

Curriculum for MD/ MS Ayurveda
(PRESCRIBED BY NCISM)

अभ्यासात्प्राप्यते दृष्टिः कर्मसिद्धिप्रकाशिनी ।

Semester II
Applied Basics of Kriya Sharira
(Human Physiology)
(SUBJECT CODE : AYPG-AB-KS)

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



आयुषे सर्वलोकानाम्



SKILLS

Skill
Training



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.

INDEX

Summary & Credit Framework	4
Course Code and Name of Course	5
Table 1 : Course learning outcomes and mapped Program learning outcomes	5
Table 2 : Course contents (Modules- Credits and Notional Learning Hours)	7
Table 3 : Modules - Unit - Module Learning Objectives and Session Learning Objective- Notional Learning Hours- Domain-Level- TL Methods	17
Table 4 : Practical Training Activity	72
Table 5 : Experiential learning Activity	76
Table 6 : Assessment Summary: Assessment is subdivided in A to H points	79
6 A : Number of Papers and Marks Distribution	79
6 B : Scheme of Assessment (Formative and Summative Assessment)	79
6 C : Semester 2 Calculation Method for Modular Grade Points (MGP)	79
6 D : Semester Evaluation Methods for Semester Grade point Average (SGPA)	80
6 E : Question Paper Pattern	80
6 F : Distribution for summative assessment (University examination)	82
6 G : Instruction for the paper setting & Blue Print for Summative assessment (University Examination)	84
6 H : Distribution of Practical Exam (University Examination)	85
Reference Books/ Resources	87
Abbreviations	88

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 for MD/ MS Ayurveda

Applied Basics of Kriya Sharira (AYPG-AB-KS)

Summary & Credit Framework

Semester II

Module Number & Name	Credits	Notional Learning Hours	Maximum Marks of assessment of modules (Formative assessment)
M1. Application of Dosha, Dhatu, Mala	3	90	75
M2. Applied Physiology of Panchamahabhuta and Samanya-Visesha Siddhanta	2	60	50
M3. Doshik Biorhythm	2	60	50
M4. Srotas, Agni & Koshta	2	60	50
M5. Prakriti & Ayurgenomics	2	60	50
M6. Saara	1	30	25
M7. Naadi Pariksha	1	30	25
M8. Standard operating procedures of Laboratory Experiments and diagnostic instruments	3	90	75
	16	480	400

Credit frame work

AYPG-AB-KS consists of 8 modules totaling 16 credits, which correspond to 480 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. In case of difficulty and questions regarding the curriculum, write to syllabus24ayu@ncismindia.org.

Course Code and Name of Course

Course code	Name of Course
AYPG-AB-KS	Applied Basics of Kriya Sharira

Table 1 : Course learning outcomes and mapped Program learning outcomes

CO No	A1 Course learning Outcomes (CO) AYPG-AB-KS At the end of the course AYPG-AB-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, Kosta, 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)

2A Module Number	2B Module & units	2C Number of Credits	Notional Learning hours			
			2D Lectures	2E Practical Training	2F Experiential Learning including modular assessment	2G Total
1	<p>M-1 Application of Dosha, Dhatu, Mala This module covers comprehensive approach on the concept of Guna, Sthana, Karma of Dosha; Karma of Dhatu & Mala. It includes subjective & objective parameters to assess Dosha, Dhatu, Mala Karma & Vriddhi-Kshaya. It includes recent updates & research works on the concept of Dosha, Dhatu, Mala.</p> <ul style="list-style-type: none"> • M1U1 Basics of Dosha <ul style="list-style-type: none"> ◦ Physiological significance on Nirukti of Dosha ◦ Panchabhoutikatha of Vata, Pitta, Kapha. ◦ Paryaya of Vata, Pitta, Kapha. • M1U2 Applied Basics of Vata <ul style="list-style-type: none"> ◦ Guna, Sthana of Vata Dosha with its molecular, biochemical significance ◦ Karma of Vata Dosha with its applied physiology. ◦ Methods to assess Prakrit & Vaikrit Karma, Vriddhi -Kshaya of Vata Dosha. • M1U3 Applied Basics of Pitta <ul style="list-style-type: none"> ◦ Guna, Sthana of Pitta Dosha with its molecular, biochemical 	3	15	30	45	90

significance

- Karma of Pitta Dosha with its applied physiology
- Methods to assess Prakrit & Vaikrit Karma, Vriddhi -Kshaya of Pitta Dosha.

• **M1U4 Applied Basics of Kapha**

- Guna, Sthana of Kapha Dosha with its molecular, biochemical significance
- Karma of Kapha Dosha with its applied physiology
- Methods to assess Prakrit & Vaikrit Karma, Vriddhi -Kshaya of Kapha Dosha.

• **M1U5 Applied Basics of Dhatu Karma**

- Karma of Sapta Dhatu with its histology & applied physiology.
- Methods to assess Prakrit & Vaikrit Karma, Vriddhi -Kshaya of Sapta Dhatu.

• **M1U6 Applied Basics of Mala Karma**

- Karma of Trimala with its applied physiology
- Methods to assess Prakrit & Vaikrit Karma, Vriddhi -Kshaya of Trimala.

• **M1U7 Recent advances in Dosha, Dhatu, Mala.**

- Research works & updates on Dosha, Dhatu, Mala

2	M-2 Applied Physiology of Panchamahabhuta and Samanya- Visesha	2	10	20	30	60
---	---	---	----	----	----	----

Siddhanta

This module will explore the influence of Panchamahabhuta Siddhanta over various physiological aspects. The Samanya-Vishesha Siddhanta will be applied to understand the similarities and differences between various physiological processes to develop a deeper appreciation for the complexities of human physiology.

- **M2U1 Panchamahabhuta and Samanya-Vishesha Siddhanta**

- Panchamahabhuta Siddhanta with different levels of organization of human body,
- Samanya Vishesha Siddhanta in the context of Dravya, Guna, Karma with homeostasis mechanism.

- **M2U2 Sharira Avayavaastu Paramanu Bhedena Apari Sankyeya Bhavanti**

- Cellular processes involved in body organization, growth, and tissue repair in terms of Panchamahabhut & Samanya Vishesha Siddhanta
- Cell ageing & cell death.

- **M2U3 Integrated knowledge of Panchamahabhuta Siddhanta & physiology**

- Microscopic examination of Nerve Cells and tissues
- Muscle Cells and tissues
- Epithelial Cells and tissues
- Embryonic Stem Cells & Adult Stem Cells
- Adipose tissue, Cartilage tissue, Bone tissue, Blood tissue etc

- **M2U4 Integrated knowledge of Samanya Vishesha Siddhanta & physiology**

- Samanya Vishesha Siddhanta in relation to homeostasis & feedback mechanisms
- Concepts of regulatory mechanisms and homeostasis while exploring

	<p>the structural and functional similarities at various physiological levels.</p> <ul style="list-style-type: none"> • M2U5 Recent research works on Panchamahabhuta and Samanya,- Vishesha Siddhanta <ul style="list-style-type: none"> ◦ Research updates on Panchamahabhuta, Samanya, and Vishesha Siddhanta on the physiological processes evaluate their role in maintaining homeostasis and health. 					
3	<p>M-3 Doshik Biorhythm This module comprise doshik influence in biorhythm in homeostasis. Module covers circadian rhythms, sleep-wake cycles, seasonal variations in doshik status for keeping physiological balance. Module also covers Kriya Kala and its significance in early identification and disease preventive aspect.</p> <ul style="list-style-type: none"> • M3U1 Significance of Ritu charya in physiology <ul style="list-style-type: none"> ◦ Impact of seasonal changes on immunological responses and metabolic alterations along with its physiological adaptation ◦ Recent advances in seasonal variations in human physiology and behavior, and their implications for health . • M3U2 Kriya Kaala <ul style="list-style-type: none"> ◦ Interpretation of Chaya, Prakopa, Prashama stage of Kriya kala emphasizing its significance in applied physiology. • M3U3 Dosha Karma - Kaala, aahara with reference to circadian rhythm 	2	10	20	30	60

	<p>Role of circadian rhythms in</p> <ul style="list-style-type: none"> ◦ Regulating digestion, including hormonal secretion, digestive enzyme activity, ◦ Gut microbiome balance, jet-lag, Shift work sleep disorder(SWSD), ◦ Effects of pranayama on doshik biorhythm and physiological parameters <p>• M3U4 Bio rhythms</p> <ul style="list-style-type: none"> ◦ Diurnal fluctuation of Tridoshas in relation to physiology ◦ Role of Neurotransmitters in circadian rhythms for regulation of sleep ◦ Effects of disrupting bio-rhythms and their influence on pathological processes 					
4	<p>M-4 Srotas, Agni & Koshtha</p> <p>The Srotus (channels) through transport the Poshaka dhatus i.e. the part of the Dhatus (tissues) flow to provide nutrition to the successive tissues.</p> <p>Agni (digestive fire) is one of the basic biologic elements of the living body. It is representative of energy in the living organism, it maintains the structural and functional integrity by performing the vital activities like Pakadi Karmas.</p> <p>Koshtha encompasses the digestive system and its role in nutrient absorption, elimination.</p> <p>• M4U1 Srotas</p> <ul style="list-style-type: none"> ◦ Various types (Bheda), functions of Srotas & analysis on the Synonyms of Srotas. 	2	10	20	30	60

	<ul style="list-style-type: none"> • M4U2 Mula Sthana of Srotas <ul style="list-style-type: none"> ◦ Analysis on Mulasthana of Srotas with its applied and clinical physiology. • M4U3 Agni <ul style="list-style-type: none"> ◦ Analysis on Jatharagni, Bhutagni, Dhatvagni with its applied and clinical physiology. • M4U4 Koshtha <ul style="list-style-type: none"> ◦ Analysis on different types of koshtha with its applied and clinical physiology. 					
5	<p>M-5 Prakriti & Ayurgenomics This module covers comprehensive approach on the concept of Prakriti. It includes various subjective & objective parameters to improve the outcome of Prakriti Pariksha. It includes methods of assessing Prakriti with Global perspective & clinical applicability of Shareerika Prakriti & Manasika Prakriti.</p> <ul style="list-style-type: none"> • M5U1 Applied basics of Prakriti <ul style="list-style-type: none"> ◦ Concept of Prakriti, ◦ Factors that determine & influence the features of Prakriti including Jatyadi Prakriti ◦ Anthropometry Epigenetics & Ayurgenomics. • M5U2 Prakriti - global perspective 	2	10	20	30	60

	<ul style="list-style-type: none"> ◦ Features of Prakriti as seen in various continents ◦ Research works of Prakriti <p>• M5U3 Applied basics of Shareerika Prakriti</p> <ul style="list-style-type: none"> ◦ Shareerika Prakriti in per different age group & gender ◦ Guna based Prakriti Pariksha <p>• M5U4 Applied basics of Manasika Prakriti</p> <ul style="list-style-type: none"> ◦ Analysis of Manasika Prakriti features ◦ Research works & updates in Manasika Prakriti 					
6	<p>M-6 Saara This module covers comprehensive approach on the concept of Saara. It includes o various Subjective & objective parameters to improve the outcome of Saara Pariksha. It includes Dhatu Bala & its clinical applicability.</p> <p>• M6U1 Concept of Saara</p> <ul style="list-style-type: none"> ◦ Concept of Dhatu Saara ◦ Dhatu Bala with its clinical applicability ◦ Subjective and objective parameter of Dhatu Saara Pariksha <p>• M6U2 Saarata in different physiological condition</p> <ul style="list-style-type: none"> ◦ Dhatu Saara in different physiological condition like age, gender, in relation to Aahara, Vyayayama etc. <p>• M6U3 Saarata in different Pathological condition.</p>	1	5	10	15	30

	<ul style="list-style-type: none"> ◦ Dhatu Saara with Dhatu Bala in different Pathological condition ◦ Research works & updates in Saara Pariksha. 					
7	<p>M-7 Naadi Pariksha</p> <p>This module covers comprehensive approach on the concept of Naadi on the basis of Dosha. It includes incorporation of various tools to improve the outcome of Naadi Pariksha. It includes Doshanusara clinical applicability of Naadi Pariksha.</p> <ul style="list-style-type: none"> • M7U1 Naadi & Pulse <ul style="list-style-type: none"> ◦ Concept of Naadi & Naadi Parikshya Bhava ◦ Naadi recording instruments. • M7U2 Naadi in different physiological condition <ul style="list-style-type: none"> ◦ SOP of Manual & instrument based Naadi Pariksha ◦ Patterns of Naadi in different physiological condition. • M7U3 Naadi in different Pathological condition. <ul style="list-style-type: none"> ◦ Patterns of Naadi in different Pathological condition ◦ Comparing the features of Naadi by Manual & instrument method ◦ Research works & updates in Naadi Pariksha. 	1	5	10	15	30
8	<p>M-8 Standard operating procedures of Laboratory Experiments and diagnostic instruments</p> <p>This module provides a understanding of the Standard Operating Procedures (SOPs) for laboratory instruments, including general protocols, hematology analyzers, and</p>	3	15	30	45	90

urine analysis techniques. It also covers the correct usage and interpretation of ECG a,digital spirometry, digital ph meter essential for diagnostic accuracy.

- **M8U1 Standard Operating procedure of laboratory instruments**

- SOP of equipment description, operational procedures and safety precautions of Trinocular microscope, Trichoscope, Digital skin fold caliper, Body composition monitor ,Stadiometer, Digital weighing machine
- Quality control in laboratory settings, ensuring instrument calibration, and validation of Body composition monitor ,Stadiometer and Digital weighing machine.

- **M8U2 Standard Operating procedure of laboratory instrument in hematology**

- SOP of equipment description, operational procedures of hematology analyzer
- Quality control in laboratory settings, ensuring instrument calibration and validation automatic cell counter.

- **M8U3 Standard Operating procedure in Urine analysis**

- Standard Operating Procedure (SOP) for urine analysis by understanding the standardized methods for physical, chemical, microscopic examination
- Correlate applied aspects with Ayurvedic concepts.

- **M8U4 Standard Operating procedure Instruments/ Diagnostics**

- Principles, applications, and SOP of diagnostic equipment of

	ECG, Digital spirometry, digital pH Meter etc.					
		16	80	160	240	480

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

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 (D oes/Show s how/K nows ho w/Know)	3G Teaching Learning Methods
Module 1 : Application of Dosha, Dhatu, Mala						
<p>Module Learning Objectives (At the end of the module, the students should be able to)</p> <ol style="list-style-type: none"> 1. Interpret Guna, Sthana, Karma of Dosha; Karma of Dhatu & Mala with its molecular, biochemical & applied physiological aspects. 2. Perform Dosha, Dhatu, Mala Karma & Vriddhi-Kshaya Pariksha using subjective & objective parameters. 3. Evaluate the subjective & objective parameters of Dosha, Dhatu, Mala Karma & Vriddhi-Kshaya. 						
<p>Unit 1 Basics of Dosha</p> <ul style="list-style-type: none"> ◦ Physiological significance on Nirukti of Dosha ◦ Panchabhoutikatha of Vata, Pitta, Kapha. ◦ Paryaya of Vata, Pitta, Kapha. <p>References: 1,2,3,4,5,8,33,34,62</p>						
3A	3B	3C	3D	3E	3F	3G
CO1	Analyse the physiological significance on Nirukti of Dosha, Vata, Pitta, Kapha.	1	Lecture	CAN	Knows-how	L,L&PPT
CO1	Analyse the physiological significance of Panchabhoutikatha, Paryaya of Vata, Pitta,	1	Lecture	CAN	Knows-	L,L&PPT

Kapha

how

Unit 2 Applied Basics of Vata

- Guna, Sthana of Vata Dosha with its molecular, biochemical significance
- Karma of Vata Dosha with its applied physiology.
- Methods to assess Prakrit & Vaikrit Karma, Vriddhi -Kshaya of Vata Dosha.

