	7
31.4	Recent research works and updates on Satmya, Satva Pariksha in relation to different physiological condition: Vaya, Kaala, Garbhini etc.	5
32.1	Role of specific Indian tradition / customs in maintaining health.	7
32.2	Effect of Swarnamrutaprashana Samskara	7
32.3	Effect of alternate therapy on Sharir, Manas and Indriya.	7
32.4	Physiological changes in Aviation, entering deep sea and hyperbaric condition.	2
32.5	Preventive points to be considered before Exercise and sports considering its physiology basis and its role in preventing chronic diseases	3

Table 6 : Assessment Summary: Assessment is subdivided in A to H points

6 A : Number of Papers and Marks Distribution

Subject Code	Paper	Theory	Practical	Total
AYPG-KS	4	100 x 4 Papers = 400	400	800

6 B : Scheme of Assessment (Formative and Summative Assessment)

Credit frame work

AYPG-KS consists of 32 modules totaling 64 credits, which correspond to 1920 Notional Learning Hours. Each credit comprises 30 Hours of learner engagement, distributed across teaching, practical, and experiential learning in the ratio of 1:2:3. Accordingly, one credit includes 5 hours of teaching, 10 hours of practical training, 13 hours of experiential learning, and 2 hours allocated for modular assessment, which carries 25 marks.

Formative Assessment : Module wise Assessment:will be done at the end of each module. Evaluation includes learners active participation to get Credits and Marks. Each Module may contain one or more credits.
Summative Assessment: Summative Assessment (University examination) will be carried out at the end of Semester VI.

6 C : Semester 2 Calculation Method for Modular Grade Points (MGP)

Module Number & Name (a)	Credits (b)	Actual No. of Notional Learning Hours (c)	Attended Number of notional Learning hours (d)	Maximum Marks of assessment of modules (e)	Obtained Marks per module (f)	MGP =d*f/c*e*100
Semester No : 3						
Paper No : 1 (DOSHA EVAM PRAKRITI VIJNANIYAM)						
M1 Vata Dosha	2	60		50		
M2 Pitta Dosha	2	60		50		
Paper No : 2 (DHATU EVAM MALA VIJNANIYAM)						
M9 Dhatu Poshana Nyaya	1	30		25		
M10 Dhatu	3	90		75		
Paper No : 3 (KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM)						
M17 Aahara and Nutrition	2	60		50		
M18 Aahara Vidhi Visheshaytana & Aahara Vidhi Vidhana	2	60		50		
Paper No : 4 (SATVA ATMA INDRIYAADI VIJNANIYAM)						

M25 Dharaniya and Adharaniya Vega	2	60		50		
M26 Indriya	2	60		50		
	16	480		400		
Semester No : 4						
Paper No : 1 (DOSHA EVAM PRAKRITI VIJNANIYAM)						
M3 Kapha Dosha	2	60		50		
M4 Neuro-Immuno-Endocrinology	2	60		50		
Paper No : 2 (DHATU EVAM MALA VIJNANIYAM)						
M11 Dhatu Saara	3	90		75		
M12 Oja & Bala	1	30		25		
Paper No : 3 (KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM)						
M19 Koshtang- Avayaya Parichaya Part -1	1	30		25		
M20 Koshtang- Avayaya Parichaya Part -2	3	90		75		
Paper No : 4 (SATVA ATMA INDRIYAADI VIJNANIYAM)						
M27 Manas and Atma	3	90		75		
M28 Buddhi	1	30		25		
	16	480		400		
Semester No : 5						
Paper No : 1 (DOSHA EVAM PRAKRITI VIJNANIYAM)						
M5 Prakriti	3	90		75		
M6 Body Patterns & Personality	1	30		25		
Paper No : 2 (DHATU EVAM MALA VIJNANIYAM)						
M13 Upadhatu – Part I (Stanya, Artava & Tvak)	2	60		50		
M14 Upadhatu – Part II (Kandara adi)	2	60		50		
Paper No : 3 (KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM)						
M21 Agni and Koshta	2	60		50		
M22 Grahani and Pittadhara Kala	2	60		50		
Paper No : 4 (SATVA ATMA INDRIYAADI VIJNANIYAM)						
M29 Dhruti, Smruti	2	60		50		
M30 Nidra, Svapna	2	60		50		

