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School of Ayurveda (KSVAMC&RC)
Doctor of Medicine (Kriya Sharir)

Program Outcomes, Program Specific Outcomes & Course Outcomes (POs, PSOs & COs)

Program Outcomes

Program Outcome		Statement
PO 1	Mastery in Ayurvedic Physiology	Acquire an in-depth understanding of Kriya Sharir and its integration with Tridosha, Dhātu, Mala, and Srotas. Gain comprehensive knowledge of the physiological concepts of Pancamahābhūta, Loka-Purusa Sāmya, and Sāmānya-Viśesa principles and their clinical application.
PO 2	Advanced Understanding of Tridosha and Their Functions	Develop a profound understanding of the Tridosha theory, including the locations (Sthāna), attributes (Guna), and functions (Karma) of Vāta, Pitta, and Kapha, along with their subdivisions and physiological applications. Analyze the role of Tridosha in maintaining health and their impact on Prakrti.
PO 3	In-depth Knowledge of Dhātu and Their Physiology	Gain expertise in the physiology of Dhātus such as Rasa, Rakta, Māmsa, Meda, Asthi, Majjā, and Śukra, along with their formation, functions, and manifestations of imbalances (Vriddhi/Ksaya) in the body. Understand the physiological processes involved in Dhātu Posana and Dhātu Pradosaja Vikāra.
PO 4	Proficiency in Applied Physiology of Ojas, Upadhātu, and Stanya	Develop the ability to understand the physiological roles of Ojas, Upadhātu, and Stanya in health and disease, including their formation, distribution, properties, and clinical significance. Evaluate the manifestations of Vriddhi and Ksaya of Ojas and Stanya in various clinical scenarios
PO 5	Understanding of Agni and Its Role in Digestion and Absorption	Master the principles of Āgni (digestive fire) and its physiological significance in digestion, absorption, and metabolism. Understand the functions of Jātharāgni, Bhūtāgni, and Dhātvagni in the context of digestive processes and the applied physiology of Annavaha Srotās.
PO 6	Integration of Ayurvedic and Modern	Integrate the concepts of Āhāra, Āhārpāchana, and Kostha with modern physiological mechanisms involved in digestion, absorption, and metabolism of nutrients. Understand the role of gastrointestinal tract, digestive juices,

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	Digestive Physiology	and enzymes in human physiology, and apply these principles in clinical practice.
PO 7	Proficiency in Physiological Mechanisms of Sensory and Special Senses	Develop a detailed understanding of the physiological mechanisms of perception via the Pancajnanendriya and Karmendriya. Study the physiology of Śabda, Sparśa, Rūpa, Rasa, and Gandha perception, and their integration with Manas (mind) and Buddhi (intellect).
PO 8	Expertise in Neuro-Immune-Endocrine Interactions	Gain expertise in the physiology of the nervous system, immune system, and endocrine system, including their roles in maintaining homeostasis, immunity, and hormonal regulation. Understand the physiological effects of hypo- and hyper-secretion of hormones and their clinical implications.
PO 9	Mastery of Reproductive Physiology	Acquire comprehensive knowledge of male and female reproductive physiology, including spermatogenesis, oogenesis, hormonal regulation of the menstrual and ovarian cycles, pregnancy, lactation, and parturition. Apply this knowledge in clinical practice for the diagnosis and management of reproductive health.
PO 10	Clinical Application of Ayurvedic and Modern Physiology	Apply the concepts of Kriya Sharir and modern physiology to the clinical diagnosis and treatment of diseases, including understanding the pathology of gastrointestinal, cardiovascular, respiratory, musculoskeletal, and excretory systems. Integrate modern diagnostic tools with Ayurvedic principles for effective patient care.
PO 11	Research and Evidence-Based Practice in Kriya Sharir	Conduct research in Kriya Sharir by integrating traditional Ayurvedic physiology with modern medical research methods. Develop evidence-based clinical practices and contribute to the academic community with publications, clinical trials, and experimental research on neuro-immune-endocrine systems, stem cells, and biorhythms.
PO 12	Professionalism and Lifelong Learning in Ayurvedic Physiology	Cultivate professionalism and a commitment to lifelong learning in the field of Ayurvedic physiology. Stay updated with recent advances in neuro-immune-endocrine physiology, stem cell research, and bioinformatics, ensuring continuous improvement in clinical practice, research, and patient care.

