



Dr. D. Y. Patil Vidyapeeth, Pune
(Deemed to be University)

Dr. D. Y. Patil College of Ayurved & Research Centre

Pimpri, Pune 411018

Accredited by NAAC with 'A' Grade | Hospital Accredited by NABH

Syllabus for IV Year BAMS

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TITLE OF THE COURSE: PANCHAKARMA

COURSE CODE: AA401

MARKS: THEORY -100 PRACTICAL/VIVA-VOCE - 50 TOTAL - 150

HOURS: THEORY - 100 PRACTICAL - 200

GOALS-

1. The goal of Curriculum is to produce Competent, Confident clinician who can provide ethical medical care.
2. Maintenance of Health & relief from ailments are two basic principles of Ayurveda treatment, which can be easily achieved by Panchakarma.
3. Acquire knowledge regarding the fundamentals of Ayurveda.
4. Acquire knowledge regarding the fundamentals of Panchakarma.
5. Learning the clinical skills for diagnosis and treatment modalities as per principles of Ayurveda.
6. Students should able to perform All Panchakarma procedures
7. Create first line Ayurved Physician, Consultant.

LEARNING OBJECTIVE:

1. Treating the patient successfully with the application of Panchakarma.
2. Ability to do counseling for prevention of diseases through health maintenance.

COURSE OUTCOME-

• **COGNITIVE DOMAIN**

Possess the knowledge and skills required to perform Panchakarma therapies according to Standard Operating Procedures with proper use of instruments.

• **PSYCHOMOTOR DOMAIN**

Have proper knowledge of ethical aspects regarding Panchakarma

• **AFFECTIVE DOMAIN**

Become a good communicator and acquire soft skill to fulfill the needs of health care establishment

Sr. No.	TOPIC	DESCRIPTION	NO OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
1	Introduction	<p>1. Introduction to Panchakarma, Panchakarma and Shodhana, its importance for promotion of health, prevention and treatment of diseases.</p> <p>2. Trividha Karma- Purva, Pradhana and Pashchat Karma in relation to Shodhana and their importance.</p> <p>3. Indications of Shodhana, Shodhana according to Ritu</p> <p>4. Rugna Pariksha for Panchakarma</p> <p>5. General Principles of doshagati from Koshta to Shaka and vice versa</p> <p>6. General precautions (Pariharya Vishaya) for Panchakarma</p> <p>7. Specifications of Panchakarma theatre and necessary equipments</p> <p>8. Importance of Koshta and Agni Parikshan</p>	07	10
2	Snehana	<p>1. Etymology and Definition of Sneha and Snehana</p> <p>2. Snehayoni- Sthavara and Jangama: Properties of Snehadravyas, Snehopag Dravyas</p> <p>3. General knowledge of Ghrita, Taila, Vasa and Majja with their specific utility and actions , Yamaka, Trivrit and MahaSneha</p> <p>4. Metabolism of fat</p> <p>5. Achcha and Pravicharana of Sneha</p> <p>6. Snehapaka and its importance in Panchakarma</p> <p>7. Types of Snehana: i) Bahya ii) Abhyantara Snehana</p> <p>i) Bāhya Snehana : Methods, indications and contra indications of the following types of Bahya snehana; Mardana, Unmardana, Pādāghāta, Samvāhana, Karna Purana & Akshi Tarpan, Lepa, Talam, Murdhni Taila: Shiro-Abhyanga, Shiro Seka / dhārā, Shiro Pichu and Shiro-Basti</p> <p>ii) Ābhyantara Snehana: Three Types of Ābhyantara Snehana; Shodhanārtha, Shamanārtha and Brimhanārtha Snehana, Indications and contra - indications for Snehana</p> <p><u>Shodhanārtha Snehana</u></p> <p>a. Importance and method of Deepan Pāchan and Rookshana in Shodhanārtha Snehana. Properties of Rooksh ana Dravya. Samyak Rookshana Lakshana</p>	15	15