	16	480		400		
Semester No : 6						
Paper No : 1 (DOSHA EVAM PRAKRITI VIJNANIYAM)						
M7 Manasika Prakriti	2	60		50		
M8 Bija, Bija Bhaga, Bija Bhaga Avayava	2	60		50		
Paper No : 2 (DHATU EVAM MALA VIJNANIYAM)						
M15 Mala	3	90		75		
M16 Dhatumala	1	30		25		
Paper No : 3 (KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM)						
M23 Dasha Pranayatana, Hrudaya and Agni	2	60		50		
M24 Ayu and Agni	2	60		50		
Paper No : 4 (SATVA ATMA INDRIYAADI VIJNANIYAM)						
M31 Ashtavidha, Dashavidha Pariksha	2	60		50		
M32 Swathya Rakshana: Preventive Physiology	2	60		50		
	16	480		400		
MGP = ((Number of Notional learning hours attended in a module) X (Marks obtained in the modular assessment) / (Total number of Notional learning hours in the module) X (Maximum marks of the module)) X 100						

6 D : Semester Evaluation Methods for Semester Grade point Average (SGPA)

SGPA will be calculated at the end of the semester as an average of all Module MGPs. Average of MGPS of the Semester For becoming eligible for Summative assessment of the semester, student should get minimum of 60% of SGPA

SGPA = Average of MGP of all modules of all papers = add all MGPs in the semester/ no. of modules in the semester

Evaluation Methods for Modular Assessment

Semester No : 3		
Paper No : 1 DOSHA EVAM PRAKRITI VIJNANIYAM		
A **S.No**	**B** **Module number and Name**	**C** **MGP**
1	M1.Vata Dosha	C1
2	M2.Pitta Dosha	C2
Paper No : 2 DHATU EVAM MALA VIJNANIYAM		
A **S.No**	**B** **Module number and Name**	**C** **MGP**
3	M9.Dhatu Poshana Nyaya	C3
4	M10.Dhatu	C4
Paper No : 3 KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM		
A **S.No**	**B** **Module number and Name**	**C** **MGP**
5	M17.Aahara and Nutrition	C5
6	M18. Aahara Vidhi Visheshaytana & Aahara Vidhi Vidhana	C6
Paper No : 4 SATVA ATMA INDRIYAADI VIJNANIYAM		
A **S.No**	**B** **Module number and Name**	**C** **MGP**
7	M25.Dharaniya and Adharaniya Vega	C7
8	M26.Indriya	C8
	Semester Grade point Average (SGPA)	(C1+C2+C3+C4+C5+C6+C7+C8) / Number of modules(8)
Semester No : 4		
Paper No : 1 DOSHA EVAM PRAKRITI VIJNANIYAM		
A	**B**	**C**

S.No	Module number and Name	MGP
1	M3.Kapha Dosha	C1
2	M4.Neuro-Immuno-Endocrinology	C2
Paper No : 2 DHATU EVAM MALA VIJNANIYAM		
A S.No	**B Module number and Name**	**C MGP**
3	M11.Dhatu Saara	C3
4	M12.Oja & Bala	C4
Paper No : 3 KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM		
A S.No	**B Module number and Name**	**C MGP**
5	M19.Koshtang- Avayaya Parichaya Part -1	C5
6	M20. Koshtang- Avayaya Parichaya Part -2	C6
Paper No : 4 SATVA ATMA INDRIYAADI VIJNANIYAM		
A S.No	**B Module number and Name**	**C MGP**
7	M27.Manas and Atma	C7
8	M28.Buddhi	C8
	Semester Grade point Average (SGPA)	(C1+C2+C3+C4+C5+ C6+C7+C8) / Number of modules(8)
Semester No : 5		
Paper No : 1 DOSHA EVAM PRAKRITI VIJNANIYAM		
A S.No	**B Module number and Name**	**C MGP**
1	M5.Prakriti	C1
2	M6.Body Patterns & Personality	C2
Paper No : 2 DHATU EVAM MALA VIJNANIYAM		
A S.No	**B Module number and Name**	**C MGP**