References: 1,2,3,4,5,8,10,11,33,34,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO4	Analyse Guna, Sthana of Vata Dosha with its molecular, biochemical significance	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT
CO2,CO4	Analyse Karma of Vata Dosha with its applied physiology.	2	Lecture	CAN	Knows-how	DIS,L,L&PPT ,L_VC
CO2,CO4	Appraise Panchavidha Vata with its applied physiology.	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC
CO2,CO3,CO4	Assess Prakrit & Vaikrit Karma of Vata using structured format.	6	Practical Training 1.1	PSY-GUD	Shows-how	CBL,D,D-BED,L_V C
CO2,CO3,CO4	Assess Karma of Panchavidha Vata using structured format.	2	Practical Training 1.2	PSY-GUD	Shows-how	CBL,D,D-BED
CO2,CO3,CO4	Evaluate Vata Vriddhi Kshaya assessment techniques.	6	Experiential-Learning 1.1	CE	Does	D,DIS,L_VC,PT

Unit 3 Applied Basics of Pitta

- Guna, Sthana of Pitta Dosha with its molecular, biochemical significance
- Karma of Pitta Dosha with its applied physiology
- Methods to assess Prakrit & Vaikrit Karma, Vriddhi -Kshaya of Pitta Dosha.

References: 1,2,3,4,5,8,10,11,33,34,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO4	Analyse Guna, Sthana of Pitta Dosha with its molecular, biochemical significance	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT
CO2,CO4	Analyse Karma of Pitta Dosha with its applied physiology.	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC
CO2,CO4	Appraise Panchavidha Pitta with its applied physiology.	1	Lecture	CE	Knows-how	L,L&GD, L&PPT ,L_VC
CO2,CO3,CO4	Assess Prakrit & Vaikrit Karma of Pitta using structured format.	4	Practical Training 1.3	PSY-GUD	Shows-how	CBL,D,D-BED
CO2,CO3,CO4	Assess Karma of Panchavidha Pitta using structured format.	2	Practical Training 1.4	PSY-GUD	Shows-how	D,PT
CO2,CO4	Evaluate Pitta Vriddhi Kshaya assessment techniques.	6	Experiential-Learning 1.2	CE	Does	CBL,D

Unit 4 Applied Basics of Kapha

- Guna, Sthana of Kapha Dosha with its molecular, biochemical significance
- Karma of Kapha Dosha with its applied physiology
- Methods to assess Prakrit & Vaikrit Karma, Vriddhi -Kshaya of Kapha Dosha.

References: 1,2,3,4,5,8,10,11,33,34,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO4	Analyse Guna, Sthana of Kapha Dosha with its molecular, biochemical significance	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT, L_VC
CO2,CO4	Analyse Karma of Kapha Dosha with its applied physiology.	1	Lecture	CAN	Knows-how	L&GD,L &PPT, L_VC
CO2,CO4	Analyse types of Kapha Dosha with its applied physiology.	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT, L_VC
CO2,CO3,CO4	Assess Prakrit & Vaikrit Karma of Kapha using structured format.	2	Practical Training 1.5	PSY-GUD	Shows-how	CBL,D,D-BED
CO2,CO3,CO4	Assess Karma of Panchavidha Kapha using structured format.	2	Practical Training 1.6	PSY-GUD	Shows-how	CBL,D,D-BED,PT
CO2,CO3,CO4	Evaluate Kapha Vriddhi Kshaya assessment techniques.	6	Experiential-Learning 1.3	CE	Does	CBL,DIS, PT

Unit 5 Applied Basics of Dhatu Karma

- Karma of Sapta Dhatu with its histology & applied physiology.
- Methods to assess Prakrit & Vaikrit Karma, Vriddhi -Kshaya of Sapta Dhatu.

References: 1,2,3,4,5,8,17,18,33,34,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4	Analyse Karma of Rasa, Rakta, Mamsa, Dhatu with its histology & applied physiology.	1	Lecture	CAN	Knows-	L,L&GD,

					how	L&PPT ,L_VC
CO1,CO2,CO4	Analyse Karma of Meda, Asthi, Majja, Shukra, Dhatu with its histology & applied physiology.	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC
CO2,CO3,CO4	Assess histology of Sapta Dhatu.	2	Practical Training 1.7	PSY-GUD	Shows-how	PT
CO2,CO3,CO4	Assess Prakrit & Vaikrit Karma of Rasa, Rakta using structured format.	2	Practical Training 1.8	PSY-GUD	Shows-how	CBL,D,D-BED
CO2,CO3,CO4	Assess Prakrit & Vaikrit Karma of Mamsa, Meda Asthi, Majja using structured format.	2	Practical Training 1.9	PSY-GUD	Shows-how	CBL,D,D-BED
CO2,CO3,CO4	Assess Prakrit & Vaikrit Karma of Shukra using structured format.	2	Practical Training 1.10	PSY-GUD	Shows-how	CBL,PT
CO2,CO3,CO4	Evaluate Dhatu Vriddhi assessment techniques.	3	Experiential-Learning 1.4	CE	Does	CBL,PL
CO2,CO3,CO4	Evaluate Dhatu Kshaya assessment techniques.	3	Experiential-Learning 1.5	CE	Does	CBL,PT

Unit 6 Applied Basics of Mala Karma

- Karma of Trimala with its applied physiology
- Methods to assess Prakrit & Vaikrit Karma, Vriddhi -Kshaya of Trimala.

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

3A	3B	3C	3D	3E	3F	3G
CO1	Analyse Karma of Trimala with its applied physiology	1	Lecture	CAN	Knows-	L,L&GD,

					how	L&PPT ,L_VC
CO2,CO3,CO4	Assess Prakrit & Vaikrit Purisha Karma using structured format	2	Practical Training 1.11	PSY-GUD	Shows-how	CBL,D,D-BED,PT
CO2,CO3,CO4	Assess Prakrit & Vaikrit Mutra & Sveda Karma using structured format	2	Practical Training 1.12	PSY-GUD	Shows-how	CD,CBL,D,D-BED
CO2,CO3,CO4	Evaluate Trimala Vriddhi assessment techniques.	3	Experiential-Learning 1.6	CE	Does	CBL,PT
CO2,CO3,CO4	Evaluate Trimala Kshaya assessment techniques.	3	Experiential-Learning 1.7	CE	Does	CBL,PT

Unit 7 Recent advances in Dosha, Dhatu, Mala.

- Research works & updates on Dosha, Dhatu, Mala

References: 88,89,90

3A	3B	3C	3D	3E	3F	3G
CO4,CO5,CO7	Evaluate research works & updates on Dosha	3	Experiential-Learning 1.8	CE	Does	BS,JC,LS,ML
CO4,CO5,CO7	Evaluate research works & updates on Dhatu	3	Experiential-Learning 1.9	CE	Does	BS,JC,LS,ML
CO4,CO5,CO7	Evaluate research works & updates on Mala	3	Experiential-Learning 1.10	CE	Does	JC,LS,ML

Practical Training Activity

Practical No	Name	Activity details
--------------	------	------------------

Practical Training 1.1	Prakrit & Vaikrit Karma of Vata using structured format.	Teacher will demonstrate the structured format of Prakrit & Vaikrit Karma of Vata assessment 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 1.2	Karma of Panchavidha Vata using structured format.	Teacher will demonstrate the structured format of Panchavidha Vata Karma 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 1.3	Prakrit & Vaikrit Karma of Pitta using structured format.	Teacher will demonstrate the structured format of Prakrit & Vaikrit Karma of Pitta 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 1.4	Karma of Panchavidha Pitta using structured format.	Teacher will demonstrate the structured format of Panchavidha Pitta Karma 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 1.5	Prakrit & Vaikrit Karma of Kapha using structured format.	Teacher will demonstrate the structured format of Prakrit & Vaikrit Karma of Kapha 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 1.6	Karma of Panchavidha Kapha using structured format.	Teacher will demonstrate the structured format of Panchavidha Kapha Karma 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 1.7	Histology of Sapta Dhatu.	Teacher will demonstrate the histology slides of different tissue sections considering Sapta Dhatu. Students will note down the observation and will align the structural and functional relations between histology & Sapta Dhatu.
Practical Training 1.8	Prakrit & Vaikrit Karma of Rasa, Rakta using structured format.	Teacher will demonstrate the structured format of Prakrit & Vaikrit Karma of Rasa, Rakta 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 1.9	Prakrit & Vaikrit Karma of Mamsa, Meda Asthi, Majja using structured	Teacher will demonstrate the structured format of Prakrit & Vaikrit Karma of Mamsa, Meda Asthi, Majja assessment considering the subjective and objective parameters. Students will be asked to assess same using above format on 01 individual & note down the observations.

	format.	
Practical Training 1.10	Prakrit & Vaikrit Karma of Shukra using structured format.	Teacher will demonstrate the structured format of Prakrit & Vaikrit Karma of Shukra 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 1.11	Prakrit & Vaikrit Purisha Karma using structured format	Teacher will demonstrate the structured format of Prakrit & Vaikrit Karma of Purisha 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 1.12	Prakrit & Vaikrit Mutra & Sveda Karma using structured format	Teacher will demonstrate the structured format of Prakrit & Vaikrit Karma of Mutra, Sveda assessment 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 No	Name	Activity details
Experiential-Learning 1.1	Vata Vriddhi Kshaya assessment techniques.	Vata Vriddhi Kshaya 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 basis of Guna and have a departmental discussion.
Experiential-Learning 1.2	Pitta Vriddhi Kshaya assessment techniques.	Pitta Vriddhi Kshaya 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 basis of Guna and have a departmental discussion.
Experiential-Learning 1.3	Kapha Vriddhi Kshaya assessment techniques.	Kapha Vriddhi Kshaya 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 basis of Guna and have a departmental discussion.
Experiential-Learning 1.4	Dhatu Vriddhi assessment techniques.	Dhatu Vriddhi assessment technique considering the subjective and objective parameters will be done by the student. Student will be asked to note down the observations, analyse the features and have a departmental discussion.
Experiential-Learning 1.5	Dhatu Kshaya assessment techniques.	Dhatu Kshaya assessment technique considering the subjective and objective parameters will be done by the student. Student will be asked to note down the observations, analyse the features and have a departmental discussion.
Experiential-Learning 1.6	Trimala Vriddhi assessment techniques.	Mala Vriddhi assessment technique considering the subjective and objective parameters will be done by the student. Student will be asked to note down the observations, analyse the features and have a departmental discussion.

Experiential-Learning 1.7	Trimala Kshaya assessment techniques.	Mala Kshaya assessment technique considering the subjective and objective parameters will be done by the student. Student will be asked to note down the observations, analyse the features and have a departmental discussion.
Experiential-Learning 1.8	Research works & updates on Dosha	Teacher will describe recent updates and research works on Dosha and will allot 1 publication to each student. Student has to go through the publication in detail and do a micro journal presentation in department.
Experiential-Learning 1.9	Research works & updates on Dhatu	Teacher will describe recent updates and research works on Dhatu and will allot 1 publication to each student. Student has to go through the publication in detail and do a micro journal presentation in department.
Experiential-Learning 1.10	Research works & updates on Mala	Teacher will describe recent updates and research works on Mala and will allot 1 publication to each student. Student has to go through the publication in detail and do a micro journal presentation in 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 Dosha/Dhatu/Mala 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

Module 2 : Applied Physiology of Panchamahabhuta and Samanya- Vishesha Siddhanta

Module Learning Objectives

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

1. Interpret the fundamental concepts of Panchamahabhuta, Samanya-Vishesha Siddhanta and assess their implications in human physiology.
2. Analyze the physiological processes of cell proliferation, differentiation, aging, and death, emphasizing their significance in overall human body functioning.
3. Evaluate the Panchamahabhuta & Samanya-Vishesha Siddhanta to assess the regulatory mechanisms to maintain homeostasis

Unit 1 Panchamahabhuta and Samanya-Vishesha Siddhanta

- Panchamahabhuta Siddhanta with different levels of organization of human body,
- Samanya Vishesha Siddhanta in the context of Dravya, Guna, Karma with homeostasis mechanism.

References: 1,3,5,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO6	Interpret the Panchamahabhuta Siddhanta with different levels of organization of human body.	2	Lecture	CE	Know	D-M,DIS
CO1,CO6	Interpret concept of Samanya Vishesha Siddhanta in the context of Dravya, Guna, Karma with homeostasis mechanism.	3	Lecture	CE	Knows-how	CBL,L&GD

Unit 2 Sharira Avayavaastu Paramanu Bhedena Apari Sankyeya Bhavanti

- Cellular processes involved in body organization, growth, and tissue repair in terms of Panchamahabhut & Samanya Vishesha Siddhanta
- Cell ageing & cell death.

References: 1,2,3,5,33

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Interpret the processes of cell proliferation and differentiation integrating their roles in growth, development, and tissue repair.	2	Lecture	CE	Knows-how	BS,RP,SIM
CO1,CO3,CO6	Justify bodily functions in geriatrics through physiological perspectives on cell aging and cell death focusing on Dosha & Dushya	3	Lecture	CE	Knows-how	DIS,FC,ROLE
CO1,CO3,CO6	Identify and describe cellular processes involved in body organization, growth, and tissue repair in terms of Panchamahabhut	2	Experiential-Learning 2.1	AFT-VAL	Does	DL,D-M
CO1,CO3,CO6	Identify and describe cellular processes involved in body organization, growth, and tissue repair in terms of Samanya Vishesha Siddhanta	2	Experiential-Learning 2.2	AFT-VAL	Does	CBL,PBL
CO1,CO3,CO6	Analyse the process of cell aging .	2	Experiential-Learning 2.3	AFT-VAL	Does	CBL,DIS
CO1,CO3,CO6	Analyse the process of cell death and longevity.	2	Experiential-Learning 2.4	AFT-VAL	Does	CD,CBL

Unit 3 Integrated knowledge of Panchamahabhuta Siddhanta & physiology

- Microscopic examination of Nerve Cells and tissues
- Muscle Cells and tissues
- Epithelial Cells and tissues
- Embryonic Stem Cells & Adult Stem Cells
- Adipose tissue, Cartilage tissue, Bone tissue, Blood tissue etc

References: 8,33,34,62,108

3A	3B	3C	3D	3E	3F	3G
CO1	Conduct microscopic examination of Nerve Cells and tissues.	2	Practical Training 2.1	PSY-GUD	Shows-how	FC,PAL,PT

CO1	Conduct microscopic examination of Muscle Cells, and tissues.	2	Practical Training 2.2	PSY-GUD	Shows-how	FC,PT
CO1	Conduct microscopic examination of Epithelial Cells and tissues.	2	Practical Training 2.3	PSY-GUD	Shows-how	FC,PT
CO1	Conduct microscopic examination of Embryonic Stem Cells & Adult Stem Cells	2	Practical Training 2.4	PSY-GUD	Shows-how	FC,PT
CO1	Conduct a microscopic examination Adipose tissue and Cartilage tissue	2	Practical Training 2.5	PSY-GUD	Shows-how	FC,PT
CO1	Conduct microscopic examination Bone tissue and Blood tissue.	2	Practical Training 2.6	PSY-GUD	Shows-how	FC,PT
CO1,CO3,CO6	Apply the concepts of Panchamahabhuta to maintain health.	6	Experiential-Learning 2.5	CAP	Does	CD,CBL, LRI

Unit 4 Integrated knowledge of Samanya Vishesha Siddhanta & physiology

- Samanya Vishesha Siddhanta in relation to homeostasis & feedback mechanisms
- Concepts of regulatory mechanisms and homeostasis while exploring the structural and functional similarities at various physiological levels.

