



**Shobhit
University**

EDUCATION EMPOWERS

Babu Vijendra Marg, Adarsh Institutional
Area Gangoh, Distt. Saharanpur (U.P.)
247341, India
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**School of Ayurveda (KSVAMC&RC)
Master of Surgery (Shalya Tantra)**

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

Program Outcomes

Program Outcome	Graduate Attributes	Statement
PO 1	Basic Knowledge Application	Comprehensive Understanding of Surgical Principles: Students must understand and apply principles from both Ayurvedic and modern surgical domains.
PO 2	Problem-Solving Skills	Advanced Diagnostic and Treatment Expertise: Diagnosis and treatment involve application of knowledge, analysis of patient condition, and evaluating the best course of action.
PO 3	Innovation and Design	Research-Oriented Surgical Practice: Research demands critical analysis, interpretation of data, and development of new insights or techniques.
PO 4	Effective Communication	Ethical and Legal Proficiency: Requires comprehension of guidelines and the ability to evaluate scenarios legally and ethically.
PO 5	Teamwork and Leadership	Professional Communication and Presentation Skills: Involves applying communication skills and creating presentations or documentation.
PO 6	Ethical Decision-Making	Informed Surgical Decision-Making: Decision-making integrates analysis of evidence and evaluation of outcomes.
PO 7	Lifelong Learning	Application of Modern Techniques in Ayurvedic Surgery: Involves the use and assessment of technologies within the Ayurvedic context.
PO 8	Societal Awareness	Surgical Skills and Knowledge Application: Practical application of skills and analysis of case-specific surgical techniques.





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Program Specific Outcomes (PSOs)

Program Specific Outcome	Statement
PSO 1	Integration of Ayurveda and Modern Surgery: Master the integration of traditional Ayurvedic surgical practices (e.g., Kshara Karma, Agnikarma) with modern surgical techniques for treating a wide range of surgical conditions.
PSO 2	Comprehensive Wound and Trauma Management: Acquire the ability to manage traumatic injuries and chronic wounds, incorporating Ayurvedic principles like Vrana (wound) management with modern wound care practices.
PSO 3	Surgical and Parasurgical Expertise: Gain proficiency in both surgical and parasurgical procedures, including advanced techniques such as Kshara Karma, Agnikarma, and Raktamokshana (bloodletting).
PSO 4	Ethical and Informed Surgical Care: Understand the ethical dimensions of surgery, including patient autonomy, informed consent, and the medico-legal aspects of surgical practice.
PSO 5	Advanced Diagnostics in Shalya Tantra: Master diagnostic tools, including modern imaging techniques (e.g., MRI, X-rays, USG), alongside Ayurvedic diagnostic methods (e.g., Prakriti, Pariksha), for effective treatment planning.
PSO 6	Comprehensive Disease Management: Develop a comprehensive approach for managing surgical conditions, from abdominal disorders to specialized surgical procedures for rectal, urological, and reproductive issues.
PSO 7	Research and Evidence-Based Practices in Surgery: Develop the ability to conduct, interpret, and apply research findings to continuously improve surgical practices and outcomes in both Ayurveda and modern surgery.
PSO 8	Specialized Surgical Interventions: Acquire knowledge and skills for performing specialized surgical interventions such as reconstructive surgeries, hernia repairs, and the treatment of tumors and fractures.
PSO 9	Innovative Surgical Procedures: Understand and apply advanced surgical techniques, such as laparoscopy, endoscopy, and minimally invasive approaches, to enhance patient outcomes with reduced recovery times.
PSO 10	Holistic Approach to Surgical Treatment: Integrate holistic healing methods, including Ayurvedic therapies, with conventional medical treatments for enhanced patient recovery and wellness.





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Course Outcomes (COs)

1st Year

Course: - Research Methodology

Course Outcomes	Statement
CO 1	CO-1 Informed research decisions: Demonstrates decision-making based on acquired knowledge, understanding various research types.
CO 2	CO-2 Literature review for research gaps: Conduct a comprehensive literature review to identify research gaps and define areas for future study
CO 3	CO-3 Critical literature appraisal: Evaluate and appraise the literature to assess research gaps and the necessity for new studies.
CO 4	CO-4 Design Ayurveda research protocols: Design and conduct research protocols using appropriate study designs and develop effective assessment tools tailored for Ayurveda.
CO 5	CO-5 Ethical and regulatory compliance: Implement and monitor ethical and regulatory guidelines throughout the research process.
CO 6	CO-6 Ethical and regulatory compliance: Prepare and disseminate research findings through presentations, publications in indexed journals and other professional platforms adhering to publication ethics.
CO 7	CO-7 Clear and professional presentations: Deliver impactful presentations of research projects to peers, demonstrating clarity, analysis, and professional communication.
CO 8	CO-8 Use of IT in research: Utilize information technology tools to enhance research capabilities, manage observations, and improve analytical accuracy.
CO 9	CO-9 Advanced tools in Ayurvedic research: Apply advanced instrumentation and modern techniques in Ayurvedic research to elevate study quality, accuracy and integrity.