3	M13.Upadhatu – Part I (Stanya, Artava & Tvak)	C3
4	M14.Upadhatu – Part II (Kandara adi)	C4
Paper No : 3 KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM		
A S.No	**B Module number and Name**	**C MGP**
5	M21.Agni and Koshta	C5
6	M22.Grahani and Pittadhara Kala	C6
Paper No : 4 SATVA ATMA INDRIYAADI VIJNANIYAM		
A S.No	**B Module number and Name**	**C MGP**
7	M29.Dhruti, Smruti	C7
8	M30.Nidra, Svapna	C8
	Semester Grade point Average (SGPA)	(C1+C2+C3+C4+C5+ C6+C7+C8) / Number of modules(8)
Semester No : 6		
Paper No : 1 DOSHA EVAM PRAKRITI VIJNANIYAM		
A S.No	**B Module number and Name**	**C MGP**
1	M7.Manasika Prakriti	C1
2	M8.Bija, Bija Bhaga, Bija Bhaga Avayava	C2
Paper No : 2 DHATU EVAM MALA VIJNANIYAM		
A S.No	**B Module number and Name**	**C MGP**
3	M15.Mala	C3
4	M16.Dhatumala	C4
Paper No : 3 KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM		
A S.No	**B Module number and Name**	**C MGP**
5	M23.Dasha Pranayatana, Hrudaya and Agni	C5
6	M24.Ayu and Agni	C6

Paper No : 4 SATVA ATMA INDRIYAADI VIJNANIYAM		
A **S.No**	**B** **Module number and Name**	**C** **MGP**
7	M31.Ashtavidha, Dashavidha Pariksha	C7
8	M32.Swathya Rakshana: Preventive Physiology	C8
	Semester Grade point Average (SGPA)	(C1+C2+C3+C4+C5+ C6+C7+C8) / Number of modules(8)

S. No	Evaluation Methods
1.	Method explained in the Assessment of the module or similar to the objectives of the module.

6 E : Question Paper Pattern

MD/MS Ayurveda Examination
AYPG-KS
Sem VI

Time: 3 Hours ,**Maximum Marks:** 100
INSTRUCTIONS: All questions compulsory

		Number of Questions	Marks per Question	Total Marks
Q 1	Application-based Questions (ABQ)	1	20	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Analytical based structured Long answer question (LAQ)	4	10	40
				100

6 F : Distribution for summative assessment (University examination)

S.No	List of Module/Unit	ABQ	SAQ	LAQ
Paper No : 1 (DOSHA EVAM PRAKRITI VIJNANIYAM)				
(M-1)Vata Dosha (Marks: Range 5-20)				
1	(U-1) Physiological reflections of Vata Dosha	No	Yes	Yes
2	(U-2) Functional anatomy of Vata Sthana	Yes	Yes	Yes
3	(U-3) Functional spectrum and subtypes of Vata Dosha	Yes	Yes	Yes
4	(U-4) Diet and lifestyle factors influencing Vata Dosha	No	Yes	Yes
5	(U-5) Clinical manifestations of Vata Dosha	Yes	Yes	Yes
6	(U-6) Technological integration and advancements in Vata assessment	No	Yes	Yes
(M-2)Pitta Dosha (Marks: Range 5-20)				
1	(U-1) Physiological reflections of Pitta Dosha	Yes	Yes	Yes
2	(U-2) Functional anatomy of Pitta Sthana	Yes	Yes	Yes
3	(U-3) Functional spectrum and types of Pitta Dosha	Yes	Yes	Yes
4	(U-4) Diet and lifestyle factors influencing Pitta Dosha	Yes	Yes	No
5	(U-5) Clinical manifestations of Pitta Dosha	No	Yes	Yes
6	(U-6) Technological integration and advancements in Pitta assessment	Yes	Yes	No
(M-3)Kapha Dosha (Marks: Range 5-20)				
1	(U-1) Physiological reflections of Kapha Dosha	Yes	Yes	Yes
2	(U-2) Functional anatomy of Kapha Sthana	No	Yes	Yes
3	(U-3) Functional spectrum and subtypes of Kapha Dosha	Yes	Yes	Yes
4	(U-4) Diet and lifestyle factors influencing Kapha Dosha	No	Yes	Yes
5	(U-5) Clinical manifestations of Kapha Dosha	Yes	Yes	Yes
6	(U-6) Technological integration and advancements in Kapha assessment	Yes	Yes	Yes
(M-4)Neuro-Immuno-Endocrinology (Marks: Range 5-20)				
1	(U-1) Structural & Functional overview of Neuro-immuno-endocrinology	Yes	Yes	Yes
2	(U-2) Cellular and Molecular Mediators	Yes	Yes	Yes
3	(U-3) Hypothalamic-Pituitary Axis and Immune Modulation	Yes	Yes	Yes
4	(U-4) Bidirectional Communication Pathways	Yes	Yes	Yes