References: 1,2,3,5,33,34

3A	3B	3C	3D	3E	3F	3G
CO3,CO6	Perform Clinical assesment of Dosha & Dushya pertaining Samanya Vishesha Siddhanta in relation to homeostasis & feedback mechanisms.	8	Practical Training 2.7	PSY-GUD	Shows-how	CD,CBL, TBL
CO1,CO3,CO6	Analyze and apply the concepts of regulatory mechanisms and homeostasis while exploring the structural and functional similarities at various physiological levels.	6	Experiential-Learning 2.6	CAP	Does	BS,DIS

Unit 5 Recent research works on Panchamahabhuta and Samanya,- Vishesha Siddhanta

- Research updates on Panchamahabhuta, Samanya, and Vishesha Siddhanta on the physiological processes evaluate their role in maintaining homeostasis and health.

References: 1,2,3,5,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO3,CO6,CO7	Explore research the influence of Panchamahabhuta, Samanya, and Vishesha Siddhanta on the physiological processes and evaluate their role in maintaining homeostasis and health	6	Experiential-Learning 2.7	CE	Does	BL,CBL,JC

Practical Training Activity

Practical No	Name	Activity details
Practical Training 2.1	Microscopic examination of Nerve Cells and tissues.	Teacher will demonstrate and exhibit microscopic examination of the Nerve Cells and tissues. Student will identify cellular components and tissue structure Nerve Cells and tissues. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 2.2	Microscopic examination of Muscle Cells and tissues.	Teacher will demonstrate and exhibit microscopic examination of the Muscle Cells and tissues. Student will identify cellular components and tissue structure Muscle Cells and tissues. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 2.3	Microscopic examination of Epithelial Cells and tissues.	Teacher will demonstrate and exhibit microscopic examination of the Epithelial Cells and tissues. Student will identify cellular components and tissue structure Epithelial Cells and tissues. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 2.4	Microscopic examination of Embryonic Stem Cells & Adult Stem Cells	Teacher will demonstrate and exhibit microscopic examination of the Embryonic Stem Cells & Adult Stem Cells. Student will identify cellular components and tissue structure Embryonic Stem Cells & Adult Stem Cells. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 2.5	Microscopic examination Adipose	Teacher will demonstrate and exhibit microscopic examination of the Adipose tissue and Cartilage tissue. Student will identify cellular components and tissue structure Adipose tissue and Cartilage tissue. Student will discuss with mentor/ peer the

	tissue and Cartilage tissue	relationship between structure and function
Practical Training 2.6	Microscopic examination of Bone tissue and Blood tissue.	Teacher will demonstrate and exhibit microscopic examination of the Bone tissue and Blood tissue. Student will identify cellular components and tissue structure Bone tissue and Blood tissue. Student will discuss with mentor/ peer the relationship between structure and function
Practical Training 2.7	Clinical assesment of Dosha & Dushya pertaining Samanya Vishesha Siddhanta in relation to homeostasis & feedback mechanisms.	Teacher will assign the cases of OPD/ IPD & student analyze the these cases in-perspective of homeostatic imbalance of various cases e.g Prameha. Students will analyze the Lab reports of these cases to identify Dosha and Dushya: student will conduct a thorough analysis of the patient's symptoms and medical history to ascertain the implicated Dosha (e.g., Kapha, Pitta) and Dushya (e.g., Rasa, Rakta) and Elucidate the relationship between the Dosha and Dushya in connection to the patient's condition, employing the principles of Samanya Vishesha Siddhanta.
Experiential learning Activity		
Experiential learning No	Name	Activity details
Experiential-Learning 2.1	Cellular processes involved in body organization, growth, and tissue repair in terms of Panchamahabhut	Teacher will assign 5 case studies of OPD/ IPD to analyze tissue repair and regeneration examples, relating them to Prithvi and Jal elements etc & They will draw connections to the elemental principles of Prithvi and Jal, among others, and engage in discussions regarding the involvement of each Panchamahabhuta, applying these principles to the intricacies of cellular processes.
Experiential-Learning 2.2	Cellular processes involved in body organization, growth, and tissue repair in terms of Samanya Vishesha Siddhanta	Teacher will assign five intricate case studies of Outpatient Department (OPD) and Inpatient Department (IPD) to meticulously analyze instances of tissue repair and regeneration, correlating them with the principles of Dravya, Guna, Karma Samanyam, and Vishesh in relation to cellular processes.

Experiential-Learning 2.3	Process of cell ageing.	Teacher will assign case studies that exemplify the ramifications of aging and age-related ailments. Instruct each student or group to meticulously analyze their designated case study and identify the physiological components pertinent to the aging process and associated diseases. .
Experiential-Learning 2.4	Process of cell death and longevity.	Teacher will assign case studies that illustrate the effects of age-related diseases & tissue regeneration. Instruct each student/group to review their assigned case study and identify physiological components related to tissue regeneration and or cell death . Analyze involved physiological process in tissue regeneration and or cell death.
Experiential-Learning 2.5	Concepts of Panchamahabhuta to maintain health.	Teacher will assign five case studies of Sthaulya (Obesity) . The students will conduct an analysis and comparison of the principles of Panchamahabhuta considering individuals with increased BMI. Furthermore, they will design a customized dietary plan aimed at supporting effective weight management based on the principles of Panchamahabhuta.
Experiential-Learning 2.6	Concepts of regulatory mechanisms and homeostasis while exploring the structural and functional similarities at various physiological levels.	Analyze 5 case studies illustrating the interplay between regulatory mechanisms and homeostasis at various physiological levels. Discuss and reflect on the similarities and differences in regulatory mechanisms and homeostasis across physiological systems. Record personal reflections on the role of regulatory mechanisms and homeostasis and discuss the implications of disruptions to these mechanisms in disease states in maintaining physiological balance.
Experiential-Learning 2.7	Research the influence of Panchamahabhuta, Samanya, and Vishesha Siddhanta on the physiological processes and evaluate their role in maintaining homeostasis and health	Teacher will assign 5 case studies of OPD/IPD. Students will analyze those case studies illustrating the influence of Panchamahabhuta (five elements) on a physiological process e.g., digestion .Identify Samanya (common) and Visesha (unique) factors influencing the process. - Discuss and present findings on the influence of Panchamahabhuta, Samanya, and Visesha on various physiological processes. Evaluate the role of these factors in maintaining health and preventing disease.

Modular Assessment

Assessment method

Instructions - Conduct a structured Modular assessment. Assessment will be for 50 marks. Keep structured marking pattern. Use different assessment

Hour

4

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 Panchamahabhuta, samanya, Vissha (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 3 : Doshik Biorhythm

Module Learning Objectives

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

1. Interpret physiological and environmental factors influencing biorhythms along with kriya kala
2. Perform doshik biorthytm assessment on daily and seasonal basis and assess various stages of kriyakala.
3. Evaluate synchronization of circadian rhythms and environmental cues, kriya kala stages and seasonal changes

Unit 1 Significance of Rutu charya in physiology

- Impact of seasonal changes on immunological responses and metabolic alterations along with its physiological adaptation
- Recent advances in seasonal variations in human physiology and behavior, and their implications for health .

References: 1,2,3,43,44,46

3A	3B	3C	3D	3E	3F	3G
CO1	Analyze the diurnal fluctuation of Tridoshas in relation to physiology	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT
CO1	Interpret the role of Neurotransmitters in circadian rhythms for regulation of sleep	1	Lecture	CK	Know	L,L&GD, L&PPT
CO1,CO2	Analyze the effects of disrupting bio-rhythms and their influence on pathological processes.	1	Lecture	CK	Knows-how	L,L&GD, L&PPT

Unit 2 Kriya Kaala

- Interpretation of Chaya, Prakopa, Prashama stage of Kriya kala emphasizing its significance in applied physiology.

References: 1,2,3,45,47,48

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Interpret the role of circadian rhythms in regulating digestion, including hormonal secretion, digestive enzyme activity, and gut microbiome balance	1	Lecture	CE	Knows-how	L,L&GD, L&PPT
CO1,CO2	Interpret the doshik status of impaired circadian rhythm on situations like jet-lag,Shift work sleep disorder(SWSD)	1	Lecture	CE	Knows-how	L,L&GD, L&PPT ,L_VC
CO2,CO3	Perform and interpret the effects of doshik biorhythm on physiological parameters.	2	Practical Training 3.1	PSY-GUD	Shows-how	D,DL
CO2,CO3	Perform and interpret the effects of pranayama and yoga on doshik biorhythm and physiological parameters.	4	Practical Training 3.2	PSY-GUD	Shows-how	D,DIS,TPW
CO2,CO3,CO4	Design Doshik Bio-Rhythm chart, accurately plotting and analyzing physiological rhythms	4	Practical Training 3.3	PSY-MEC	Shows-how	TPW,TBL
CO2,CO3,CO4	Critique biological rhythms in relation to Prakriti and Dosha status	9	Experiential-Learning 3.1	CE	Does	PAL,PER,SDL

Unit 3 Dosha Karma - Kaala, aahara with reference to circadian rhythm

Role of circadian rhythms in

- Regulating digestion, including hormonal secretion, digestive enzyme activity,
- Gut microbiome balance, jet-lag, Shift work sleep disorder(SWSD),
- Effects of pranayama on doshik biorhythm and physiological parameters

References: 47

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

CO1,CO2	Interpret chaya stage of Kriya kala emphasizing its significance in applied physiology .	1	Lecture	CE	Knows-how	L,L&GD, L&PPT ,L_VC
CO1,CO2	Interpret prakopa stage of Kriya kala ,emphasizing its significance in applied physiology	1	Lecture	CS	Knows-how	L,L&GD, L&PPT ,L_VC
CO1,CO2	Interpret prasama stage of Kriya kala ,emphasizing its significance in applied physiology .	1	Lecture	CK	Knows-how	L,L&GD, L&PPT ,L_VC
CO1,CO3,CO4	Perform and assess progression patterns of chaya,prakopa and prasama with chaya ,prakopa ,prasara in Kriya kala	5	Practical Training 3.4	PSY-GUD	Shows-how	PT,PBL,PSM
CO4,CO5	Evaluate and compare Chaya ,prakopa and prasama stage of kriya kala with Chaya ,prakopa and prasara stage of kriya kala	9	Experiential-Learning 3.2	PSY-MEC	Does	CBL,PSM

Unit 4 Bio rhythms

- Diurnal fluctuation of Tridoshas in relation to physiology
- Role of Neurotransmitters in circadian rhythms for regulation of sleep
- Effects of disrupting bio-rhythms and their influence on pathological processes

References: 42,50

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Interpret impact of seasonal changes on immunological responses and metabolic alterations along with its physiologic adaptation	2	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC
CO2,CO3,CO4	Perform and assess the dietary plan based on nutrition as per Rithu	5	Practical Training 3.5	PSY-GUD	Shows-how	PT

CO2,CO4,CO7	Evaluate recent advances in seasonal variations in human physiology and behavior, and their implications for health	8	Experiential-Learning 3.3	CE	Does	BS,C_L
-------------	---	---	---------------------------	----	------	--------

Practical Training Activity

Practical No	Name	Activity details
Practical Training 3.1	Effects of doshik biorhythm on physiological processes.	Teacher will demonstrate the recording of subjective and objective parameters of doshik status and record physiological parameters like heart rate,pulse rate ,respiratory rate etc in healthy volunteers twice - at morning and after noon
Practical Training 3.2	Effects of pranayama and yoga on doshik biorhythm and physiological parameters.	Teacher will demonstrate the recording of subjective and objective parameters of doshik status and physiological parameters - heart rate,pulse rate etc in healthy volunteers before and after a suitable pranayama and yoga -at morning and noon.
Practical Training 3.3	Bio-Rhythm chart, accurately plotting and analyzing physiological rhythms	Teacher will demonstrate by plotting doshik Bio-Rhythm chart and biorhythm curve on the provided paper or digital template after collecting Bio-Rhythm Data- heart rate, blood pressure, body temperature, etc.) at regular intervals (e.g., every hour) for 24 hours from hospital data .Another data set will be given to students to prepare and plot a bio rhythm chart and curve
Practical Training 3.4	Progression patterns of chaya,prakopa and prasama with chaya ,prakopa ,prasara states in kriya kala	Teacher will select cases presenting with chaya ,prakopa and prasama state of kriya kala and chaya ,prakopa and prasara state of kriya kala . Record and do comparative analysis of their signs,symptoms and laboratory findings to identify progression patterns of stages of Kriya kala .
Practical Training 3.5	Dietary plan based on nutrition as per Rithu	The teacher will guide students to prepare a seasonal dietary plan based on Ayurvedic principles and nutritional guidelines in a participant. Each Student will then replicate and modify the plan to create personalized dietary plans for 2 participant as per Rithu,prakrithi and agni status

Experiential learning Activity

Experiential	Name	Activity details
--------------	------	------------------

learning No		
Experiential-Learning 3.1	Biological rhythms in relation to their Prakriti and Dosha status	Each student will self-observe, record, and analyze their biological rhythms -heart rate, pulse rate,respiratory rate and body temperature at regular intervals and compare with peers and correlate with their Prakriti and Dosha status.
Experiential-Learning 3.2	Chaya, prakopa and prasama stage of kriya kala with Chaya, prakopa and prasara stage of kriya kala	Each student should conduct a case study analysis on 2 patients with clearly identifiable kriyakala state of Chaya ,prakopa and prasama stage versus Chaya ,prakopa and prasara stage.Draft the progression timeline with a flowchart/table, compare the data, and discuss and present the findings in the department.
Experiential-Learning 3.3	Recent advances in seasonal variations in human physiology and behavior, and their implications for health	Conduct 4 seminar sessions (2 hours each) where students will present on recent advances in seasonal variations on human physiology and behavior.Annual Variation in Daily Light Exposure and Circadian Change. Seasonal Adaptation in Physiology and Behavior. Seasonal Variations in Physical Activity and Human Health. Widespread Seasonal Gene Expression in Human Immunity and Physiology.

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 Doshik Biorhythm; Day to day doshik interactions, fluctuations; research updates (50 marks)

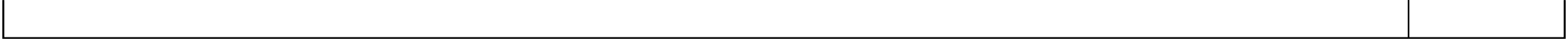
OR

- 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



Module 4 : Srotas, Agni & Koshtha

Module Learning Objectives

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

- 1 Interpret and describe various types of Srotas.
2. Perform Assessment of Agni, Koshtha.
3. Evaluate the functions of Srotas.

Unit 1 Srotas

- Various types (Bheda), functions of Srotas & analysis on the Synonyms of Srotas.