Course: Biostatistics

Course Outcomes	Statement
CO 1	CO-1 Apply descriptive & inferential statistics: Demonstrate application of principles of Descriptive and Inferential Statistics in research.





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CO 2	CO-2 Use appropriate statistical tests: Demonstrate use of appropriate statistical tests in research.
CO 3	CO-3 Analyze & present data with tools/software: Analyze and present research data using suitable statistical methods, tools, and software.
CO 4	CO-4 Interpret statistical data from publications: Evaluate and interpret statistical data from research papers and publications.

Course: Fundamental Principles and Applied Aspects of Shalya Tantra

Course Outcomes	Statement
CO 1	CO-1 Understand the Scope, Definition, and Principles of Shalya Tantra: Students will grasp the origin, definition, and importance of Shalya Tantra in both Ayurvedic and modern surgical contexts.
CO 2	CO-2 Integration of Sushruta Samhita with Modern Surgical Practices: Students will apply the teachings of Sushruta Samhita (1st-29th Sutra Sthana) alongside modern surgical methodologies.
CO 3	CO-3 Applied Anatomy, Physiology, and Pathology in Surgery: Students will integrate principles of anatomy, physiology, and pathology to assess and treat surgical conditions using Ayurvedic and modern approaches.
CO 4	CO-4 Diagnosis Using Ayurvedic Pariksha Methods and Prakriti: Students will apply Ayurvedic diagnostic techniques (e.g., Trividha, Shadvidha) and Prakriti analysis in surgical patient assessment and treatment planning.
CO 5	CO-5 Management of Surgical Emergencies, Shock, and Infections: Students will manage surgical emergencies, shock, sepsis, and other critical conditions using Ayurvedic and modern interventions.
CO 6	CO-6 Surgical Pharmacology and Fluid Management: Students will demonstrate knowledge of antibiotics, analgesics, electrolyte balance, and fluid therapy in surgical practice.
CO 7	CO-7 Advanced Surgical Techniques: Kshara Karma, Agnikarma, and Shashtra Karmas: Students will apply Kshara Karma, Agnikarma, and Shashtra Karmas for treating surgical conditions and improving recovery.
CO 8	CO-8 Practical Surgical Skills and Medico-legal Aspects: Students will acquire hands-on experience in surgical procedures, emergency care, and understand medico-legal requirements and proper documentation in surgical practice.





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Course Outcomes (COs)
2nd & 3rd Year

Course: Shalya Tantra Vangmaya – Literature, Research and Development

Course Outcomes	Statement
CO 1	CO-1 Surgical Expertise: Understand and apply the concept and application of Sandhana Karma (Plastic and Reconstructive Surgery) techniques like Auroplasty, Rhinoplasty, Cheiloplasty, and use of grafts and flaps in plastic and reconstructive surgery.
CO 2	CO-2 Research and Evidence-Based Practices: Learn the importance of surgical audits for quality improvement and understand the methods of conducting surgical research, contributing to evidence-based surgical practices.
CO 3	CO-3 Legal and Ethical Proficiency: Medico-Legal Aspects of Surgery: Understand the legal framework around acts of omission and commission, implications of the Consumer Protection Act, National Health Policy, and medico-legal issues like accidents and assaults in medical practice.
CO 4	CO-4 Clinical and Diagnostic Methods in Shalya Tantra: Master modern diagnostic tools such as X-rays, Ultrasound (U.S.G.), MRI, Endoscopy, and CAT scans, and integrate them into diagnostic and treatment planning in Shalya Tantra.
CO 5	CO-5 Surgical Ethics and Informed Consent: Grasp the ethical principles of surgery, focusing on informed consent, patient autonomy, and transparent decision-making, ensuring ethical practices in surgical procedures.

Course: Shalya Tantra Vigyan

Course Outcomes	Statement
CO 1	CO-1 Comprehensive Wound Management: Develop proficiency in managing various types of wounds, including chronic, traumatic, thermal, and diabetic wounds, using modern and traditional principles of treatment.