5	(U-5) Stress, Inflammation, and Immune Regulation	Yes	Yes	Yes
6	(U-6) Research Perspectives of Neuro-immuno-endocrinology	Yes	Yes	Yes
(M-5)Prakriti (Marks: Range 5-20)				
1	(U-1) Basics of Prakriti	Yes	Yes	Yes
2	(U-2) Vata Prakriti	Yes	Yes	Yes
3	(U-3) Pitta Prakriti	Yes	Yes	Yes
4	(U-4) Kapha Prakriti	Yes	Yes	Yes
5	(U-5) Prakriti Pariksha	Yes	Yes	No
6	(U-6) Bhautika Prakriti	Yes	Yes	Yes
7	(U-7) Anukatva, Diet & Dinacharya Chart	Yes	Yes	Yes
(M-6)Body Patterns & Personality (Marks: Range 5-20)				
1	(U-1) Body Patterns	Yes	Yes	Yes
2	(U-2) Personality & Personality traits	Yes	Yes	Yes
3	(U-3) Brain activity model	No	Yes	No
(M-7)Manasika Prakriti (Marks: Range 5-20)				
1	(U-1) Basics of Manasika Prakriti	No	Yes	Yes
2	(U-2) Satvika Kaaya	Yes	Yes	Yes
3	(U-3) Rajasika Kaaya	Yes	Yes	Yes
4	(U-4) Tamasika Kaaya	Yes	Yes	Yes
5	(U-5) Recent advances and research works in Manasika Prakriti	No	Yes	Yes
(M-8)Bija, Bija Bhaga, Bija Bhaga Avayava (Marks: Range 5-20)				
1	(U-1) Bija	Yes	Yes	Yes
2	(U-2) Bija Bhaga	Yes	Yes	No
3	(U-3) Bhija bhaga avayava	Yes	Yes	Yes
4	(U-4) Genetic Disorder	No	Yes	Yes
5	(U-5) Recent advances & research works	No	Yes	Yes

S.No	List of Module/Unit	ABQ	SAQ	LAQ
Paper No : 2 (DHATU EVAM MALA VIJNANIYAM)				
(M-9)Dhatu Poshana Nyaya (Marks: Range 5-20)				
1	(U-1) Basics of Dhatu Poshana Nyaya	No	Yes	Yes
2	(U-2) Factors affecting Dhatu Poshana	Yes	Yes	Yes
3	(U-3) Applied Physiology of Dhatu Poshana	Yes	Yes	Yes
4	(U-4) Tissue formation	Yes	Yes	Yes
5	(U-5) Recent Updates & advances	No	Yes	Yes
(M-10)Dhatu (Marks: Range 5-20)				
1	(U-1) Rasa Dhatu	Yes	Yes	Yes
2	(U-2) Rakta Dhatu	Yes	Yes	Yes
3	(U-3) Mamsa Dhatu	Yes	Yes	Yes
4	(U-4) Meda Dhatu	Yes	Yes	Yes
5	(U-5) Asthi Dhatu	Yes	Yes	Yes
6	(U-6) Majja Dhatu	Yes	Yes	Yes
7	(U-7) Shukra Dhatu	Yes	Yes	Yes
8	(U-8) Applied Physiology of Dhatu	Yes	Yes	Yes
(M-11)Dhatu Saara (Marks: Range 5-20)				
1	(U-1) Dhatu Saara	Yes	Yes	Yes
2	(U-2) Rasa Saara	Yes	Yes	Yes
3	(U-3) Rakta Saara	Yes	Yes	Yes
4	(U-4) Mamsa Saara	Yes	Yes	Yes
5	(U-5) Meda Saara	Yes	Yes	Yes
6	(U-6) Asthi Saara	Yes	Yes	Yes
7	(U-7) Majja Saara	Yes	Yes	Yes
8	(U-8) Shukra Saara	Yes	Yes	Yes
9	(U-9) Satva & Sarva Saara	No	Yes	Yes
(M-12)Oja & Bala (Marks: Range 5-20)				
1	(U-1) Applied Physiology of Oja	Yes	Yes	Yes
2	(U-2) Pathophysiology of Oja	Yes	Yes	Yes