References: 1,2,3,4,5,25,96

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret various types (Bheda) & analyze the Synonyms of Srotas.	1	Lecture	CAN	Knows-how	C_L,IBL,LS
CO1	Interpret various functions of Srotas	2	Lecture	CAN	Knows-how	L&GD,LS
CO1,CO2	Assess Rasavaha, Raktavaha srotodushti lakshanas.	2	Practical Training 4.1	PSY-GUD	Shows-how	CD,CBL
CO1,CO2	Assess Mamasavaha and Medovaha Srotodushti lakshanas.	2	Practical Training 4.2	PSY-GUD	Shows-how	CD,CBL, LRI
CO1,CO2	Assess Asthivaha and Majjavaha Srotodushti lakshanas.	2	Practical Training 4.3	PSY-GUD	Shows-how	CD,CBL, D-BED

CO1,CO2	Assess Shukravaha Srotodushti lakashanas.	2	Practical Training 4.4	PSY-GUD	Shows-how	CD,CBL
CO1,CO2	Assess Artavavaha Srotodushti lakashanas.	2	Practical Training 4.5	PSY-GUD	Shows-how	CD,CBL, LRI
CO1,CO2,CO6	Evaluate & analyze the role of Srotodushti lakshnas.	9	Experiential-Learning 4.1	PSY-MEC	Does	BL,CBL, RLE
CO1,CO3,CO6	Assess Annavaha and Pranavaha Srotodushti lakashanas	2	Practical Training 4.6	PSY-GUD	Shows-how	CD,CBL

Unit 2 Mula Sthana of Srotas

- Analysis on Mulasthana of Srotas with its applied and clinical physiology.

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

3A	3B	3C	3D	3E	3F	3G
CO1	Analyze the functions of Mula Sthana.	1	Lecture	CE	Knows-how	LS,SDL
CO1	Evaluation function of Srotas	1	Lecture	CK	Knows-how	LS,SDL
CO1,CO2,CO6	Evaluate the Significance of Mulasthan of Rasavaha and Raktavaha Srotas	2	Experiential-Learning 4.2	PSY-GUD	Does	CBL,LRI
CO1,CO3,CO6	Evaluate the Significance of Mulasthan of Mamasvaha and Medovaha Srotas	2	Experiential-Learning 4.3	PSY-GUD	Does	CBL,LRI
CO1,CO3,CO6	Evaluate the Significance of Mulasthan of Ashthivaha and Majjavaha Srotas	2	Experiential-Learning 4.4	PSY-GUD	Does	CBL,D-BED,LRI

CO1,CO3,CO6	Evaluate the Significance of Mulasthan of Shukravaha and Aartavaha Srotas	2	Experiential-Learning 4.5	PSY-GUD	Does	CBL,RLE
CO1,CO3,CO6	Evaluate the Significance of Mulasthan of Annavaha and Pranavaha Srotas	2	Experiential-Learning 4.6	PSY-GUD	Does	CBL,LRI
Unit 3 Agni						
◦ Analysis on Jatharagni, Bhutagni, Dhatvagni with its applied and clinical physiology.						
References: 1,2,3,4,5,6,8,33,34,62,87						
3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Analyze the concept of Jatharagni.	1	Lecture	CAN	Knows-how	BS,L&GD,REC
CO1,CO2	Analyze the concept of Bhutagni	1	Lecture	CAN	Knows-how	BS,IBL
CO1,CO2	Analyze the concept of Dhatvagni.	1	Lecture	CAN	Knows-how	FC,LS
CO1,CO2	Analyze the concept of Samagni Mandagni, Vishmagni, Tiksnagni.	1	Lecture	CAN	Knows-how	RLE
CO2,CO6	Assess Samagni and Vishmagni Agni Bala (Status of agni) considering different pathological condition.	2	Practical Training 4.7	PSY-GUD	Shows-how	D-BED,J C,PT
CO2,CO6	Assess Mandagni and Tikshnagni with Agni Bala (Status of agni) considering different pathological condition.	3	Practical Training 4.8	PSY-GUD	Shows-how	CBL,D-BED
CO2,CO6,CO7	Evaluate different Agni assessment tools.	7	Experiential-Learning 4.7	PSY-ADT	Does	CBL,D-BED,W

Unit 4 Koshtha

- Analysis on different types of koshtha with its applied and clinical physiology.

References: 1,2,4,5,6,7,8,87

3A	3B	3C	3D	3E	3F	3G
CO1,CO2	Analyze the concept of Koshtha	1	Lecture	CAN	Knows-how	PL,PER
CO2,CO6	Assess Koshtha in Healthy & diseased condition.	3	Practical Training 4.9	PSY-GUD	Shows-how	D,RLE

Practical Training Activity

Practical No	Name	Activity details
Practical Training 4.1	Assessment of Rasavaha, Raktavaha srotodushti lakshanas.	The teacher will elucidate the Rasavaha, Raktavaha Srotodushtee Lakshanas, highlighting their significance and application. In accordance with directives, students and scholars will undertake the Sroto Pariksha on five selected patients, providing them with the opportunity to analyze the manifestations of Srotodushtee Lakshanas in practical scenarios.
Practical Training 4.2	Mamasavaha and Medovaha Srotodushti lakshanas.	The teacher will elucidate the Mamasavaha and Medovaha Srotodushtee Lakshanas, highlighting their significance and application. In accordance with directives, students will undertake the Sroto Pariksha on five selected patients, providing them with the opportunity to analyze the manifestations of Mamasavaha and Medovaha Srotodushtee Lakshanas in practical scenarios.
Practical Training 4.3	Asthivaha and Majjavaha Srotodushti lakshanas.	The teacher will elucidate the Asthivaha and Majjavaha Srotodushtee Lakshanas, highlighting their significance and application. In accordance with directives, students and scholars will undertake the Sroto Pariksha on five selected patients, providing them with the opportunity to analyze the manifestations of Asthivaha and Majjavaha Srotodushtee Lakshanas in practical scenarios.
Practical Training 4.4	Shukravaha Srotodushti lakshanas.	The teacher will elucidate the Shukravaha Srotodushtee Lakshanas, highlighting their significance and application. In accordance with directives, students and scholars will undertake the Sroto Pariksha on five selected patients, providing them with the opportunity to analyze the manifestations of Shukravaha Srotodushtee Lakshanas in practical scenarios.

Practical Training 4.5	Artavavaha Srotodushti lakshanas.	The teacher will elucidate the Artavavaha Srotodushtee Lakshanas, highlighting their significance and application. In accordance with directives, students and scholars will undertake the Sroto Pariksha on five selected patients, providing them with the opportunity to analyze the manifestations of Artavavaha Srotodushtee Lakshanas in practical scenarios.
Practical Training 4.6	Annavaha and Pranavaha Srotodushti lakshanas	The teacher will elucidate the Annavaha and Pranava Srotodushti Lakshanas, highlighting their significance and application. In accordance with directives, students and scholars will undertake the Sroto Pariksha on five selected patients, providing them with the opportunity to analyze the manifestations of Annavaha and Pranavaha Srotodushtee Lakshanas in practical scenarios.
Practical Training 4.7	Samagni and Vishmagni Agni Bala (Status of agni) considering different pathological condition.	Teacher should demonstrate the features of Samagni and Vishmagni Agni Bala (Status of agni) considering different pathological condition. Each student should perform practical of Samagni and Vishmagni assessment on 03 patients, prepare portfolio of the observation in relation with and conduct a departmental group discussion
Practical Training 4.8	Mandagni and Tikshnagni with Agni Bala (Status of agni) considering different pathological condition.	Teacher should demonstrate the features of Mandagni and Tikshnagni with Agni Bala (Status of agni) considering different pathological condition. Each student should perform practical of Mandagni and Tikshnagn assessment on 03 patients, prepare portfolio of the observation in relation with and conduct a departmental group discussion
Practical Training 4.9	Koshtha in Healthy & diseased condition.	Teacher should demonstrate the features of Mrudu, Madhya and Krura Koshtha considering different pathological condition. Each student should perform practical of Mrudu, Madhya and Krura Koshtha assessment on 03 patients, Note down the observation in relation with and conduct a departmental group discussion

Experiential learning Activity

Experiential learning No	Name	Activity details
Experiential-Learning 4.1	role of Srotodushti lakshnas.	Teacher will assign Five cases to each student. Student will evaluate and analyze the patient's Srotodushti Lakshanas. Identify and correlate the Srotodushti Lakshanas with lab reports , the applied systemic physiology and present findings in a group discussion under the guidance of Teacher/ mentor/ Peer

Experiential-Learning 4.2	Mulasthan of Rasavaha and Raktavaha Srotas	Teacher will assign five cases. Student/scholar will assess and evaluate the mulasthan of Rasavaha and Raktavaha Srotas with help of Lab reports . Present findings in a comparative analysis, elucidating the similarities and distinctions in the descriptions of Mulasthan across various contexts.
Experiential-Learning 4.3	Mulasthan of Mamasvaha and Medovaha Srotas	Teacher will assign five cases. Student/scholar will assess and evaluate the mulasthan of Mamasvaha and Medovaha Srotas with help of Lab reports . Present findings in a comparative analysis, elucidating the similarities and distinctions in the descriptions of Mulasthan across various contexts.
Experiential-Learning 4.4	Mulasthan of Ashthivaha and Majjavaha Srotas	Teacher will assign five cases. Student/scholar will assess and evaluate the mulasthan of Ashthivaha and Majjavaha Srotas with help of Lab reports . Present findings in a comparative analysis, elucidating the similarities and distinctions in the descriptions of Mulasthan across various contexts.
Experiential-Learning 4.5	Mulasthan of Shukravaha and Aartavaha Srotas	Teacher will assign five cases. Student/scholar will assess and evaluate the mulasthan of Shukravaha and Aartavaha with help of Lab reports . Present findings in a comparative analysis, elucidating the similarities and distinctions in the descriptions of Mulasthan across various contexts.
Experiential-Learning 4.6	Mulasthan of Annavaha and Pranavaha Srotas	Teacher will assign five cases. Student/scholar will assess and evaluate the mulasthan of Annavaha and Pranavaha Srotas with help of Lab reports . Present findings in a comparative analysis, elucidating the similarities and distinctions in the descriptions of Mulasthan across various contexts.
Experiential-Learning 4.7	Different Agni assessment tools.	Teacher will assign IPD/OPD patients. Students Evaluate 5-5 cases Samagni, Mandagni, Vishmagni and Tikshnagni utilizing the various assessment tools at your disposal. Document the findings and the results. Each student will present a comparative analysis

Modular Assessment

Assessment method

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.

- Evaluation of summary reports of demonstrations, experiments in the lab, or bed side observations. 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 (50 marks)

OR

- Any practical in converted form can be taken for assesment (25 marks)

Hour

4

and

- Any of the experiential as portfolio/ reflections / presentations can be taken as an assessment.(25 marks)

Module 5 : Prakriti & Ayurgenomics

Module Learning Objectives

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

1. Interpret the characteristic features of Prakriti based on Guna and with its physiological applicability.
2. Assessment of Prakriti on basis of Guna using subjective and objective parameters.
3. Evaluate Prakriti at global perspective & to explore the possible application of Shareerika & Manasika Prakriti in prevention of disease & promotion of health.

Unit 1 Applied basics of Prakriti

- Concept of Prakriti,
- Factors that determine & influence the features of Prakriti including Jatyadi Prakriti
- Anthropometry Epigenetics & Ayurgenomics.

References: 1,2,3,4,5,8,63,64,65,66,67,68,69,70,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret the concept of Prakriti	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC
CO1	Analyse the factors that determine & influence the features of Prakriti including Jatyadi Prakriti	2	Lecture	CE	Knows-how	BL,BS,DI S,L,L&G D,L&PPT ,L_VC
CO1	Interpret the concept of Epigenetics & prakriti.	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT

						,L_VC
CO1	Interpret the concept of Ayurgenomics & prakriti.	1	Lecture	CAN	Knows-how	BL,BS,DIS,L
CO2,CO3	Perform & record the values of Anthropometry parameters for measurement of Height, Weight, Chest & waist circumference as per SOP	2	Practical Training 5.1	PSY-GUD	Shows-how	CBL,C_L,D
CO2,CO3	Perform & record the values of Anthropometry parameters for measurement of Anguli Pramana & Sharira Avayava Pramana related to Prakriti	1	Practical Training 5.2	PSY-GUD	Shows-how	CD,CBL,C_L,D,PT
CO2,CO4,CO5	Evaluate Anthropometry Parameters as per different Prakriti	6	Experiential-Learning 5.1	AFT-CHR	Does	CBL,D,D-BED,PT
CO2,CO4,CO5	Evaluate the research work of Ayurgenomic, genetic variations influence prevention of disease & promotion of health & Epigenetics, changes in gene expression with environment influence on different prakriti	4	Experiential-Learning 5.2	CE	Does	JC,ML,PAL,PL

Unit 2 Prakriti - global perspective

- Features of Prakriti as seen in various continents
- Research works of Prakriti

References: 1,2,3,4,8,71,72,73,74,75,76,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO3	Interpret concept of Prakriti at Global level	1	Lecture	CAN	Knows-how	L,L&GD,L&PPT,L_VC
CO1,CO2,CO3,CO4	Analyse Variations in Features of Prakriti as seen in various continents	1	Lecture	CAN	Knows-how	D,L,L&GD,L&PPT,L_VC

CO2,CO3	Demonstrate & compare various observed features of Prakriti in persons staying in various continents	2	Practical Training 5.3	PSY-GUD	Shows-how	CBL,C_L
CO2,CO4,CO5	Evaluate Prakriti features as seen in different continents with the help of different images & videos	6	Experiential-Learning 5.3	CE	Does	CBL,C_L, D,ML,PA L,PL
CO2,CO4,CO7	Explore the Research works of Prakriti as seen globally	2	Experiential-Learning 5.4	CAN	Does	JC

Unit 3 Applied basics of Shareerika Prakriti

- Shareerika Prakriti in per different age group & gender
- Guna based Prakriti Pariksha

References: 1,2,3,5,78,79,80,81,82,83,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret the concept of Shareerika Prakriti in per different age group & gender	2	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC
CO2,CO3,CO8	Demonstrate & perform Vata Prakriti features as per Guna in different age group & gender	3	Practical Training 5.4	PSY-GUD	Shows-how	CBL,D,D-BED
CO2,CO3,CO8	Demonstrate & perform Pitta Prakriti features as per Guna in different age group & gender	3	Practical Training 5.5	PSY-GUD	Shows-how	CBL,D,D-BED,PT
CO2,CO3,CO8	Demonstrate & perform Kapha Prakriti features as per Guna in different age group & gender	3	Practical Training 5.6	PSY-GUD	Shows-how	CBL,D,D-BED,PT
CO4,CO5	Evaluate the observed features as per Shareerika Prakriti in different age group & gender	4	Experiential-Learning 5.5	CE	Does	CBL,C_L, DIS

Unit 4 Applied basics of Manasika Prakriti

- Analysis of Manasika Prakriti features
- Research works & updates in Manasika Prakriti

References: 1,2,3,5,78,79,80,81,82,83,84,85,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret the features of Manasika prakriti	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC
CO2,CO3,CO4 ,CO8	Demonstrate & perform features of Satvika Prakriti/ Satvakaya	2	Practical Training 5.7	PSY-GUD	Shows-how	CBL,D,D-BED,PT
CO2,CO3,CO4 ,CO8	Demonstrate & perform features of Rajasika Prakriti / Rajasakaya	2	Practical Training 5.8	PSY-GUD	Shows-how	CBL,D,D-BED,PT
CO2,CO3,CO4 ,CO8	Demonstrate & perform features of Tamasika Prakriti/ Tamaskaya	2	Practical Training 5.9	PSY-GUD	Shows-how	CBL,D,D-BED,DIS, PT
CO2,CO4,CO5	Evaluate features of Manasika Prakriti with their subtypes with different personality assessment scale & research works & updates in Manasika Prakriti	4	Experiential-Learning 5.6	CAN	Does	C_L,JC,L S,ML,PL