		<p>b. Consideration of Agni and Koshta in Snehana</p> <p>c. Indication of Different Matra, Various dose schedules for Shodhanārtha Snehana; Hraseeyasi, Hrasva, Madhyama and Uttama Mātrā, Ārohana Mātrā</p> <p>d. Methods of Shodhanārtha Snehana,</p> <p>e. Anupāna of Sneha</p> <p>f. Jeerna and Jeeryaman Lakshana</p> <p>g. Samyak Yoga, Ayoga and Atiyoga of Snehana, Sneha Vyāpat & their management according to Ayurveda & Modern Medicine</p> <p>h. Diet and regimen during Snehana</p> <p>Sadyo Sneha: Method of administration, dose fixation and utility</p> <p>Shamanārtha Snehana, Method of administration, dose fixation and utility</p> <p>Brunhanarth Snehana: Method of administration, dose fixation and utility</p> <p>Avapeedak Sneha: Method of administration, dose fixation and utility</p> <p>8. Snehana Kārmukata (mode of action)</p> <p>9. Special Procedures:</p> <p>Takradhara, Udvartanam, Putpāka, Aschotana, Anjana, Gandusha, Kavala,</p> <p>Dhoompāna, Udvartana, Utsādana, Udgharshana, Talapothichil</p>		
3	Swedana	<p>1. Etymology and Definition of Sweda and Swedana</p> <p>2. Classifications of Sweda/Swedana</p> <p>3. General Swedadravaya, Properties of Swedadravayas, Swedopag dravyas</p> <p>4. Indications and contraindications of Swedana</p> <p>5. Ten Types of Niragni Swedana</p> <p>6. Knowledge of 13 types of Sagni Swedana and Chaturvidh Swedan</p> <p>7. Detailed Knowledge with their Utility of the following Swedana procedures:</p> <p>Sankara/ Pinda Sweda-Ruksha and Snigdha Sweda</p> <p>Patrapinda Sweda, Jamber Pinda Sweda, Vāluka Sweda,</p>	12	15

		<p>Churna Pinda Sweda, Kukkutand Pinda Sweda, Shashtika Shalipinda Sweda, Nadi Sweda, Bashpa Sweda Ksheer dhooma, Ksheer Seka, Kwath Seka, Avagaha Sweda, Dhanymla Dhara, Parisheka Sweda, Pizichil, Upanaha Sweda, Annalepan, Upanaha Sweda, Ruksha & Snigdha Sweda</p> <p>8. Local Basti such as Kati Basti, Janu Basti, Greeva Basti and Urobasti.</p> <p>9. General precautions during Sagni Swedana and Methods to protect vital during Swedana</p> <p>10. Samyak Yoga, Ayoga and Atiyoga of Swedana</p> <p>11. Complications of Swedana and their Management according to Ayurveda & Modern Medicine</p> <p>12. Diet and management during and after Swedana</p> <p>13. Parihārya Vishaya</p> <p>14. Swedana Kārmukata (Mode of action)</p> <p>15. General Knowledge about current Sudation techniques like Sauna bath, Steam bath</p>		
4	Vamana Karma	<p>1. Etymology, definition and importance of Vamana Karma</p> <p>2. Utility of Vamana Karma in health and disease</p> <p>3. Indications and Contraindications for Vamana</p> <p>4. Knowledge of Koshta and Agni</p> <p>5. General knowledge of Vamana and Vamanopaga drugs; properties, actions, preparations, preservation with special reference to Madanphala, Kutaj, Nimba, Yashti, Vacha</p> <p>6. Purva Karma of Vamana: Deepan-Pāchana, Abhyantara Snehana and diet</p> <p>7. Management of one gap day-Abhyanga and Swedana, diet, special Kapha increasing diet</p> <p>8. Preparation of the patient on Morning of Vamana day</p> <p>9. Vamaka Yoga, Anupana, fixation of dose and method of administration</p> <p>10. Administration of Vamanopaga Dravya such as milk, sugarcane juice, Yashtimadhu decoction</p> <p>11. Lakshana indicating Doshagati during the process</p> <p>12. Management during Vamana Karma & observations</p> <p>13. Symptoms of Samyak Yoga, Ayoga and Atiyoga of Vamana Karma</p>	15	15

		<p>14. Post Vamana management</p> <p>15. Types of Shuddhi-Hina, Madhya and Pravara</p> <p>16. Peyadi Samsarjana Krama and Tarpanadi Krama with their specific indications</p> <p>17. Complication of Vamana and their management with Ayurveda and modern drugs</p> <p>18. Pariharya Vishaya</p> <p>19. Vamana Karmukata (Mode of action).</p>		
5	Virechana Karma	<p>1. Etymology, definition and importance of Virechana Karma</p> <p>2. Utility of Virechana Karma in healthy and diseased</p> <p>3. Indications and Contra-indications for Virechana</p> <p>4. Knowledge of Koshta and Agni</p> <p>5. Classification of Virechana Dravyas, General properties of Virchanadravya</p> <p>6. General knowledge of single and compound Virechan drugs; properties, actions, preparations, preservation with special reference to Trivrutta, Aragvadha, Eranda, Katuki, Jaipal</p> <p>7. Purva Karma of Virechana: Deepan- Pachana, Abhyantara Snehana and diet</p> <p>8. Management of 3 gap days-Abhyanga, Swedana & diet</p> <p>9. Management on Morning of Virechana day</p> <p>10. Preparation of Virechana Kalpa, Anupana, dose and method of its administration</p> <p>11. Method of Virechana Karma and management during Virechana Karma & observations</p> <p>12. Symptoms of Samyak Yoga, Ayoga and Atiyoga of Virechana Karma</p> <p>13. Post Virechana management</p> <p>14. Types of Shuddhi-Hina, Madhya and Pravara and accordingly Samsarjana Krama</p> <p>15. Complications of Virechana and their management with Ayurveda and modern drugs</p> <p>16. Pariharya Vishaya</p> <p>17. Virechana Kārmukatā (Mode of action)</p>	15	15
6	Basti Karma	<p>1. Etymology, definition and importance of Basti as Ardha-</p>	18	20