3	(U-3) Advanced Physiological Perspective of Oja	Yes	Yes	Yes
4	(U-4) Oja, Bala and Vyadhikshamtva	Yes	Yes	Yes
5	(U-5) Recent advances & research works on Oja & Bala	No	Yes	Yes
(M-13)Upadhatu – Part I (Stanya, Artava & Tvak) (Marks: Range 5-20)				
1	(U-1) Stanya	Yes	Yes	Yes
2	(U-2) Artava	Yes	Yes	Yes
3	(U-3) Tvak	Yes	Yes	Yes
(M-14)Upadhatu – Part II (Kandara adi) (Marks: Range 5-20)				
1	(U-1) Sira & Kandara	Yes	Yes	No
2	(U-2) Vasa, Snayu, Sandhi	Yes	Yes	No
3	(U-3) Danta, Kesha, Roma	Yes	Yes	No
(M-15)Mala (Marks: Range 5-20)				
1	(U-1) Trimala	No	Yes	No
2	(U-2) Purisha	Yes	Yes	No
3	(U-3) Mutra	Yes	Yes	Yes
4	(U-4) Sweda	No	Yes	Yes
(M-16)Dhatumala (Marks: Range 5-15)				
1	(U-1) Rasa Dhatu Mala	No	Yes	No
2	(U-2) Rakta and Mamsa Dhatu Mala	No	Yes	No
3	(U-3) Meda and Asthi Dhatu Mala	No	Yes	No
4	(U-4) Majja and Shukra Dhatu Mala	No	Yes	No
5	(U-5) Recent advances in the field of Dhatu Mala	No	Yes	No

S.No	List of Module/Unit	ABQ	SAQ	LAQ
Paper No : 3 (KOSHTANGA EVAM AAHARA PAKADI VIJNANIYAM)				
(M-17)Aahara and Nutrition (Marks: Range 5-20)				
1	(U-1) Aahariya Dravya Parichay	Yes	Yes	Yes
2	(U-2) Aahara Parinamakara Bhava and Anna Pachana	Yes	Yes	Yes
3	(U-3) Introduction to Nutrigenomics	No	Yes	Yes
4	(U-4) AI powered nutrition in Ayurveda	No	No	Yes
(M-18) Aahara Vidhi Visheshaytana & Aahara Vidhi Vidhana (Marks: Range 5-20)				
1	(U-1) Aahara Vidhi Visheshaytana	Yes	Yes	Yes
2	(U-2) Aahara Vidhi Vidhana	Yes	Yes	Yes
3	(U-3) Dwadasha Aashana Pravichara	Yes	Yes	Yes
4	(U-4) Viruddha Aahara	Yes	Yes	Yes
5	(U-5) Bioavailability and Absorption of Nutrient	No	Yes	Yes
(M-19)Koshtang- Avayaya Parichaya Part -1 (Marks: Range 5-20)				
1	(U-1) Accessory organs involved in digestive process	Yes	Yes	Yes
2	(U-2) Composition, Function Mechanism and regulation of Secretions	Yes	Yes	Yes
(M-20) Koshtang- Avayaya Parichaya Part -2 (Marks: Range 5-20)				
1	(U-1) Study of GIT	Yes	Yes	Yes
2	(U-2) Biochemistry of Macronutrients, micronutrient, Bile pigments & salts	Yes	Yes	Yes
3	(U-3) Digestion and metabolism of proteins, fats and carbohydrates	Yes	Yes	Yes
4	(U-4) Applied physiology of gut & Gut Movement	Yes	Yes	Yes
5	(U-5) Gut - Organ axis	Yes	Yes	Yes
6	(U-6) Physiological Aspect of disorder of GIT	Yes	Yes	Yes
(M-21)Agni and Koshta (Marks: Range 5-20)				
1	(U-1) Jatharagni Paka and Digestive physiology	Yes	Yes	Yes
2	(U-2) Dhatwagni Paka and Bhutagnipaka	Yes	Yes	Yes
3	(U-3) Avasthapaka and Nishtapaka	Yes	Yes	Yes
4	(U-4) Concept of Ama in Agnimandya	No	Yes	No