Practical Training Activity

Practical No	Name	Activity details
Practical Training 5.1	Anthropometry parameters for measurement of Height, Weight, Chest & waist circumference as per	Teachers should demonstrate how to measure Height, Weight, Chest & waist circumference etc with measuring tape, stadiometer with ref to SOP. Each student should measure & record the above Anthropometry parameters of minimum 5 cases

	SOP	
Practical Training 5.2	Anthropometry parameters for measurement of Anguli Pramana & Sharira Avayava Pramana related to Prakriti	Teachers should demonstrate how to Measurement Anguli Pramana with the help of vernier caliper, measuring tape according to prepared SOP. Each Students should measure & record Anguli pramana & Sharira Avayava Pramana in relation with Prakriti of minimum 5 cases.
Practical Training 5.3	Observe features of Prakriti in persons staying in various continents	Teacher to Demonstrate features of Prakriti in persons staying in various continents with the help of video & images etc & available econtent. Each student should perform the features of Prakriti in persons staying in various continents by creating scenario. Note down the observation and conduct a departmental group discussion.
Practical Training 5.4	Vata Prakriti features as per Guna in different age group & gender	Teacher should demonstrate the features of Vata Prakriti as per Guna in children, adults & old age persons.Each student should assess Prakriti of different age persons like children, adults & old age till he finds Vata dominant Prakriti in each age group. He should also assess Prakriti in male & female healthy volunteers. Note down the observation & conduct departmental group discussion on Prakriti features according to Guna in different age group & gender.
Practical Training 5.5	Pitta Prakriti features as per Guna in different age group & gender	Teacher should demonstrate the features of Pitta Prakriti as per Guna in children, adults & old age persons.Each student should assess Prakriti of different age persons like children, adults & old age till he finds Pitta dominant Prakriti in each age group. He/she should also assess Prakriti in male & female healthy volunteers. Note down the observation & conduct departmental group discussion on Prakriti features according to Guna in different age group & gender.
Practical Training 5.6	Kapha Prakriti features as per Guna in different age group & gender	Teacher should demonstrate the features of Kapha Prakriti as per Guna in children, adults & old age persons.Each student should assess Prakriti of different age persons like children, adults & old age till he finds Kapha dominant Prakriti in each age group. He should also assess Prakriti in male & female healthy volunteers. Note down the observation & conduct departmental group discussion on Prakriti features according to Guna in different age group & gender.
Practical Training 5.7	Features of Satvika Prakriti / Satvakaya	Teacher should demonstrate the features of Satvika Prakriti . Each student should assess Satvika Prakriti with the features & correlate with subtype of Satvika Prakriti. Note down the observation & conduct departmental group discussion on Satvika Prakriti features with its subtypes. Explore Satvika Prakriti by performing Roleplay.
Practical	Features of Rajasika	Teacher should demonstrate the features of Rajasika Prakriti.Each student should assess Rajasika Prakriti with the features &

Training 5.8	Prakriti / Rajasakaya	correlate with subtype of Rajasika Prakriti. Note down the observation & conduct departmental group discussion on Rajasika Prakriti features with its subtypes. Explore Rajasika Prakriti by performing Roleplay
Practical Training 5.9	Features of Tamasika Prakriti/ Tamaskaya	Teacher should demonstrate the features of Tamasika Prakriti. Each student should assess Tamasika Prakriti with the features & correlate with subtype of Tamasika Prakriti. Note down the observation & conduct departmental group discussion on Tamasika Prakriti features with its subtypes. Explore Tamasika Prakriti by performing Roleplay
Experiential learning Activity		
Experiential learning No	Name	Activity details
Experiential-Learning 5.1	Anthropometry Parameters as per different Prakriti	Each student should measure & record Anthropometry parameters as per SOP & relate the findings with Anguli Pramana in different Prakriti. Explore inter-relation of Anthropometry parameter – Anguli Pramana – Prakriti & present the same in the Department.
Experiential-Learning 5.2	Research work of Ayurgenomic, genetic variations influence prevention of disease & promotion of health & Epigenetics, changes in gene expression with environment influence on different prakriti	Conduct expert talk, Group Discussion on influence of Ayurgenomics & Epigenetics in Different Prakriti. Each student should List down the probable points related to prevention of disease & promotion of health in different Prakriti & express the outcome through Seminars
Experiential-Learning 5.3	Prakriti features as seen in different continents with the help of different images & videos	Divide students in small groups & distribute the features found in different continents & evaluate according to different Prakriti. Use of photos & videos & Cinemeducation. Try Collaborating with Overseas University through e-meeting & conduction e-sessions to explore & analyse Prakriti in global citizens
Experiential-Learning 5.4	Research works of Prakriti as seen globally	Each student refer one research paper and present in the department

Experiential-Learning 5.5	Shareerika Prakriti in different age group & gender	Each student should evaluate features of at least one Prakriti of children / adults / old age person as per Guna and present each aspect of features of Sharirika Prakriti in relation with age & gender as well. Conduct group discussion on paper review and recent updates related to this topic and its role for prevention of disease and health promotion in different age group & gender
Experiential-Learning 5.6	Manasika Prakriti with their subtypes with different personality assessment scale & research works & updates in Manasika Prakriti	Evaluate the features of Satvika / Rajasika / Tamasika prakriti along with its subtypes with different personality traits like Big Five for broad traits, MMPI for mental health, MBTI for self-discovery. Explore the recent research updates by e-learning / journal club / Role play / Seminars / Cinemeducation etc

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.

- 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. (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

Module 6 : Saara

Module Learning Objectives

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

1. Interpret the characteristic features of Saara with its physiological applicability.
2. Assessment of Dhatu Saara subjective and objective parameters.
3. Evaluate the Saara Pariksha and will be able to explain the ways to maintain/increase Dhatu Bala.

Unit 1 Concept of Saara

- Concept of Dhatu Saara
- Dhatu Bala with its clinical applicability
- Subjective and objective parameter of Dhatu Saara Pariksha

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

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret the concept of Dhatu Saara.	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC
CO1	Interpret the concept of Dhatu Bala	1	Lecture	CAN	Knows-how	DIS,L,L&GD,L&PPT ,L_VC
CO1	Analyse on Different types of saara with its clinical applicability	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC

CO2,CO4,CO5	Evaluate the subjective and objective parameter of Rasa Rakta Dhatu Saara	1	Experiential-Learning 6.1	AFT-CHR	Does	DIS,SDL
CO2,CO4,CO5	Evaluate the subjective and objective parameter of Mamsa Meda Dhatu Saara	1	Experiential-Learning 6.2	AFT-CHR	Does	C_L,DIS,IBL,SDL
CO2,CO4,CO5	Evaluate the subjective and objective parameter of Asthi Majja Dhatu Saara	1	Experiential-Learning 6.3	AFT-CHR	Does	C_L,DIS,IBL,SDL
CO2,CO4,CO5	Evaluate the subjective and objective parameter of Shukra Saara & Satva Saara	1	Experiential-Learning 6.4	AFT-CHR	Does	C_L,DIS,SDL
CO2,CO3	Demonstrate and Perform practical assessment of Dhatu Saara considering age	2	Practical Training 6.1	PSY-GUD	Shows-how	CBL,D,D-BED,DIS

Unit 2 Saarata in different physiological condition

- Dhatu Saara in different physiological condition like age, gender, in relation to Aahara, Vyayayama etc.

References: 1,2,3,4,5,6,8,33,34,62

3A	3B	3C	3D	3E	3F	3G
CO1,CO2,CO4	Interpret Dhatu Saara in different physiological condition	1	Lecture	CAN	Knows-how	L&GD,L&PPT,L_VC
CO2,CO3,CO4	Demonstrate and Perform practical assessment of Dhatu Saara in different gender	2	Practical Training 6.2	PSY-GUD	Shows-how	CBL,D,D-BED,PT
CO2,CO3,CO4	Demonstrate and Perform practical assessment of Dhatu Saara considering Aahar, Vyayama, Yoga etc	2	Practical Training 6.3	PSY-GUD	Shows-how	CBL,D,D-BED,DIS,PER,PBL
CO2,CO4,CO5	Evaluate the observed features of Dhatu Saraata, age wise & gender wise	4	Experiential-	AFT-	Does	CBL,PT,S

Unit 3 Saarata in different Pathological condition.

- Dhatu Saara with Dhatu Bala in different Pathological condition
- Research works & updates in Saara Pariksha.

References: 1,2,3,4,5,6,8,33,34,62

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret Dhatu Saara with Dhatu Bala in different Pathological condition	1	Lecture	CAN	Shows-how	L,L&GD, L&PPT ,L_VC
CO2,CO3,CO4	Demonstrate and perform practical assessment of Rasa, Rakta, Mamsa & Meda Saarata with Dhatu Bala considering different pathological condition.	2	Practical Training 6.4	PSY-GUD	Shows-how	CBL,C_L, DIS
CO2,CO3,CO4	Demonstrate and perform practical assessment of Asthi, Majja, Shukra Satva Saarata with dhatu Bala considering different pathological condition.	2	Practical Training 6.5	PSY-GUD	Shows-how	CBL,D,D-BED,DIS, PT
CO2,CO3,CO4	Evaluate the observed features of Dhatu Saraata as per Dhatu Bala. Like Rakta Saara-Sukumara / Anatibala , Medasaara & Obesity	4	Experiential-Learning 6.6	AFT-CHR	Does	CBL,C_L, DIS,LRI
CO4,CO5,CO7	Evaluate research works & updates in Saara Pariksha.	1	Experiential-Learning 6.7	CAN	Does	JC,LS,PL, SDL

Practical Training Activity

Practical No	Name	Activity details
Practical Training 6.1	Practical assessment of Dhatu Saara considering age	Teacher should demonstrate the features of Dhatu saara on healthy individuals considering age factor. Each students should perform the practical assessment and note down the observation of 03 cases (One in each group) conduct a departmental group discussion

Practical Training 6.2	Practical assessment of Dhatu Saara in different gender	Teacher should demonstrate the features of Dhatu saara on healthy individuals considering gender factor. Each students should perform the practical assessment and note down the observation of 03 cases (One in each group) conduct a departmental group discussion
Practical Training 6.3	Practical assessment of Dhatu Saara considering Aahar, Vyayama, Yoga etc	Teacher should demonstrate the features of Dhatu saara on healthy individuals considering parameters like Ahara, Vyayama, Yoga etc. Each students should perform the practical assessment and note down the observation of 03 cases (One in each group) conduct a departmental group discussion
Practical Training 6.4	Practical assessment of Rasa, Rakta, Mamsa & Meda Saarata with Dhatu Bala considering different pathological condition.	Teacher should demonstrate the features of above mentioned Dhatu saara in relation with Dhatu bala in different pathological conditions. Each student should perform practical assessment on 03 patients, note down the observation in relation with Dhatu Bala (Uttam / Madhyama / Heena) and conduct a departmental group discussion
Practical Training 6.5	Practical assessment of Asthi, Majja, Shukra Satva Saarata with dhatu Bala considering different pathological condition.	Teacher should demonstrate the features of above mentioned Dhatu saara in relation with Dhatu bala in different pathological conditions. Each student should perform practical assessment on 03 patients, note down the observation in relation with Dhatu Bala (Uttam / Madhyama / Heena) and conduct a departmental group discussion
Experiential learning Activity		
Experiential learning No	Name	Activity details
Experiential-Learning 6.1	Subjective and objective parameter of Rasa Rakta Dhatu Saara	Evaluate and interpret the subjective and objective parameter of Dhatu Saara mentioned above by self-assessment and note the merits and demerits .Maintain self record diary and observe the features as pre physiological condition /season in relation with Dhatu Bala. Each student should present this observation and review one research paper related to this and present in the department.
Experiential-	Subjective and	Evaluate and interpret the subjective and objective parameter of Dhatu Saara mentioned above by self-assessment and note the

Learning 6.2	objective parameter of Mamsa Meda Dhatu Saara	merits and demerits .Maintain self record diary and observe the features as pre physiological condition /season in relation with Dhatu Bala. Each student should present this observation and review one research paper related to this and present in the department.
Experiential-Learning 6.3	Subjective and objective parameter of Asthi Majja Dhatu Saara	Evaluate and interpret the subjective and objective parameter of Dhatu Saara mentioned above by self-assessment and note the merits and demerits .Maintain self record diary and observe the features as pre physiological condition /season in relation with Dhatu Bala. Each student should present this observation and review one research paper related to this and present in the department.
Experiential-Learning 6.4	Subjective and objective parameter of Shukra Saara & Satva Saara	Evaluate and interpret the subjective and objective parameter of Dhatu Saara mentioned above by self-assessment and note the merits and demerits .Maintain self record diary and observe the features as pre physiological condition /season in relation with Dhatu Bala. Each student should present this observation and review one research paper related to this and present in the department.
Experiential-Learning 6.5	Features of Dhatu Saraata, age wise & gender wise	Student should able to evaluate the difference between Dhatu Saara features and physiological condition like age, gender, Vyayam etc. Each student list down the probable points related to prevention of disease and promotion of health e.g. Evaluate the features of Rasa / Twak saara in different age. Effect of physiological condition on Dhatu saara are correlate, discuss & express the outcome through seminar.
Experiential-Learning 6.6	Dhatu Saraata as per Dhatu Bala. Like Rakta Saara- Sukumara / Anatibala , Medasaara & Obesity	Student should evaluate the features which showing that Bala is less of that particular Dhatu eg Sukumara, Anatibala is feature of Rakta Saarata so it shows the strength / Bala is less inspite of having saar feature. Like wise student should able to differentiate between Medasaara & Obesity etc.Each student should observe 02 cases and correlate with lab report /investigations and present in the seminar.
Experiential-Learning 6.7	Research works & updates in Saara Pariksha.	Explore research works and updates in different dimensions of Saara Pariksha through e-learning /publications and have a departmental presentation & group discussion

Modular Assessment

Assessment method

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

Hour

2

standard protocol.

- Conduct a structured compilation/ project work on different dimensions of Saara & 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)

Module 7 : Naadi Pariksha

Module Learning Objectives

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

1. Interpret the characteristic features of Naadi & its physiological basis.
2. Perform Naadi Pariksha by Manual method, Naadi recording instruments.
3. Evaluate & differentiate Prakrit - Vaikrit features of Naadi.

Unit 1 Naadi & Pulse

- Concept of Naadi & Naadi Parikshya Bhava
- Naadi recording instruments.

References: 28,37,53,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret the concept of Naadi & Naadi Parikshya Bhava	1	Lecture	CE	Knows-how	L,L&GD, L&PPT ,L_VC
CO2,CO4	Analyse on Naadi recording instruments	1	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC

Unit 2 Naadi in different physiological condition

- SOP of Manual & instrument based Naadi Pariksha
- Patterns of Naadi in different physiological condition.

References: 28,37,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret the patterns of Naadi in different physiological condition	2	Lecture	CAN	Knows-how	L,L&GD, L&PPT ,L_VC
CO2,CO3	Perform practical on SOP of Manual Naadi Pariksha.	2	Practical Training 7.1	PSY-GUD	Shows-how	CBL,D,D-BED,DL
CO2,CO3	Perform practical on SOP of Instrument based Naadi Pariksha.	3	Practical Training 7.2	PSY-GUD	Shows-how	PAL,PL,PT
CO4,CO5	Evaluate & compare the features of Naadi by Manual & instrument method in different physiological condition.	7	Experiential-Learning 7.1	AFT-CHR	Does	D,D-BED,PT

Unit 3 Naadi in different Pathological condition.