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Program Specific Outcomes (PSOs)

Program Specific Outcome	Statement
PSO 1	Develop a deep understanding of Tridosha and its application in Kriya Sharir, with a focus on their functional anatomy, attributes (Guna), locations (Sthāna), and specific functions (Karma). Students will demonstrate the ability to apply the principles of Vāta, Pitta, and Kapha in understanding human physiology, Prakrti (individual constitution), and disease management, and utilize Tridosha theory for diagnosis and treatment.
PSO 2	Gain proficiency in integrating Ayurvedic physiological concepts with modern medical physiology to evaluate and manage physiological functions across systems like the gastrointestinal, cardiovascular, respiratory, and endocrine systems. Students will be able to apply modern diagnostic tools in combination with Ayurvedic principles for holistic patient care, emphasizing Agni, Ojas, and Srotas in maintaining health
PSO 3	Demonstrate expertise in the formation, function, and manifestations of imbalances (Vriddhi/Ksaya) of Dhātus, Mala, and Srotas. Students will be skilled in identifying pathophysiological changes related to Rasa, Rakta, Māmsa, Meda, Asthi, Majjā, and Śukra and applying this knowledge to treat Dhātu disorders, Srotodusti, and other Ayurvedic pathologies in clinical settings.
PSO 4	Equip students with advanced knowledge of neuro-immune-endocrine interactions in the body and their relevance to Kriya Sharir. Students will develop the ability to conduct research and analyze neuro-endocrine mechanisms in maintaining homeostasis, immunity, and disease resistance. This will include understanding hormonal regulation, immune responses, and nervous system physiology to apply to clinical practice and improve patient outcomes.

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Course Outcomes (COs)
1st Year

Course: Research Methodology & Medical Statistics

Course Outcomes	Statement
CO 1	CO-1 Demonstrate comprehensive understanding of research fundamentals and methodologies in Ayurveda: Learners will be able to define key terms like research and anusandhan, identify the need and significance of research in Ayurveda, and outline the various types of research designs including observational, interventional, qualitative and quantitative studies.
CO 2	CO-2 Apply skills to formulate research proposals and conduct ethical, literature-backed Ayurvedic investigations: Learners will gain the ability to select appropriate research problems, perform critical literature reviews using various databases, define objectives, formulate hypotheses, and prepare detailed research proposals following ethical guidelines.
CO 3	CO-3: Analyze and interpret Ayurvedic drug research with focus on classical and modern laboratory-based methods: Students will be able to describe drug identification techniques, standardization methods, GMP/GLP guidelines, toxicity studies, and latest trends in drug discovery and development using rational approaches.
CO 4	CO-4 Demonstrate proficiency in clinical research methodologies and pharmacovigilance in Ayurveda: Learners will understand clinical trial designs, observational and interventional studies, RCTs, GCP, adaptive trials, and survey research methods. They will also gain insight into pharmacovigilance systems and protocols specific to ASU drugs.
CO 5	CO-5 Utilize statistical methods and tools for Ayurvedic research data analysis and interpretation: Students will apply statistical concepts including central tendency, variability, non-parametric tests, correlation, regression, and sampling methods. They will also gain familiarity with software tools like SPSS for data analysis.

Course: Kriya Sharir Preliminary

Course Outcomes	Statement
CO 1	CO-1 Demonstrate a comprehensive understanding of Ayurvedic physiological theories and principles: Learners will explain the fundamental Ayurvedic theories such as Loka-Purusha Samya, Panchamahabhuta, and Samanya-Vishesha Siddhanta, and

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	understand their interrelationship in maintaining the balance of health and disease.
CO 2	CO-2 Understand and apply Ayurvedic concepts related to body structure, function, and health: Learners will describe the physiological functions of Dhatu, Mala, Ojas, Srotas, Atma, Manas, Indriya, and Ashtavidha Sara, exploring how these concepts are foundational to maintaining the body's health.
CO 3	CO-3 Explore the digestive processes and the role of Agni in Ayurveda, including its classifications and functions: Learners will explain the process of Ahara Parinama, Aharaparinamakara Bhava, the role of Agni in digestion, and the Dhatuposana theories, relating them to modern concepts of metabolism.
CO 4	CO-4 Integrate Ayurvedic and modern physiological knowledge related to cell and membrane physiology: Learners will understand the essential aspects of cell physiology, including the structure and function of cells, membrane transport mechanisms, and the importance of action potentials and resting membrane potentials.
CO 5	CO-5 Explain homeostasis and genetic regulation in both Ayurvedic and contemporary contexts: Learners will demonstrate the ability to explain homeostasis through negative and positive feedback mechanisms, and how genetic codes and gene expression regulation play critical roles in maintaining physiological balance.
CO 6	CO-6 Analyze modern cardiovascular, respiratory, gastrointestinal, and nervous system physiology. Learners will apply their understanding of the physiological processes in the cardiovascular, respiratory, gastrointestinal, and nervous systems, and compare them with Ayurvedic perspectives on body functions.
CO 7	CO-7 Investigate the physiology of blood, excretion, and endocrine systems in both Ayurvedic and modern contexts: Learners will understand the physiology of blood (including blood cells, plasma proteins, and immunity), excretion mechanisms (urine formation), and the endocrine system, including hormone classification and functions.