5	(U-5) Koshta and its variations	No	Yes	Yes
(M-22)Grahani and Pittadhara Kala (Marks: Range 5-20)				
1	(U-1) Grahani, Pittadhara Kala and role in digestive health	Yes	Yes	Yes
2	(U-2) Impact of Takra Prayaga on Grahani and digestion	No	Yes	No
3	(U-3) Applied physiology of Grahani and Pittadhara Kala	No	Yes	Yes
4	(U-4) Grahani and Pittadhara Kala with recent advancement of gut microbiota	No	Yes	No
(M-23)Dasha Pranayatana, Hrudaya and Agni (Marks: Range 5-15)				
1	(U-1) Dasha Pranayatana and supportive role of Agni	No	Yes	Yes
2	(U-2) Arthodasha Mahamuliyam	No	Yes	Yes
3	(U-3) Hrudaya and Dasha Dhamani	No	Yes	No
4	(U-4) Parirakshana of Hrudaya	No	Yes	No
(M-24)Ayu and Agni (Marks: Range 5-20)				
1	(U-1) Concept of Ayu with evidences of healthy practices	No	Yes	Yes
2	(U-2) Rasayana and Dhatu Samya concept	Yes	Yes	Yes
3	(U-3) Ayu, Agni and genetic /programmed aging	No	Yes	Yes
4	(U-4) Ayu and Cellular Senescence	No	Yes	Yes

S.No	List of Module/Unit	ABQ	SAQ	LAQ
Paper No : 4 (SATVA ATMA INDRIYAADI VIJNANIYAM)				
(M-25)Dharaniya and Adharaniya Vega (Marks: Range 5-20)				
1	(U-1) Physiological Perspective of Dharaniya Vega	Yes	Yes	Yes
2	(U-2) Advanced and Applied Physiology of Dharaniya Vega	Yes	Yes	Yes
3	(U-3) Physiological Perspective of Adharaniya Vega	Yes	Yes	Yes
4	(U-4) Advanced and Applied Physiology of Adharaniya Vega	Yes	Yes	Yes
5	(U-5) Research Works on Dharaniya and Adharaniya Vega	Yes	Yes	Yes
(M-26)Indriya (Marks: Range 5-20)				
1	(U-1) Jnanendriya and Panchapanchaka	Yes	Yes	Yes
2	(U-2) Physiological and Clinical Aspects of Jnanendriya	Yes	Yes	Yes
3	(U-3) Sarva Indriyanam Nayanam Pradhanam.	Yes	Yes	Yes
4	(U-4) Advanced physiological description of Karmendriya.	Yes	Yes	Yes
5	(U-5) Research works on Jnanendriya and Karmendriya	Yes	Yes	Yes
(M-27)Manas and Atma (Marks: Range 5-20)				
1	(U-1) Applied Basics of Mana	Yes	Yes	Yes
2	(U-2) Domains of Mana	Yes	Yes	Yes
3	(U-3) Physiology and pathophysiology of Manovaha Srotas	Yes	Yes	Yes
4	(U-4) Theories related to Mana.	Yes	Yes	Yes
5	(U-5) Physiology of Atma.	Yes	Yes	Yes
6	(U-6) Physiology of death.	Yes	Yes	Yes
7	(U-7) Signs of life	Yes	Yes	Yes
(M-28)Buddhi (Marks: Range 5-15)				
1	(U-1) Physiological and applied description on Buddhi	No	Yes	Yes
2	(U-2) Advanced Physiological Perspective of Buddhi	No	Yes	Yes
3	(U-3) Dravya influencing Buddhi	No	Yes	Yes
4	(U-4) Research works on Buddhi	No	Yes	Yes
(M-29)Dhruti, Smruti (Marks: Range 5-20)				
1	(U-1) Dhi & Dhruti Vibramsha	Yes	Yes	Yes
2	(U-2) Smruti & Smruti Vibhramsha.	Yes	Yes	Yes