- Patterns of Naadi in different Pathological condition
- Comparing the features of Naadi by Manual & instrument method
- Research works & updates in Naadi Pariksha.

References: 28,37,88,89,90

3A	3B	3C	3D	3E	3F	3G
CO1	Interpret the patterns of Naadi in different Pathological condition	1	Lecture	CAN	Shows-how	L,L&GD, L&PPT ,L_VC
CO2,CO3	Perform practical observation of Doshanusara Naadi Pariksha considering different pathological condition (shareerika).	3	Practical Training 7.3	PSY-GUD	Shows-how	CBL,D,D-BED
CO2,CO3	Perform practical observation of Doshanusara Naadi Pariksha considering different	2	Practical	PSY-	Shows-	CBL,PT

	pathological condition (Manasika).		Training 7.4	GUD	how	
CO2,CO4,CO5	Evaluate & compare the features of Naadi by Manual & instrument method in different pathological condition.	3	Experiential-Learning 7.2	CAN	Does	CBL,D,D-BED,PBL
CO4,CO5,CO7	Evaluate research works & updates in Naadi Pariksha.	3	Experiential-Learning 7.3	AFT-CHR	Does	JC,LS,ML

Practical Training Activity

Practical No	Name	Activity details
Practical Training 7.1	practical on SOP of Manual Naadi Pariksha.	Teacher will demonstrate Manual Naadi Pariksha on healthy individuals considering basic etiquettes, rules & regulations. Students will be given with subjects to conduct Nadi Pariksha as per SOP and observation should be noted.
Practical Training 7.2	SOP of Instrument based Naadi Pariksha.	Teacher will demonstrate Instrument based Naadi Pariksha on healthy individuals considering basic etiquettes, rules & regulations. Students will be given with subjects to conduct Nadi Pariksha as per SOP and observation should be noted.
Practical Training 7.3	Doshanusara Naadi Pariksha considering different pathological condition (shareerika).	Teacher will demonstrate Manual Naadi Pariksha on diseased individuals (shareerika) considering basic etiquettes, rules & regulations. Students will be given with subjects to conduct Nadi Pariksha as per SOP and observation should be noted.
Practical Training 7.4	Doshanusara Naadi Pariksha considering different pathological condition (Manasika).	Teacher will demonstrate Manual Naadi Pariksha on diseased individuals (manasika) considering basic etiquettes, rules & regulations. Students will be given with subjects to conduct Nadi Pariksha as per SOP and observation should be noted.

Experiential learning Activity

Experiential learning No	Name	Activity details
Experiential-Learning 7.1	features of Naadi by Manual & instrument method in different	Teacher will demonstrate Manual and Instrument based Naadi Pariksha on healthy individuals considering parameters like different stages of digestion; before, during & after Vyayama, Yoga, Pranayama; Rutu Kaala, Srava Kaala, Grabhini, Prasava etc. Each Student will allotted with 2 specific physiological conditions on which student has to observe & compare Naadi Pariksha

	physiological condition.	readings of many subjects, as per Manual and Instrument method.
Experiential-Learning 7.2	Naadi by Manual & instrument method in different pathological condition.	Teacher will demonstrate Manual and Instrument based Naadi Pariksha on healthy individuals considering parameters like different shareerika & Manasika pathological conditions. Each Student will allotted with 2 specific condition on which student has to observe & compare Naadi Pariksha readings of many subjects, as per Manual and Instrument method.
Experiential-Learning 7.3	Research works & updates in Naadi Pariksha.	Teacher will describe recent updates and research works on Naadi and will allot 1 publication to each student. Student has to go through the publication in detail and do a micro journal presentation in department.

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.

- Each student will be given a published paper on Naadi 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 8 : Standard operating procedures of Laboratory Experiments and diagnostic instruments

Module Learning Objectives

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

1. Interpret principles and SOPs of laboratory instruments ,instruments for hematology , urine analysis and diagnostic instruments
- 2.Perform Standard Operating Procedures of laboratory instruments ,instruments for hematology , urine analysis and diagnostic instruments
- 3.Evaluate , compare and analyse findings laboratory instruments ,instruments for hematology , urine analysis and diagnostic instruments

Unit 1 Standard Operating procedure of laboratory instruments

- SOP of equipment description, operational procedures and safety precautions of Trinocular microscope, Trichoscope, Digital skin fold caliper, Body composition monitor ,Stadiometer, Digital weighing machine
- Quality control in laboratory settings, ensuring instrument calibration, and validation of Body composition monitor ,Stadiometer and Digital weighing machine.

References: 91,92,93,94

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Describe essential SOP of equipment description, operational procedures and safety precautions of Trinocular microscope	1	Lecture	CK	Knows-how	L,L&PPT ,L_VC
CO1,CO3	Describe essential SOP of equipment description, operational procedures and safety precautions of Trichoscope	1	Lecture	CK	Knows-how	L,L&PPT ,L_VC
CO1,CO3	Describe essential SOP of equipment description, operational procedures and safety precautions of Digital skin fold caliper, Body composition monitor ,Stadiometer and Digital weighing machine	1	Lecture	CK	Knows-how	L,L&PPT ,L_VC
CO1,CO3,CO4	Perform Standard Operating Procedures (SOPs) on lab instruments Trinocular microscope	4	Practical	PSY-	Shows-	DL

			Training 8.1	GUD	how	
CO1,CO3,CO4	Perform Standard Operating Procedures (SOPs) on lab instruments Trichoscope	2	Practical Training 8.2	PSY-GUD	Shows-how	D
CO1,CO3,CO4	Perform Standard Operating Procedures (SOPs) on lab instruments Digital skin fold caliper,Body composition monitor , Stadiometer , and Digital weighing machine	2	Practical Training 8.3	PSY-GUD	Shows-how	D
CO1,CO3,CO4	Evaluate quality control in laboratory settings, ensuring instrument calibration, and validation of Trinocular microscope	4	Experiential-Learning 8.1	PSY-GUD	Does	DL
CO1,CO3,CO4	Evaluate quality control in laboratory settings, ensuring instrument calibration, and validation of trichoscope	2	Experiential-Learning 8.2	PSY-GUD	Does	DL
CO1,CO2,CO4	Evaluate quality control in laboratory settings, ensuring instrument calibration, and validation of Digital skin fold caliper ,Body composition monitor,Stadiometer , and Digital weighing machine	4	Experiential-Learning 8.3	PSY-GUD	Does	DL

Unit 2 Standard Operating procedure of laboratory instrument in hematology

- SOP of equipment description, operational procedures of hematology analyzer
- Quality control in laboratory settings, ensuring instrument calibration and validation automatic cell counter.

References: 94,95,96

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Interpret the SOP equipment description, operational procedures of hematology analyzer	2	Lecture	CK	Knows-how	L,L&PPT ,L_VC
CO1,CO3	Interpret the SOP of pre-operational,operational and post operational safety precautions of hematology analyzer	2	Lecture	CK	Knows-how	L,L&PPT ,L_VC
CO1,CO3,CO4	Perform the SOP in hematology analyzer for assessing Complete blood cell count	4	Practical Training 8.4	PSY-GUD	Shows-how	D,DL

CO1,CO3,CO4	Evaluate blood test results from the perspective of applied physiology and integrate the findings with Ayurvedic principles	6	Experiential-Learning 8.4	CE	Does	BS,LRI
CO1,CO3,CO4	Evaluate quality control in laboratory settings, ensuring instrument calibration and validation automatic cell counter	4	Experiential-Learning 8.5	PSY-ADT	Does	DL

Unit 3 Standard Operating procedure in Urine analysis

- Standard Operating Procedure (SOP) for urine analysis by understanding the standardized methods for physical, chemical, microscopic examination
- Correlate applied aspects with Ayurvedic concepts.

References: 94,95,96

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Interpret the Standard Operating Procedure (SOP) for urine analysis by understanding the standardized methods for physical examination	1	Lecture	CK	Knows-how	L,L&PPT ,L_VC
CO1,CO3	Interpret the Standard Operating Procedure (SOP) for urine analysis by understanding the standardized methods for chemical examination	2	Lecture	CK	Knows-how	L,L&PPT ,L_VC
CO1,CO3	Interpret the Standard Operating Procedure (SOP) for urine analysis by understanding the standardized methods for microscopic examination	1	Lecture	CK	Knows-how	L,L&PPT ,L_VC
CO1,CO3,CO4	Perform SOP of physical examination of urine by assessing its color, clarity, odor, and specific gravity	2	Practical Training 8.5	PSY-GUD	Shows-how	DL,L,L&PPT ,L_VC
CO1,CO3,CO4	Perform SOP of chemical examination of urine	4	Practical Training 8.6	PSY-GUD	Shows-how	DL
CO1,CO3,CO4	Perform SOP of microscopic examination of urine	2	Practical Training 8.7	PSY-GUD	Shows-how	DL
CO1,CO3,CO4	Evaluate physical examination of urine, compare the variations and correlate applied	2	Experiential-	CE	Does	DIS,LRI

	aspects with Ayurvedic concepts		Learning 8.6			
CO1,CO3,CO4	Evaluate chemical examination of urine, compare the variations and correlate applied aspects with Ayurvedic concepts	5	Experiential-Learning 8.7	CE	Does	DIS,LRI
CO1,CO3,CO4	Evaluate microscopic examination of urine, compare the variations and correlate applied aspects with Ayurvedic concepts	4	Experiential-Learning 8.8	CE	Does	DIS,LRI

Unit 4 Standard Operating procedure Instruments/ Diagnostics

- Principles, applications, and SOP of diagnostic equipment of ECG, Digital spirometry, digital pH Meter etc.

References: 8,97,98,99,100,101,102,103,104,105,106,107

3A	3B	3C	3D	3E	3F	3G
CO1,CO3	Discuss the principles, applications, and SOP of diagnostic equipment of ECG	1	Lecture	CK	Knows-how	L,L&GD, L&PPT ,L_VC
CO1,CO3	Describe the principles, applications, and SOP of diagnostic equipment of Digital spirometry	2	Lecture	CK	Knows-how	L,L&GD, L&PPT ,L_VC
CO1,CO3	Discuss the principles, applications, and SOP of diagnostic equipment of digital pH Meter	1	Lecture	CK	Knows-how	L,L&GD, L&PPT ,L_VC
CO1,CO3,CO4	Perform SOP for ECG calibration, proper electrode placement, artifact monitoring, recording, and documentation	4	Practical Training 8.8	PSY-GUD	Shows-how	D,DL
CO1,CO3,CO4	Perform the SOP of digital spirometry through demonstration and practice	4	Practical Training 8.9	PSY-GUD	Shows-how	D,DL
CO1,CO3,CO4	Perform the SOP of digital pH meter through demonstration and practice	2	Practical	PSY-	Shows-	D,DL

			Training 8.10	GUD	how	
CO1,CO3,CO4	Evaluate alternative and advanced ECG techniques, analyze data, and present correlations	4	Experiential-Learning 8.9	CE	Does	DIS
CO1,CO3,CO4	Evaluate calibration and operation on digital pH meter, analyze deviations, and interpret results and correlate findings with applied physiology	2	Experiential-Learning 8.10	CE	Does	CBL
CO1,CO3,CO4	Evaluate digital spirometry, interpret key parameters, and correlate findings with applied physiology	2	Experiential-Learning 8.11	CE	Does	CBL

Practical Training Activity

Practical No	Name	Activity details
Practical Training 8.1	Standard Operating Procedures (SOPs) on lab instruments Trinocular microscope	Teacher will demonstrate the calibration and operation of Trinocular microscope according to established Standard Operating Procedures followed by practice session
Practical Training 8.2	Standard Operating Procedures (SOPs) on lab instrument -Tricoscope	Teacher will demonstrate the calibration and operation of Tricoscope according to established Standard Operating Procedures followed by practice session
Practical Training 8.3	Standard Operating Procedures (SOPs) on lab instrument-Digital skin fold caliper Body composition monitor , Stadiometer, and Digital weighing machine	The teacher will demonstrate the calibration and operation of the Digital skin fold caliper Body composition monitor , Stadiometer and Digital weighing machine according to established Standard Operating Procedures followed by a practice session
Practical Training 8.4	SOP in hematology analyzer for assessing	The teacher demonstrates the step-by-step operation of the hematology analyzer to assess Complete Blood Cell Count (CBC), including sample preparation, machine calibration, result interpretation, and quality control verification followed by practice

	Complete blood cell count	sessions
Practical Training 8.5	SOP of physical examination of urine by assessing its color, clarity, odor, and specific gravity	The teacher will demonstrate the physical examination of urine by assessing its color, clarity, odor, and specific gravity using a standardized color chart, visual inspection, odor detection, and a urinometer, followed by practice session
Practical Training 8.6	SOP of chemical examination of urine	The teacher will demonstrate the SOP of chemical examination of urine - protein, glucose, bile salt, bile pigment, and ketone, followed by practice session
Practical Training 8.7	SOP of microscopic examination of of urine	The teacher will demonstrate the microscopic examination of urine by centrifuging a urine sample, transferring a drop of the sediment onto a glass slide and examining it under a microscope followed by practice session
Practical Training 8.8	SOP for ECG calibration, proper electrode placement, artifact monitoring, recording, and documentation	Teacher will demonstrate the sop of ECG machine for calibration ,ensure the participant supine position, and electrodes placement. Record, monitor for artifacts or abnormalities, save/print the ECG tracing, and document the findings for interpretation followed by practice session
Practical Training 8.9	SOP of digital spirometry through demonstration and practice	Teacher will demonstrate digital spirometry by ensuring proper calibration, proper guidance of the participant for inhalation and exhalation, interpreting the spirometric values displayed on the device followed by practice sessions
Practical Training 8.10	Calibration and operation on digital pH meter, analyze deviations, interpret results, and correlate findings with applied physiology	Each Student will calibrate and operate a digital pH meter to measure pH levels in various biological and pharmaceutical samples, analyze deviations due to temperature and contamination, and interpret results in the laboratory applications and correlate findings with applied physiology in case-based discussions