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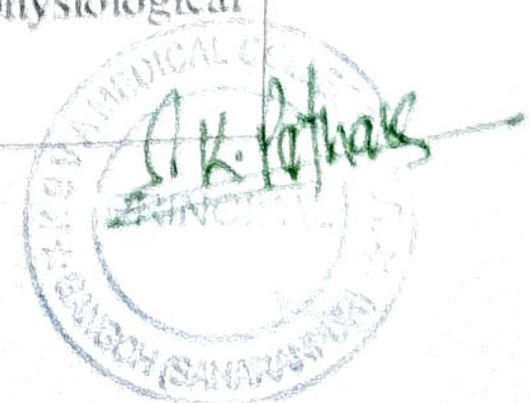
Course Outcomes (COs)

2nd & 3rd Year

Course: Dosa-Dhātu-Mala Vijñāna

Course Outcomes	Statement
CO 1	CO-1 Understand and explain the foundational Ayurvedic concepts of Tridosha, Panchamahabhuta, and Loka-Purusha Sāmya: Learners will be able to describe the theories of Panchamahabhuta, Loka-Purusha Sāmya, and the Sāmānya-Viśesa principle in relation to human physiology and health. They will also examine the mutual relationships between Tridosa, Triguna, and other physiological concepts such as Rtu, Rasa, and Indriya.
CO 2	CO-2 Explore the physiological roles and functions of the three Doshas (Vāta, Pitta, and Kapha) in health and disease: Learners will gain a detailed understanding of the locations, attributes, and functions of each Dosha (Vāta, Pitta, Kapha) and their subdivisions. They will also apply the physiology of Tridosha in relation to their roles in maintaining health, seasonal changes, and disease
CO 3	CO-3: Describe the process of Dhātu nourishment and the physiology of each Dhātu (Rasa, Rakta, Māmsa, etc.): Learners will explain the theories of Dhātu Posana and the role of each Dhātu in the body, including their formation, function, and manifestations of imbalance (Ksaya and Vriddhi). They will also explore the relationship between Dhātu and Dosha in maintaining health.
CO 4	CO-4: Investigate the physiological significance of Ojas, Upadhātu, and their role in health and disease: Learners will describe the formation, distribution, properties, and functions of Ojas and Upadhātu. They will explore the applied physiology of Ojas, including its relationship to immunity, vitality (Bala), and its role in disease prevention.
CO 5	CO-5 Analyze the physiology of Mala, including excretory products like Purīsa, Mutra, and Sveda: Learners will gain a detailed understanding of the physiological processes of excretion, including the formation, properties, and functions of Purīsa (stool), Mutra (urine), and Sveda (sweat). They will also explore the manifestations of imbalance in these excretory products and their physiological significance in health and disease.



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Course: Prakrti- Sattva Vijñāna

Course Outcomes	Statement
CO 1	CO-1 Understanding of Deha-Prakrti and Its Influence: Demonstrate comprehensive knowledge of the various definitions, synonyms, and classifications of Deha-Prakrti. Students will be able to identify and analyze the factors influencing Prakrti, classify individuals based on their Deha-Prakrti, and understand the characteristic features of each type. Additionally, they will gain insight into recent advances in the understanding of Prakrti within modern scientific and Ayurvedic frameworks.
CO 2	CO-2: Understanding of Pancajnanendriya and Sensory Physiology Outcome: Students will learn the physiological descriptions of the Pancajnanendriya (the five sensory organs) and the mechanisms by which the body perceives sound (śabda), touch (sparśa), form (rūpa), taste (rasa), and smell (gandha). They will also understand the physiological function of Karmendriya (organs of action) and the concept of Indriya-panca-pancaka in the perception process.
CO 3	CO-3 Analysis of Manas and Its Functions Outcome: Students will be able to define and describe the location, properties, functions, and objects of **Manas.** They will understand how Manas influences cognition, emotion, and decision-making processes, and how it integrates sensory inputs with mental and emotional functions :
CO 4	CO-4 Comprehension of Ātmā and Its Relation to Paramātmā and Jīvātmā: Outcome: Students will acquire a clear understanding of the nature of Ātmā, its properties, and its distinction from Paramātmā and Jīvātmā. They will be able to explain the characteristics of Ātmā as an eternal, unchanging entity and explore its role in the context of individual existence versus universal consciousness.
CO 5	CO-5 Physiology of Cognitive Functions, Sleep, and Communication: Outcome: Students will understand the physiology of sleep, special senses, speech, and articulation, along with cognitive functions like intelligence, memory, learning, and motivation. They will also study the physiological basis of pain and temperature perception, and understand the significance of Nidrā (sleep) and the clinical and physiological implications of different types of sleep, including Svapnotpatti and Svapnabheda.