3	(U-3) Pradnyaparadha.	Yes	Yes	Yes
4	(U-4) Influence of Social networking usage Dhriti, Smruthi	Yes	Yes	Yes
(M-30)Nidra, Svapna (Marks: Range 5-20)				
1	(U-1) Nidra	Yes	Yes	Yes
2	(U-2) Physiological significance on Nidra with evidence.	Yes	Yes	Yes
3	(U-3) Clinical significance of Nidra with evidence.	Yes	Yes	Yes
4	(U-4) Svapna	No	Yes	Yes
5	(U-5) Interpretation of Svapna.	No	Yes	Yes
6	(U-6) Research work on Nidra & Svapna	No	No	No
(M-31)Ashtavidha, Dashavidha Pariksha (Marks: Range 5-20)				
1	(U-1) Applied Approach on Ashtavidha Pariksha	Yes	Yes	Yes
2	(U-2) Applied approach on Dashavidha Pariksha	Yes	Yes	Yes
3	(U-3) Detailed Prakriti, Awastha based Nadi Pariksha.	No	Yes	Yes
4	(U-4) Detailed approach on Samhanana Satmya and Satva Pariksha.	Yes	Yes	Yes
(M-32)Swathya Rakshana: Preventive Physiology (Marks: Range 5-20)				
1	(U-1) Indian traditions & customs in maintaining health.	No	Yes	Yes
2	(U-2) Physiological influence of Samanya and Vishesha –customs.	No	Yes	Yes
3	(U-3) Alternative therapy influence on Sharira, Mana, Indriya and Satvavajaya Chikitsa.	Yes	Yes	Yes
4	(U-4) Swasthya Rakshana with reference to Aviation, deep sea and Hyperbaric condition	No	Yes	Yes
5	(U-5) Swsthya Rakshana with reference to Exercise, Sports.	No	Yes	Yes

6 G : Instruction for the paper setting & Blue Print for Summative assessment (University Examination)

Instructions for the paper setting.

1. University examination shall have 4 papers of 100 marks.

Each 100 marks question paper shall contain:-

- Application Based Question: 1 No (carries 20 marks)
- Short Answer Questions: 8 Nos (each question carries 05 marks)
- Long Answer Questions: 4 Nos (each question carries 10 marks)

2. Questions should be drawn based on the table 6F.
3. Marks assigned for the module in 6F should be considered as the maximum marks. No question shall be asked beyond the maximum marks.
4. Refer table 6F before setting the questions. Questions should not be framed on the particular unit if indicated “NO”.
5. There will be a single application-based question (ABQ) worth 20 marks. No other questions should be asked from the same module where the ABQ is framed.
6. Except the module on which ABQ is framed, at least one Short Answer Question should be framed from each module.
7. Long Answer Question should be analytical based structured questions assessing the higher cognitive ability.
8. Create Blueprint based on instructions 1 to 7

6 H : Distribution of Practical Exam (University Examination)

S.No	Heads	Marks
1	Major Practical (2 practicals, 50 marks each; 1 from Ayurveda, 1 from contemporary Physiology) Ayurveda Practicals: (50 marks) (Among below enlisted any practical/s can be given) Shareerika Prakriti Pariksha Manasika Prakriti Pariksha Saara Pariksha Tridosha Prakrita & Vaikrita Karma Pariksha Sapta Dhatu Prakrita & Vaikrita Karma Pariksha Trimala Prakrita & Vaikrita Karma Pariksha Astavidha Pariksha, Dashavidha Pariksha Contemporary Physiology Practicals: (50 marks) (Among below enlisted any practical/s can be given) Personality & Personality traits, Body Patterns Vital signs General clinical examination Systemic examination	100
2	Minor Practical (2 practicals, 25 marks each; 1 from Ayurveda, 1 from contemporary Physiology) Ayurveda Practicals: (25 marks) (Among below enlisted any practical/s can be given) Agni Pariksha Koshtha Pariksha Naadi Pariksha Sroto Dusthi Lakshana Pariksha Pramana Pariksha (Anthropometry) Contemporary Physiology Practicals: (25 marks) (Among below enlisted any practical/s can be given) Interpretation of: ECG calibration Digital spirometry readings Histology slides - physiological significance Hematology Lab experiments Relevant blood, serum, urine, hormonal assay report - Interpreation & physiological significance	50
3	Spotters: (50 marks) (5 marks each) Shloka – reference to context Tridosha Karma scenario – Analysis & applicability Dhatu, Mala Karma scenario – Analysis & applicability Shareerika Prakriti scenario – Analysis & applicability Manasika Prakriti scenario – Analysis & applicability	50