	<p>Chikitsa</p> <p>2. Utility of Basti Karma in healthy and diseased</p> <p>3. Basti Yantra- Putaka & Netra, Detailed study of traditional Basti Yantra and their Doshas</p> <p>Knowledge of alternative Basti Yantra-enema can, enema syringe, modified plastic / rubber bag for Putaka, modified plastic netra.</p> <p>4. Classifications of Basti</p> <p>5. Karma, Kāla and Yoga Basti schedules along with their utility.</p> <p>6. Niruha Basti: Its etymology, synonyms, definition, classifications, sub classifications & indications and contra-indications.</p> <p>a. Dose fixation of Niruha Basti according to age</p> <p>b. Contents and Method of preparation of Niruha Basti dravya</p> <p>c. Diet</p> <p>d. Administration of Niruha Basti</p> <p>e. Pratyāgamana Kāla, Post Niruha Basti management</p> <p>f. Samyak Yoga, Ayoga and Atiyoga of Niruha.</p> <p>g. Complication of Niruha Basti and its management according to Ayurved and Modern Medicines</p> <p>h. Pariharya Vishaya and kala</p> <p>7. Anuvasana Basti: Its etymology, synonyms, definition, classifications, sub classifications & indications and contra-indications.</p> <p>a. Dose fixation of Anuvasan Basti according to age</p> <p>b. Contents and Method of preparation of Anuvasan Bastidravya</p> <p>c. Diet</p> <p>d. Administration of Anuvasan Basti</p> <p>e. Pratyāgamana Kāla, Post Anuvasan Basti management</p> <p>f. Samyak Yoga, Ayoga and Atiyoga of Anuvasana.</p> <p>g. Complication of Anuvasan and its management according to Ayurved and Modern Medicines</p> <p>h. Pariharya Vishaya and kala</p>		
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		<p>8.Yapan Basti: Its etymology, indication, contraindication</p> <p>a. Dose fixation of Yapan Basti</p> <p>b. Contents of various Yapan Basti and method of preparation</p> <p>c. Diet during Basti</p> <p>d. Atiyoga of Yapan Basti& its management</p> <p>9. Basti Kārmukatā (Mode of action).</p> <p>10. Knowledge of following types of Basti:</p> <p>Madhutaailika Basti, Erandmuladi Basti, Yāpana Basti, Pichchha Basti, Ksheera Basti, Kshara Basti, Vaitarana Basti, Panchaprasutik Basti, Lekhan Basti, Krumighna Basti, Tiktaksheer Basti, Ardhamātrika Basti</p> <p>11. Uttara Basti : Its definition, indications and contra-indications, Detailed study of traditional Basti Yantra and their Doshas Knowledge of alternative Basti Yantra</p> <p>a. Preparation of patient</p> <p>b. Preparation of Trolley for Uttar Basti</p> <p>c. Drug preparation and Fixation of dose</p> <p>d. Method of administration in male and females</p> <p>e. Observations</p> <p>f. Complications and their management</p>		
7	Nasya	<p>1. Etymology, definition, Significance of Nasya Karma.</p> <p>2. Classifications and sub-classifications</p> <p>3. Knowledge of general Dravya used for Nasya Karma, Shirovirechan Gana, Shirovirechanopag dravyas</p> <p>4. Indications and contraindications of Nasya</p> <p>5. Time of administration of Nasya</p> <p>6. Dose fixation of different types of Nasya</p> <p>7. Diet and regimen before and after Nasya Karma</p> <p>8. Administration of Marsha, Pratimarsha, Avapeedaka, Dhoomapana and Dhuma Nasya</p> <p>9. Symptoms of Samyak-yoga of Nasya,</p> <p>10. Complication of Nasya and their management</p> <p>11. Parihār Vishaya</p>	08	15