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CO 2	CO-2 Surgical Pathology Knowledge: Acquire expertise in diagnosing and treating surgical conditions such as abscesses, cysts, gangrene, fractures, and tumors, with an understanding of their aetiopathogenesis and clinical features.
CO 3	CO-3 Advanced Surgical Skills: Gain practical skills in the management of complex conditions requiring surgical intervention, such as amputation, gangrene, and foreign body removal.
CO 4	CO-4 Rectal and Urological Disorders: Master the diagnosis and treatment of rectal, anal, and urinary system diseases, including hemorrhoids, fistulas, stones, and urinary retention.
CO 5	CO-5 Specialized Surgical Conditions: Acquire knowledge and skills in treating specific conditions like phimosis, paraphimosis, and prepuceal ulcers, focusing on surgical interventions for reproductive and urological issues.
CO 6	CO-6 Comprehensive Disease Management: Understand the complete diagnostic and treatment process for a wide range of surgical diseases, including abdominal disorders, tumors, fractures, dislocations, and pain syndromes.

Course: Adhunik Shalya Karma – Modern Surgery

Course Outcomes	Statement
CO 1	CO-1 Fundamentals of Modern Surgery: Develop a comprehensive understanding of the fundamentals of surgery, including surgical anatomy, physiology, and pathology, forming the basis for effective surgical management of disorders.
CO 2	CO-2 Diagnosis and Surgical Treatment of Trauma: Gain expertise in the diagnosis and surgical treatment of traumatic injuries involving the head, spine, thoracic trauma, and abdominal trauma, including management of blast injuries.
CO 3	CO-3 Surgical Management of Complex Disorders: Acquire practical skills in the surgical treatment of breast diseases, rectal and anal disorders, oral and esophageal conditions, and abdominal conditions.
CO 4	CO-4 Endoscopic and Laparoscopic Skills: Gain proficiency in performing endoscopic and laparoscopic procedures, enhancing diagnostic and treatment capabilities for various disorders.
CO 5	CO-5 Vascular and Musculoskeletal Disorders: Understand the management of vascular, ligamentous, and musculoskeletal injuries and





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	conditions, enabling effective surgical interventions for tissue repair and restoration.
CO 6	CO-6 Hernia Management: Master the diagnostic and surgical treatment of various types of hernias, from inguinal to umbilical hernias, providing effective surgical care for these common conditions.

Course: Vishishta Shalya Vigyan – Speciality (Anushastra Vigyan – Parasurgical Therapeutics)

Course Outcomes	Statement
CO 1	CO-1 Understanding Kshara Karma (Caustic Therapy): Knowledge of different types of Kshara, their preparation, standardization, pH value, application, complications, and their management in surgical practice.
CO 2	CO-2 Understanding the Surgical Anatomy and Physiology of the Anus and Rectum: Develop a thorough understanding of the surgical anatomy and physiology of the anus and rectum, and its relevance to surgical management.
CO 3	CO-3 Hemorrhoids Management: Gain a comprehensive understanding of hemorrhoids including their aetiopathogenesis, classification, and surgical treatments, such as rubber band ligation, laser therapy, cryosurgery, etc.
CO 4	CO-4 Fistula-in-Ano Management: Gain knowledge about the etiology, diagnostic methods, and surgical management of fistula-in-ano, including new techniques like fibrin glue and advanced flap therapies.
CO 5	CO-5 Agnikarma (Thermo Therapy) Skills: Learn the principles and applications of Agnikarma therapy, including the use of modern thermal equipment like diathermy, laser therapy, microwaves, and cryotherapy for treating various conditions.
CO 6	CO-6 Raktamokshana (Bloodletting Procedures): Understand the indications, techniques, and therapeutic applications of Raktamokshana, with detailed knowledge of Siravyadhana, Prachana, and Asastrakritha procedures like Jaluka (leeches).
CO 7	CO-7 Understanding Leech Therapy: Gain practical knowledge of Jaluka therapy, focusing on the morphology, physiology, and biochemical effects of leeches, as well as the methodology of leech application in therapy.
CO 8	CO-8 Management of Anal Fissures, Abscesses, and Other Disorders: Understand the management of anal fissures, abscesses, anal stenosis, fistula-in-ano, foreign bodies, and congenital anorectal disorders, along with surgical interventions.

S.K. Pathak
PRINCIPAL
SUGANGOH (SAHARANPUR)



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CO 9	CO-9 Congenital Anorectal Disorders: Study the surgical management of congenital anorectal malformations and disorders like anal atresia and others, including their diagnosis and intervention.
CO 10	CO-10 Surgical and Parasurgical Management of Anorectal Tumors: Gain the ability to diagnose and surgically manage anorectal tumors, understanding their types, complications, and treatment strategies.