	Srotus Mula sthana (model/specimen/picture) - Description & analysis Radiological images- Functional Interpretation & applied physiology Model based – Organs - Functions Clinical Instruments - Principle/Significance & use Assessment Formats - Significance & use	
4	Teaching abillity (Blackboard/ Smart board teaching, To be done in UG classroom; 20 marks) Assess: Teaching Plan Clasroom Management Communication Subject Knowledge Student engagement Assessment practices	20
5	Presentation Skills (20 marks) Powerpoint presenation Assess: Clarity Delivery style Visual Aids Engagement with audiance	20
6	Viva 4 examiners - 20 marks / each examiner	80
7	Dissertation Viva 40 marks - 10 marks/ each examiner Assess: Frame work of research work Contribution of research done to field Ability to discuss critically Limitations & Scope Overall understanding of research work	40
8	Log book/ activity record	20
9	Practical/ clinical record Observed, performed practicals of all modules should be recorded, documented, certified and framed as Practical Record Book	20

Total Marks		**400**

Reference Books/ Resources

S.No	References
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Abbreviations

Domain		T L Method		Level	
CK	Cognitive/Knowledge	L	Lecture	K	Know
CC	Cognitive/Comprehension	L&PPT	Lecture with PowerPoint presentation	KH	Knows how
CAP	Cognitive/Application	L&GD	Lecture & Group Discussion	SH	Shows how
CAN	Cognitive/Analysis	L_VC	Lecture with Video clips	D	Does
CS	Cognitive/Synthesis	REC	Recitation		
CE	Cognitive/Evaluation	SY	Symposium		
PSY-SET	Psychomotor/Set	TUT	Tutorial		
PSY-GUD	Psychomotor/Guided response	DIS	Discussions		
PSY-MEC	Psychomotor/Mechanism	BS	Brainstorming		
PSY-ADT	Psychomotor Adaptation	IBL	Inquiry-Based Learning		
PSY-ORG	Psychomotor/Origination	PBL	Problem-Based Learning		
AFT-REC	Affective/ Receiving	CBL	Case-Based Learning		
AFT-RES	Affective/Responding	PrBL	Project-Based Learning		
AFT-VAL	Affective/Valuing	TBL	Team-Based Learning		
AFT-SET	Affective/Organization	TPW	Team Project Work		
AFT-CHR	Affective/ characterization	FC	Flipped Classroom		
		BL	Blended Learning		
		EDU	Edutainment		
		ML	Mobile Learning		
		ECE	Early Clinical Exposure		
		SIM	Simulation		
		RP	Role Plays		
		SDL	Self-directed learning		
		PSM	Problem-Solving Method		
		KL	Kinaesthetic Learning		
		W	Workshops		
		GBL	Game-Based Learning		
		LS	Library Session		
		PL	Peer Learning		
		RLE	Real-Life Experience		
		PER	Presentations		
		D-M	Demonstration on Model		
		PT	Practical		
		X-Ray	X-ray Identification		
		CD	Case Diagnosis		

		LRI	Lab Report Interpretation		
		DA	Drug Analysis		
		D	Demonstration		
		D-BED	Demonstration Bedside		
		DL	Demonstration Lab		
		DG	Demonstration Garden		
		FV	Field Visit		
		JC	Journal Club		
		Mnt	Mentoring		
		PAL	Peer Assisted Learning		
		C_L	Co Learning		
		DSN	Dissection		
		PSN	Prosection		

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