		12. Nasya Karmukata (mode of action)		
8	Raktamokshana	<p>1. Definition, importance and Types of Raktamokshana</p> <p>2. General Principles and rules of Raktamokshana</p> <p>3. Classification of Raktamokshan</p> <p>4. General Indication and Contra indication of Raktamokshan</p> <p>5. Jalaukavacharana: Knowledge of different types of Jalauka (Leech), Indications and contra-indications of Jalaukavacharana, various types of Jalauka. Method of Application, Samyak Lakshan, Complication of Jalaukavacharana and their management with Ayurveda and Modern medicines.</p> <p>6. Pracchāna: Indications and contra-indications of Pracchana. Method of Application, Samyak Lakshan, Complication of Pracchana and their management with Ayurveda and Modern medicines</p> <p>7. Sirāvedha: Indications and contra-indications of Siravedha. Method of Application, Samyak Lakshan, Complication of Siravedha and their management with Ayurveda and Modern medicines</p> <p>8. Knowledge of emergency management of complications such as water & electrolyte imbalance, shock, bleeding per rectal, hematemesis, epistaxis</p>	06	15
9	Physiotherapy	<p>1. Definition, Utility and Importance of Physiotherapy.</p> <p>2. Basic Knowledge of Static exercise, Infrared, Short wave diathermy, Electromagnetic therapy, Wax bath therapy, Ultrasonic therapy.</p>	4	10

PRACTICAL TRAINING [200 Hours]

Total Duration of 3 Months posting

OPD (for 1-Month): Observation of OPD patients, selection of the patients, observation of OPD base Panchakarma procedures

IPD (Panchakarma) and Panchakarma Unit – Observation of different procedures of Panchakarma, Assistance to the procedure under guidance of Panchakarma specialist under clinical posting, each student has to study and write 15-long Cases and 10 short cases in prescribed format

Long case Paper-

Minimum 1 Vaman , 1 Virechan, 1 Niruha & 1 Anuvasan Basti, 1 Nasya, 1 Raktamokshan

Short case Paper –

Minimum one each of Pindasweda, Shirodhara, Abhyanga, Netra Tarpan, Bahya Basti, Nadi Sweda etc.

DISTRIBUTION OF FINAL PRACTICAL EXAMINATION MARKS (UNIVERSITY) TOTAL-50 MARKS

	Practical Record of 25 procedures	Long Procedure & Viva	Short Procedure & Viva	General Viva-voce	Internal Assessment	Total Marks
Marks	05	15	10	10	10	50

REFERENCE BOOKS :

Sr. No.	Name of the Book	Author	Edition	Publication
1.	Charak Samhita with commentary of Ayurved Dipika by Chakrapanidatta and Jalpakalpataru by Gangadhara by Agnivesha	Dr. Lakshmidhar Dwivedi, Dr. B. K. Dwivedi and Dr. P. K. Goswami	Reprint 2009	Chowkhamba Krishnadas Academy
2.	Sushruta Samhita with the Nibhandhasangraha commentary of Dalhana and Nyayachandrikapanjika of Gayadasa on nidansthana by Sushruta	Dr. Keval Krushna Thakral	Reprint 2017	Chaukhambha Orientalia, Varanasi
3.	AshtangHridaya with Sarvangasundara and Ayurved rasayana commentaries by Vagbhata	Prof. Jyotir Mitra and Dr. Shivprasad Sharma	Reprint 2014	Chowkhamba Sanskrit Series Office, Varanasi
4.	Ayurvediya Panchkarma Chikitsa	Dr.Mukundilal Dwivedi	Edition 1	Chaukhamba (2012)
5.	Panchkarma Vigyan	Dr. Haridas Shreedhar Kasture	First Edition Reprint 2014	Shri Baidyanath Ayurved Bhavan Private Limited
6.	Illustrated Panchkarma	Dr.G. Srinivasa Acharya	2 nd Edition 2015	Chaukhambha Sanskrita Publication
7.	Clinical Panchakarma (English)	Dr. P. Yadaiah	3 rd Edition 2013	Jaya Publication
8.	The Panchkarma Treatment of Ayurved with Kerala Specialties	Dr. T. L. Devaraj	5 th Edition 2014	Chaukhambha Orientalia, Varanasi
9.	Panchkarma Therapy	Dr. R. H. Singh	2 nd Edition 2014	Chaukhambha Sanskrita, Varanasi
10.	Essential of Panchakarma Therapy	Dr. Pulak Kanti Kaur	Edition 2013	Chaukhamba Sanskrita Pratisthan
11.	Principles and practice of vasti	Dr.Vasudevan Nampoothiri and Dr. L. Mahadevan	Edition 2014	Ayurvedic Educationnal & Charitable Trust Publication