Experiential learning Activity		
Experiential learning No	Name	Activity details
Experiential-Learning 8.1	Quality control in laboratory settings, ensuring instrument calibration, and validation of trinocular microscope	Each student will perform a quality control assessment of a trinocular microscope by calibrating the eyepiece micrometer using a stage micrometer, checking illumination and lens clarity, and validating image accuracy by comparing observed specimen measurements with standard reference values.
Experiential-Learning 8.2	Quality control in laboratory settings, ensuring instrument calibration, and validation of Trichoscope	Each student will evaluate quality control of a Trichoscope by calibrating magnification settings using a reference scale, inspecting the lens and light source for clarity and uniform illumination, and validating image accuracy by comparing hair and scalp observations with standardized clinical images.
Experiential-Learning 8.3	Quality control in laboratory settings, ensuring instrument calibration, and validation of Digital Skin Fold Caliper, Body Composition Monitor, Stadiometer, and Digital Weighing Machine.	Each student will calibrate, do quality control checks, and validate Digital Skin Fold Caliper measurements by comparing manual and digital readings on different subjects. Each Student will evaluate quality control by comparing the readings from a Body Composition Monitor, Stadiometer, and Digital Weighing Machine with manual scales, calculating discrepancies, and analyzing accuracy for quality control validation.
Experiential-Learning 8.4	Blood test results from the perspective of applied physiology and integrate the findings	Each Student will analyze and interpret 5 blood test results, correlate findings with physiological concepts, and integrate Ayurvedic concepts and present findings in department

	with Ayurvedic principles	
Experiential-Learning 8.5	Quality control in laboratory settings, ensuring instrument calibration and validation automatic cell counter	Each Student will evaluate the quality control of an hematology analyzer by performing calibration using standardized control samples, and validating accuracy by comparing test results with known reference values to ensure precision and automated biochemical analysis.
Experiential-Learning 8.6	Physical examination of urine, compare the variations and correlate applied aspects with Ayurvedic concepts	Each students will analyze urine samples- color, odor, turbidity, and specific gravity , comparing findings with normal and pathological samples .Correlate the findings with Ayurvedic applied physiology and present it in department
Experiential-Learning 8.7	Chemical examination of urine, compare the variations and correlate applied aspects with Ayurvedic concepts	Each student will analyze urine samples to detect chemical constituents - protein, glucose, ketones, and bilirubin,bile salts comparing findings with normal and pathological samples .Correlate the findings with Ayurvedic applied physiology and present it in department
Experiential-Learning 8.8	Microscopic examination of urine ,compare the variations and correlate applied aspects with Ayurvedic concepts	Each student will analyze urine sediments, examine them under a microscope to identify RBCs, WBCs, casts, crystals, and epithelial cells, comparing findings with normal and pathological samples .Correlate the findings with Ayurvedic applied physiology and present it in departmen
Experiential-Learning 8.9	Alternative and advanced ECG techniques, analyze data, and present correlations	Each Student will explore alternative ECG techniques for patients with no limbs, such as modified lead placements (Mason-Likar, EASI system) and torso ECG etc, advanced ECG techniques like Holter monitoring, stress testing, and signal-averaged ECG.followed by presentation of data in department

Experiential-Learning 8.10	Calibration and operation on digital pH meter, analyze deviations, and interpret results and correlate findings with applied physiology	Each Student will calibrate and operate a digital pH meter to measure pH levels in various biological and pharmaceutical samples, analyze deviations due to temperature and contamination, and interpret results in the laboratory applications and correlate findings with applied physiology in case-based discussions
Experiential-Learning 8.11	Digital spirometry, interpret key parameters, and correlate findings with applied physiology	Each Student will perform hands-on training in digital spirometry tests, interpret flow-volume loops and spirometric parameters (FVC, FEV1, FEV1/FVC ratio, PEF), and correlate findings with applied physiology in case-based discussions

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.

- Evaluation of summary reports of experiments in the lab, or demonstrated instruments: The report will be evaluated on the basis of active participation during the lab, observation book detailing the observations during the lab, 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

Table 4 : Practical Training Activity

Practical No	Practical name	Hours
1.1	Prakrit & Vaikrit Karma of Vata using structured format.	6
1.2	Karma of Panchavidha Vata using structured format.	2
1.3	Prakrit & Vaikrit Karma of Pitta using structured format.	4
1.4	Karma of Panchavidha Pitta using structured format.	2
1.5	Prakrit & Vaikrit Karma of Kapha using structured format.	2
1.6	Karma of Panchavidha Kapha using structured format.	2
1.7	Histology of Sapta Dhatu.	2
1.8	Prakrit & Vaikrit Karma of Rasa, Rakta using structured format.	2
1.9	Prakrit & Vaikrit Karma of Mamsa, Meda Asthi, Majja using structured format.	2
1.10	Prakrit & Vaikrit Karma of Shukra using structured format.	2
1.11	Prakrit & Vaikrit Purisha Karma using structured format	2
1.12	Prakrit & Vaikrit Mutra & Sveda Karma using structured format	2
2.1	Microscopic examination of Nerve Cells and tissues.	2
2.2	Microscopic examination of Muscle Cells and tissues.	2
2.3	Microscopic examination of Epithelial Cells and tissues.	2

2.4	Microscopic examination of Embryonic Stem Cells & Adult Stem Cells	2
2.5	Microscopic examination Adipose tissue and Cartilage tissue	2
2.6	Microscopic examination of Bone tissue and Blood tissue.	2
2.7	Clinical assesment of Dosha & Dushya pertaining Samanya Vishesha Siddhanta in relation to homeostasis & feedback mechanisms.	8
3.1	Effects of doshik biorhythm on physiological processes.	2
3.2	Effects of pranayama and yoga on doshik biorhythm and physiological parameters.	4
3.3	Bio-Rhythm chart, accurately plotting and analyzing physiological rhythms	4
3.4	Progression patterns of chaya,prakopa and prasama with chaya ,prakopa ,prasara states in kriya kala	5
3.5	Dietary plan based on nutrition as per Rithu	5
4.1	Assessment of Rasavaha, Raktavaha srotodushti lakashanas.	2
4.2	Mamasavaha and Medovaha Srotodushti lakashanas.	2
4.3	Asthivaha and Majjavaha Srotodushti lakashanas.	2
4.4	Shukravaha Srotodushti lakashanas.	2
4.5	Artavavaha Srotodushti lakashanas.	2
4.6	Annavaha and Pranavaha Srotodushti lakashanas	2
4.7	Samagni and Vishmagni Agni Bala (Status of agni) considering different pathological condition.	2
4.8	Mandagni and Tikshnagni with Agni Bala (Status of agni) considering different pathological condition.	3
4.9	Koshtha in Healthy & diseased condition.	3
5.1	Anthropometry parameters for measurement of Height, Weight, Chest & waist circumference as per SOP	2
5.2	Anthropometry parameters for measurement of Anguli Pramana & Sharira Avayava Pramana related to Prakriti	1

5.3	Observe features of Prakriti in persons staying in various continents	2
5.4	Vata Prakriti features as per Guna in different age group & gender	3
5.5	Pitta Prakriti features as per Guna in different age group & gender	3
5.6	Kapha Prakriti features as per Guna in different age group & gender	3
5.7	Features of Satvika Prakriti / Satvakaya	2
5.8	Features of Rajasika Prakriti / Rajasakaya	2
5.9	Features of Tamasika Prakriti/ Tamaskaya	2
6.1	Practical assessment of Dhatu Saara considering age	2
6.2	Practical assessment of Dhatu Saara in different gender	2
6.3	Practical assessment of Dhatu Saara considering Aahar, Vyayama, Yoga etc	2
6.4	Practical assessment of Rasa, Rakta, Mamsa & Meda Saarata with Dhatu Bala considering different pathological condition.	2
6.5	Practical assessment of Asthi, Majja, Shukra Satva Saarata with dhatu Bala considering different pathological condition.	2
7.1	practical on SOP of Manual Naadi Pariksha.	2
7.2	SOP of Instrument based Naadi Pariksha.	3
7.3	Doshanusara Naadi Pariksha considering different pathological condition (shareerika).	3
7.4	Doshanusara Naadi Pariksha considering different pathological condition (Manasika).	2
8.1	Standard Operating Procedures (SOPs) on lab instruments Trinocular microscope	4
8.2	Standard Operating Procedures (SOPs) on lab instrument -Tricoscope	2
8.3	Standard Operating Procedures (SOPs) on lab instrument-Digital skin fold caliper Body composition monitor , Stadiometer, and Digital weighing machine	2
8.4	SOP in hematology analyzer for assessing Complete blood cell count	4

8.5	SOP of physical examination of urine by assessing its color, clarity, odor, and specific gravity	2
8.6	SOP of chemical examination of urine	4
8.7	SOP of microscopic examination of of urine	2
8.8	SOP for ECG calibration, proper electrode placement, artifact monitoring, recording, and documentation	4
8.9	SOP of digital spirometry through demonstration and practice	4
8.10	Calibration and operation on digital pH meter, analyze deviations, interpret results, and correlate findings with applied physiology	2

Table 5 : Experiential learning Activity

Experiential learning No	Experiential name	Hours
1.1	Vata Vriddhi Kshaya assessment techniques.	6
1.2	Pitta Vriddhi Kshaya assessment techniques.	6
1.3	Kapha Vriddhi Kshaya assessment techniques.	6
1.4	Dhatu Vriddhi assessment techniques.	3
1.5	Dhatu Kshaya assessment techniques.	3
1.6	Trimala Vriddhi assessment techniques.	3
1.7	Trimala Kshaya assessment techniques.	3
1.8	Research works & updates on Dosha	3
1.9	Research works & updates on Dhatu	3
1.10	Research works & updates on Mala	3
2.1	Cellular processes involved in body organization, growth, and tissue repair in terms of Panchamahabhut	2
2.2	Cellular processes involved in body organization, growth, and tissue repair in terms of Samanya Vishesha Siddhanta	2
2.3	Process of cell ageing.	2
2.4	Process of cell death and longevity.	2
2.5	Concepts of Panchamahabhuta to maintain health.	6
2.6	Concepts of regulatory mechanisms and homeostasis while exploring the structural and functional similarities at various physiological levels.	6
2.7	Research the influence of Panchamahabhuta, Samanya, and Vishesha Siddhanta on the physiological processes and evaluate their role in maintaining homeostasis and health	6

3.1	Biological rhythms in relation to their Prakriti and Dosha status	9
3.2	Chaya, prakopa and prasama stage of kriya kala with Chaya, prakopa and prasara stage of kriya kala	9
3.3	Recent advances in seasonal variations in human physiology and behavior, and their implications for health	8
4.1	role of Srotodushthi lakshnas.	9
4.2	Mulasthan of Rasavaha and Raktavaha Srotas	2
4.3	Mulasthan of Mamasvaha and Medovaha Srotas	2
4.4	Mulasthan of Ashthivaha and Majjavaha Srotas	2
4.5	Mulasthan of Shukravaha and Aartavaha Srotas	2
4.6	Mulasthan of Annavaha and Pranavaha Srotas	2
4.7	Different Agni assessment tools.	7
5.1	Anthropometry Parameters as per different Prakriti	6
5.2	Research work of Ayurgenomic, genetic variations influence prevention of disease & promotion of health & Epigenetics, changes in gene expression with environment influence on different prakriti	4
5.3	Prakriti features as seen in different continents with the help of different images & videos	6
5.4	Research works of Prakriti as seen globally	2
5.5	Shareerika Prakriti in different age group & gender	4
5.6	Manasika Prakriti with their subtypes with different personality assessment scale & research works & updates in Manasika Prakriti	4
6.1	Subjective and objective parameter of Rasa Rakta Dhatu Saara	1
6.2	Subjective and objective parameter of Mamsa Meda Dhatu Saara	1
6.3	Subjective and objective parameter of Asthi Majja Dhatu Saara	1

6.4	Subjective and objective parameter of Shukra Saara & Satva Saara	1
6.5	Features of Dhatu Saraata, age wise & gender wise	4
6.6	Dhatu Saraata as per Dhatu Bala. Like Rakta Saara- Sukumara / Anatibala , Medasaara & Obesity	4
6.7	Research works & updates in Saara Pariksha.	1
7.1	features of Naadi by Manual & instrument method in different physiological condition.	7
7.2	Naadi by Manual & instrument method in different pathological condition.	3
7.3	Research works & updates in Naadi Pariksha.	3
8.1	Quality control in laboratory settings, ensuring instrument calibration, and validation of trinocular microscope	4
8.2	Quality control in laboratory settings, ensuring instrument calibration, and validation of Trichoscope	2
8.3	Quality control in laboratory settings, ensuring instrument calibration, and validation of Digital Skin Fold Caliper, Body Composition Monitor, Stadiometer, and Digital Weighing Machine.	4
8.4	Blood test results from the perspective of applied physiology and integrate the findings with Ayurvedic principles	6
8.5	Quality control in laboratory settings, ensuring instrument calibration and validation automatic cell counter	4
8.6	Physical examination of urine, compare the variations and correlate applied aspects with Ayurvedic concepts	2
8.7	Chemical examination of urine, compare the variations and correlate applied aspects with Ayurvedic concepts	5
8.8	Microscopic examination of urine ,compare the variations and correlate applied aspects with Ayurvedic concepts	4
8.9	Alternative and advanced ECG techniques, analyze data, and present correlations	4
8.10	Calibration and operation on digital pH meter, analyze deviations, and interpret results and correlate findings with applied physiology	2
8.11	Digital spirometry, interpret key parameters, and correlate findings with applied physiology	2

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-AB-KS	1	100	200	300

6 B : Scheme of Assessment (Formative and Summative Assessment)**Credit frame work**

AYPG-AB-KS consists of 8 modules totaling 16 credits, which correspond to 480 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 II.

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
M1. Application of Dosha, Dhatu, Mala	3	90		75		
M2. Applied Physiology of Panchamahabhuta and Samanya- Vishesha Siddhanta	2	60		50		
M3. Doshik Biorhythm	2	60		50		
M4. Srotas, Agni & Koshta	2	60		50		
M5. Prakriti & Ayurgenomics	2	60		50		
M6. Saara	1	30		25		
M7. Naadi Pariksha	1	30		25		
M8. Standard operating procedures of Laboratory Experiments and diagnostic instruments	3	90		75		
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

A S.No	B Module number and Name	C MGP
1	M1.Application of Dosha, Dhatu, Mala	C1
2	M2.Applied Physiology of Panchamahabhuta and Samanya- Vishesha Siddhanta	C2
3	M3.Doshik Biorhythm	C3
4	M4.Srotas, Agni & Koshtha	C4
5	M5.Prakriti & Ayurgenomics	C5
6	M6.Saara	C6
7	M7.Naadi Pariksha	C7
8	M8.Standard operating procedures of Laboratory Experiments and diagnostic instruments	C8
	Semester Grade point Average (SGPA)	$(C1+C2+C3+C4+C5+C6+C7+C8) / \text{Number of modules}(8)$

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-AB-KS
Sem II

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
(M-1)Application of Dosha, Dhatu, Mala (Marks: Range 5-20)				
1	(U-1) Basics of Dosha	Yes	Yes	Yes
2	(U-2) Applied Basics of Vata	Yes	Yes	Yes
3	(U-3) Applied Basics of Pitta	Yes	Yes	Yes
4	(U-4) Applied Basics of Kapha	Yes	Yes	Yes
5	(U-5) Applied Basics of Dhatu Karma	Yes	Yes	Yes
6	(U-6) Applied Basics of Mala Karma	Yes	Yes	Yes
7	(U-7) Recent advances in Dosha, Dhatu, Mala.	Yes	Yes	Yes
(M-2)Applied Physiology of Panchamahabhuta and Samanya- Vishesha Siddhanta (Marks: Range 5-20)				
1	(U-1) Panchamahabhuta and Samanya-Vishesha Siddhanta	Yes	Yes	Yes
2	(U-2) Sharira Avayavaastu Paramanu Bhedena Apari Sankyeya Bhavanti	Yes	Yes	Yes
3	(U-3) Integrated knowledge of Panchamahabhuta Siddhanta & physiology	Yes	Yes	Yes
4	(U-4) Integrated knowledge of Samanya Vishesha Siddhanta & physiology	Yes	Yes	Yes
5	(U-5) Recent research works on Panchamahabhuta and Samanya,- Vishesha Siddhanta	Yes	Yes	Yes
(M-3)Doshik Biorhythm (Marks: Range 5-20)				
1	(U-1) Significance of Ritu charya in physiology	Yes	Yes	Yes
2	(U-2) Kriya Kaala	Yes	Yes	Yes
3	(U-3) Dosha Karma - Kaala, aahara with reference to circadian rhythm	Yes	Yes	Yes
4	(U-4) Bio rhythms	Yes	Yes	Yes
(M-4)Srotas, Agni & Koshtha (Marks: Range 5-20)				
1	(U-1) Srotas	Yes	Yes	Yes
2	(U-2) Mula Sthana of Srotas	Yes	Yes	Yes
3	(U-3) Agni	Yes	Yes	Yes
4	(U-4) Koshtha	Yes	Yes	Yes
(M-5)Prakriti & Ayurgenomics (Marks: Range 5-20)				
1	(U-1) Applied basics of Prakriti	Yes	Yes	Yes

2	(U-2) Prakriti - global perspective	Yes	Yes	Yes
3	(U-3) Applied basics of Shareerika Prakriti	Yes	Yes	Yes
4	(U-4) Applied basics of Manasika Prakriti	Yes	Yes	Yes
(M-6)Saara (Marks: Range 5-20)				
1	(U-1) Concept of Saara	Yes	Yes	No
2	(U-2) Saarata in different physiological condition	Yes	Yes	No
3	(U-3) Saarata in different Pathological condition.	Yes	Yes	No
(M-7)Naadi Pariksha (Marks: Range 5-20)				
1	(U-1) Naadi & Pulse	Yes	Yes	No
2	(U-2) Naadi in different physiological condition	Yes	Yes	No
3	(U-3) Naadi in different Pathological condition.	Yes	Yes	No
(M-8)Standard operating procedures of Laboratory Experiments and diagnostic instruments (Marks: Range 5-20)				
1	(U-1) Standard Operating procedure of laboratory instruments	Yes	Yes	Yes
2	(U-2) Standard Operating procedure of laboratory instrument in hematology	Yes	Yes	Yes
3	(U-3) Standard Operating procedure in Urine analysis	Yes	Yes	Yes
4	(U-4) Standard Operating procedure Instruments/ Diagnostics	Yes	Yes	Yes

6 G : Instruction for the paper setting & Blue Print for Summative assessment (University Examination)

Instructions for the paper setting.