Course: Koshtanga Kriya Vigyana

Course Outcomes	Statement
CO 1	CO-1 Understand the role of Āhāra in health and disease, including its classification and digestion process: Learners will be able to define Āhāra, explain its significance, and classify different types of Āhāra. They will also comprehend the Āhāra-vidhi-vidhāna, Astu

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	āhāravidhi viśesāyatana, and Āhāraparināmakara bhāva, while exploring its influence on health and disease.
CO 2	CO-2 Analyze the physiological aspects of Agni and its role in digestion and metabolism: Learners will understand the importance of Agni, its classification, and its functions. They will describe the locations and properties of Jātharāgni, Bhūtāgni, and Dhātvagni, and explore the applied physiology of Agni in digestion (Āhārapāka) and clinical practices.
CO 3	CO-3 Explore the physiology of the gastrointestinal tract and its role in digestion and absorption: Learners will describe the physiological mechanisms of digestion and absorption of fats, carbohydrates, and proteins, including the roles of digestive juices, enzymes, and various organs such as the stomach, pancreas, small intestine, and liver.
CO 4	CO-4 Investigate the role of Annavaha Srotās and its associated disorders in gastrointestinal health: Learners will be able to explain the aetiology and features of Annavaha Srotodusti and understand the physiology of conditions such as Arocaka, Ajīrna, Atīsāra, Grahanī, Chardi, Parināma Śūla, and Agnimāndya.
CO 5	CO-5 Understand the physiological aspects of vitamins and their role in metabolism and health: Learners will be able to describe the classification, sources, daily requirements, and functions of vitamins. They will also understand the physiological basis of hypo and hyper-vitaminosis, including the signs and symptoms of vitamin deficiencies and excesses.

Course: Modern Physiology and Its Applied Aspect

Course Outcomes	Statement
CO 1	CO-1 Understand the physiology of the nervous, endocrine, and immune systems and their interactions: Learners will be able to describe the structure and function of the nervous system, including the central, peripheral, and autonomic nervous systems, and their role in sensory and motor functions. They will explore the physiological mechanisms of hormones from the hypothalamus, pituitary, thyroid, parathyroid, pancreas, and adrenal glands, and their impact on homeostasis.
CO 2	CO-2 Analyze the physiology of the cardiovascular, respiratory, and haemopoietic systems: Learners will gain an understanding of the functional anatomy of the cardiovascular system, including the cardiac cycle, heart rate regulation, and blood pressure control. They will explore respiratory mechanisms, including ventilation, gas

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	exchange, and control of respiration. Additionally, they will study blood composition, haemopoiesis, and blood clotting mechanisms.
CO 3	CO-3 Explore the physiology of the musculoskeletal system, including the classification and function of muscles: Learners will be able to classify different types of muscles (skeletal, cardiac, and smooth), and understand their electrical and mechanical properties. They will also examine the role of muscle physiology in movement, contraction, and relaxation.
CO 4	CO-4 Understand the physiology of excretion, including renal function and control of micturition. Learners will be able to describe the functional anatomy of the urinary system and the mechanism of urine formation. They will explore the physiological processes involved in the control of micturition, renal function tests, and the role of skin in excretion, including the functions of sweat glands and sebaceous glands.
CO 5	CO-5 Investigate recent advances in neuro-immune-endocrine physiology, stem cell research, and biorhythms: Learners will explore recent research in neuro-immune-endocrine physiology, including advancements in understanding the interactions between the nervous, endocrine, and immune systems. They will also examine the latest studies on biorhythms and stem cell research, and their potential applications in medicine and healthcare.

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