1. 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. Use the Blueprint provided in 6G or similar Blueprint created based on instructions 1 to 7

6 H : Distribution of Practical Exam (University Examination)

S.No	Heads	Marks
1	<p>Major Practical (2 practicals, 40 marks each; 1 from Ayurveda, 1 from modern)</p> <p>Ayurveda Practicals: (40 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</p> <p>Modern Practicals: (40 marks) (Among below enlisted any practical/s can be given) SOP of Physical, chemical & microscopic examination of urine (with different combinations) SOP in hematology analyzer for assessing complete blood cell count (with different combinations)</p>	80
2	<p>Minor Practical (3 practicals, 20 marks each; 1 from Ayurveda, 1 from modern, 10 spotters)</p> <p>Ayurveda Practicals: (20 marks) (Among below enlisted any practical/s can be given) Agni Pariksha Koshtha Pariksha Naadi Pariksha Sroto Dusthi Lakshana Pariksha Pramana Pariksha (Anthropometry)</p> <p>Modern Practicals: (20 marks) (Among below enlisted any practical/s can be given) Standard Operating Procedures (SOPs) on lab instrument-Digital skin fold caliper, Body composition monitor, Stadiometer, and Digital weighing machine. SOP for ECG calibration, digital spirometry, digital pH meter, Trinocular microscope, tricoscope</p> <p>Spotters: (20 marks) (2marks each) Nadi Pariksha report - Interpretation & Analysis Doshik Biorhythm, Kriya Kaala (picture) - Principle & analysis Srotus Mula sthana (model/specimen/picture) - Description & analysis Shloka – reference to context Manasika Prakriti scenario – Analysis & applicability Histology slide based on Module 1 - Functional Interpretation & applied</p>	60

	physiology Histology slide based on Module 2 - Functional Interpretation & applied physiology Model based – Organs - Functions ECG report - Interpretation & Analysis Instruments - Principle/Significance & use	
3	Viva 2 Examiners - 20 marks each	40
4	Log book / activity record	10
5	Pactical record Observed, performed practicals of all modules should be recorded, documented, certified and framed as Practical Record Book.	10
Total Marks		200

Reference Books/ Resources



07_Kriya

[Click here to access References and Resources](#)

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		

EXPERT MEMBERS COMMITTEE

Chairman

1. Dr Sarita Ohol, Professor, AIIA Delhi

Consultant Experts

1. Dr Kalpana Sathye, AIIA, Goa,

2. Dr Anura Bhale, Principal, Gomanthak Ayurveda College, Goa

3. Dr Pranita, Principal, MAM's Sumatibhai Shah Ayurved Mahavidyalaya Hadapsar, Pune,

Expert Members

1. Dr CR Yadav, Professor NIA Jaipur.

2. Dr Balkrishna Panwar, Professor, Uttarakhand Ayurved University, Haridwar,

3. Dr. Sampada Sandeep Sant, Dean, RA Podar Govt. Ayurved College, Mumbai,

4. Dr. Sangeeta Gehlot, Professor, Faculty of Ayurveda Institute of Medical Sciences, BHU

5. Dr. Nagaraj Kamath, Associate Professor, SDM College of Ayurveda & Hospital, Hassan,

6. Dr Ananda Lakshmy K N, Professor, Govt Ayurveda College, Kannur, Pariyaram, Kerala,

7. Dr. Raviraj Pardeshi, Professor, Dhuti, Nagpur, Maharashtra,

8. Dr. Sarita Sunil Bhutada, Professor, G.J. Patel institute of Ayurvedic studies & Research Gujrat

9. Dr P C Mangal, Shri Krishna Govt Ayurveda College Kurukshetra, Haryana,

10. Dr Babita Sharma, Associate Professor, Pandit Khushilal Sharma Govt. Ayurveda College, Bhopal,

Health Science Education Technology (HSET) Expert

11. Dr Deepak Vyas, Professor, Jupiter Ayurvedic College and Hospital, Nagpur

EMINENT RESOURCE PANEL

1. Vaidya Jayant Deopujari, Chairperson NCISM

2. Dr. B.S. Prasad, President, Board of Ayurveda, NCISM

3. Dr Atul Babu Varshney, Member, Board of Ayurveda, NCISM

4. Dr. K. K. Dwivedi, Member, Board of Ayurveda, NCISM

CURRICULUM COORDINATION TEAM

1. Chief Co-ordinator: Dr Mohan R. Joshi, Associate Dean, Professor, Samhita Siddhant and Sanskrit Dept. All India Institute of Ayurveda, Goa.

2. Co-Coordinator: Dr. Yogini R. Kulkarni, Professor and Head, Department of Research, P.G. Director,
P.D.E.A. s College of Ayurveda and Research Centre, Nigdi, Pune,

3.	Member: Dr. Anand Katti, Professor, Department of Ayurved Samhita & Siddhant, Government, Ayurvedic Medical College, Bangalore, Karnataka,
INTERNATIONAL MULTIDISCIPLINARY ADVISORY COMMITTEE	
Chairman	
Vaidya Jayant Deopujari, Chairperson, NCISM, New Delhi	
Members	
1.	Dr. B.S. Prasad, President, Board of Ayurveda, NCISM
2.	Dr. K. Jagannathan, President, BUSS, NCISM
3.	Dr. Raghugamma Bhatta U. President, MARBISM, NCISM
4.	Vd. Rakesh Sharma President, BOER, NCISM
5.	Dr. B.L. Mehra, Member, MARBISM, NCISM
6.	Dr Atul Varshney, Member, BoA, NCISM
7.	Dr KK Dwivedi, Member, BoA, NCISM
8.	Dr Mathukumar, Member, BUSS, NCISM
9.	Dr. P.S. Arathi, Member, MARBISM, NCISM
10.	Prof. (Dr.) Sushrut Kanaujia, Member, MARBISM, NCISM
11.	Dr. Narayan S. Jadhav. Member, BERISM, NCISM
12.	Dr. Siddalingesh M. Kudari, Member, BERISM, NCISM
13.	Dr. Rajani A. Nayar, Member, BERISM, NCISM
14.	Prof. (Hakim) Mohammed Mazahir Alam, Member, BERISM, NCISM
15.	Dr. Manoj Nesari Advisor to the Government of India, Ministry of AYUSH
16.	Dr. Kousthubha Upadhyaya Advisor to the Government of India, Ministry of AYUSH
17.	Prof. Sanjeev Sharma, The Director/Vice Chancellor, National Institute of Ayurveda, (Deemed to be University) Jaipur, Rajasthan
18.	Dr Kartar Singh Dhiman, Vice Chancellor, Shri Krishna Ayush University, Umri Road, Sector 8, Kurukshetra, Haryana
19.	Dr Mukul Patel, Vice-Chancellor, Gujarat Ayurved University, Jamnagar, Gujarat,
20.	Prof. Rabinarayan Acharya, Director General, Central Council for Research in Ayurvedic Sciences (CCRAS), New Delhi 58
21.	Dr Pradeep Kumar Prajapati, Vice Chancellor, Dr Sarvepalli Radhakrishnan Rajasthan Ayurved University, Jodhpur.
22.	Prof. Tanuja Manoj Nesari, Director, ITRA, Jamnagar
23.	Dr Kashinath Samagandhi, Director, Morarji Desai National Institute of Yoga, Ministry of Ayush, Govt. of India, New Delhi 01

24.	Dr. A Raghu, Deputy DG, Health service
25.	Dr. Viswajanani J. Sattigeri, Head, CSIR-TKDL Unit, New Delhi 67
26.	Dr Mitali Mukarji, Professor and HOD, Department of Bioscience & Bioengineering, Indian Institute of Technology, Jodhpur
27.	Prof. Mahesh Kumar Dadhich, Chief Executive Officer, National Medicinal Plants Board, Ministry of Ayush Government of India, New Delhi 01
28.	Director, North Eastern Institute on Ayurveda and Homoeopathy, Shillong
29.	Dr Sujata Dhanajirao Kadam. Director, All India Institute of Ayurveda, New Delhi.
30.	Dr. Raman Mohan Singh, Director, Pharmacopoeia Commission for Indian Medicine & Homoeopathy (PCIM&H), Ghaziabad.
31.	Prof. B.J. Patgiri, Director Incharge, Institute of Teaching and Research in Ayurveda
32.	Dr. Ahalya S, Vice Chancellor, Karnataka Samskrit University
33.	Dr. Vandana Siroha, Director Rashtriya Ayurveda Vidyapeeth (National Academy of Ayurveda) New Delhi 26
34.	Dr. Sangeeta Kohli, Professor, Department of Mechanical Engineering, Indian Institute of Technology, Delhi,
35.	Dr. Payal Bansal, Chair Professor, Medical Education, Maharashtra University of Health Sciences, Nashik, Maharashtra
International Experts	
36.	Dr. Geetha Krishnan, Unit Head, Evidence and Learning, WHO Global Treatment Center, Jamnagar
37.	Dr. Pawan Kumar Ramesh Godatwar, Technical Officer (Traditional Medicine) Department of UHC/Health Systems, Regional Office for South-East Asia (SEARO) World Health Organization (WHO),
38.	Dr. Pradeep Dua, Technical Officer at the World Health Organization s (WHO) headquarters in Geneva,
39.	Dr Shantala Priyadarshini, Ayurveda Chair, University of Latvia, LATVIA
40.	Dr. Rajagopala S., Academic Chair in Ayurvedic Science at Western Sydney University, Australia,
41.	Dr Venkata Narayan Joshi, Director, Association Ayurveda Academy UK.
42.	Dr. Suresh Swarnapuri, Director of Association Europe Ayurveda Academy, NIMES France
43.	Dr Prathima Nagesh, Director, Gurukula (United Kingdom),
44.	Prof. Dr. Asmita Wele, Former Ayurveda Chair, University of Debrecen, Hungary
45.	Dr. Shekhar Annambotla, Practitioner, USA,
Curriculum Expert	
46.	Dr Mohan Joshi, Associate Dean, Professor, Samhita Siddhant and Sanskrit Dept. All India Institute of Ayurveda, Goa.

HSET TRAINING COMMITTEE

Master Trainer- Dr Mohan R. Joshi, Associate Dean, Professor, Samhita Siddhant and Sanskrit Dept. All India Institute of Ayurveda, Goa.

1.	Dr. Madhumati S. Nawkar, Associate Professor, HOD, Department of Samhita –Siddhant, R. T. Ayurved Mahavidyalay, Akola, Maharashtra.
2.	Dr. Priya Vishal Naik Assistant professor Dept of Sanskrit Samhita Siddhant, R A Podar medical College Worli Mumbai, Maharashtra
3.	Dr. Aparna Prasanna Sole, Associate Professor, Kayachikitsa, Ashtang Ayurved Mahavidyalaya, Pune
4.	Dr. Gaurav Sawarkar, Professor, Mahatma Gandhi Ayurved College Hospital and Research centre, Wardha, Maharashtra,
5.	Dr. Gurumahantesh TM, Associate Professor, Dept of Panchakarma, Shree jagadguru gavisiddheshwara Ayurvedic medical College and hospital, Koppal, Karnataka
6.	Dr. Robin J Thomson, Professor, Principal & Medical Director, Mannam Ayurveda Co-operative Medical College, Pandalam, Pathanamthitta, Kerala
7.	Dr. Amrita Mishra, Associate professor, Department of Prasuti tantra and Stree Rog, RA Podar College Worli Mumbai,
8.	Dr. Pradeep S. Shindhe, Professor and HoD department of Shalyatantra, KAHER S Sri BMK Ayurveda Mahavidyalaya, Shahapur, Belagavi
9.	Dr. Renu Bharat Rathi, Professor , Head, Kaymarbhritya Dept., Mahatma Gandhi Ayurved College Hospital and Research centre, Salod, Wardha, Maharashtra
10.	Dr. Priti Desai, Professor, Dept of Rachana Sharir, Sardar Patel Ayurved Medical College & Hospital, Balaghat (MP)
11.	Dr. Manpreeth Mali Patil, Assistant professor, Department of Kaumarabhritya, Poornima Ayurvedic Medical College hospital and research centre, Raichur, Karnataka
12.	Dr. Puja CN Pathak , Assistant Professor, Department of Kaumarabhritya, Shri Ramchandra Vaidya Ayurvedic Medical College and Hospital, Lucknow, Uttar Pradesh
13.	Dr. Nilakshi Shekhar Pradhan, Professor & HOD Shalakyia, SSAM, Hadapsar Pune, Maharashtra
14.	Dr. Vaishali Pavan Mali, Assistant Professor, Department of Samhita –Siddhant, Ch. Brahm Prakash Ayurved Charak Sansthan, New Delhi
15.	Dr Maya V. Gokhale, HOD, Professor Department of Panchakarma, SSAM, Hadapsar, Pune Maharashtra

CURRICULUM DEVELOPMENT SOFTWARE COORDINATION COMMITTEE**Chairman :-**

Dr. B.S. Prasad, President, Board of Ayurveda, NCISM

Dr. K. Jagannathan, President, BUSS, NCISM

Coordinator	
Dr Mohan R. Joshi, Associate Dean, Professor, Samhita Siddhant and Sanskrit Dept. All India Institute of Ayurveda, Goa.	
Members	
1.	Dr. Nitesh Raghunath Joshi, Associate Professor, Dept. of Swasthavritta & Yoga, MAM s Sumatibhai Shah Ayurveda Mahavidyalaya, Hadapsar, Pune.,
2.	Dr. Vilobh Vijay Bharatiya, Assistant Professor, Vidarbha Ayurved Mahavidyalaya, Amrawati, Maharashtra,
3.	Dr. Sumith Kumar M, Associate Professor, Guru Gorakshnath Institute of Medical Sciences, Gorakhpur, Uttar Pradesh
4.	Mr Niteen P Revankar, Managing Director, Belgaum.