Sr. No.	Name of the Book	Author	Edition	Publication
12.	Clayton's Electrotherapy	Bailliere Tindall	10 th Edition 1995	CBS Publication
13.	Tidy's Physiotherapy	Stuart Porter	15 th Edition 2013	Churchill Livingstone Publication
14.	Harrison's Principles of Internal Medicines	Kasper, Fauci, Hauser, Longo, Jameson, Loscalzo	19 th Edition 2015	Mc Graw Hill Education Publication
15.	Guyton's Physiology	John E. Hall	13 th edition 2016	Saunders Publication
16.	Occupational therapy	Lorraire Williams Pedretti	4 th Edition 1996	Mosby Publication
17.	Short notes on Panchakarma:	Vd. Prasad N. Kulkarni	First Edition	Chaukhamba Prakashak

TITLE OF THE COURSE: KAYACHIKITSA

COURSE CODE: AA402

**MARKS: THEORY-200 (PAPER I & PAPER II) PRACTICAL/VIVA-VOCE - 100
TOTAL – 300**

HOURS: THEORY - 300 PRACTICAL - 200

GOALS

- 1) Acquire knowledge in the applied aspect of fundamental of Ayurveda.
- 2) Learning the clinical skills for diagnosis and treatment modalities as per principles of Ayurved.
- 3) Students should be able to perform basic clinical procedures.
- 4) Students should be able to practice Ayurved.

LEARNING OBJECTIVE

- 1) In day to day practice treat the patients successfully by applying the knowledge of basic Principles of Chikitsa
- 2) Ability to do health counseling for prevention of diseases.

COURSE OUTCOMES

- **Cognitive Domain**

Should recognize the importance of Ayurvedic Principles in the context of diagnosis, prognosis, management and treatment of the patients

- **Psychomotor Domain**

Should be able to diagnose and manage diseases on the basis of clinical assessment and appropriately select and conduct investigations.

Should be able to carry out quick assessment of patients on the basis of available clinical and investigational information

- **Affective Domain**

Should be able to consider socio-economical and emotional determinants of diseases and its effective management

Sr. No.	TOPIC	DESCRIPTION	NO OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
PAPER- I			150 Hours	100 Marks
Part – A				50Marks
1	Fundamentals of Kayachikitsa	Derivation of the terms ‘Kaya’, ‘Chikitsa’ and their definitions and synonyms. Definition of ‘Kayachikitsa, Definition of ‘Bheshaja’. Types and detailed description of Bheshaja and Chikitsa, Knowledge about Chikitsa Chatushpada, Rogi Roga Pariksha Siddhantha, Astasthan Pariksha	05	05
2	Kriya Kaala	Importance of KriyaKaala according to stages of Dosha and their management.	05	05
3	Detailed Knowledge of Principles of Chikitsa in Ayurveda	Chikitsa sutra and Management of vriddhi (increased) and kshaya (decreased) of Dosha, Dhatu and Mala, OjoVyapat (Kshaya, Visramsa and Vyapat) and its management. Chikitsasutra and Management of Sama-Nirama states, Roga-Anutpattikara Chikitsa, Roga Prashamana Chikitsa (Doshapratyanika, Vyadhipratyanika, Ubhayapratynika), Doshopakrama, Chikitsa sutra and Management of Sthanantara Dosha (Ashayapakarsha, Anuloma/Pratilomagati of Dosha, Vimargagamana of Dosha), Knowledge of Lina Dosha & its management, Diagnosis, Chikitsa Sutra and Management of Avarana and of Dhatu Pradoshaja diseases, Importance of Dosha, Dushya, Bala, Kaala, Agni, Prakriti, Vaya, SattvaSatmya, Desha, Ahara and stage of diseases in treating them. Chikitsa Sutra and Management of ‘Samanyaja and Nanatmaja’ diseases.	15	10
4	Dvidividhopakrama, Aushadhamatra, Sevan kaala and Anupana, Pathya-Apathya	Detailed description of Dvidividhopakrama (Santarpana and Apatarpana) and Shadavidhopakrama (Rookshana, Snehana, Swedana, Sthambhana, Langhana and Brimhana). Detailed description of Shodhana, Shamana and NidanaParivarjana. Knowledge of Aushadhamatra, Sevan kaala and Anupana, Definition and Knowledge of Pathya-Apathya with examples of diseases of various systems	10	10
5	Manasa Roga	Derivation of the term ‘Manas’, its sthana (place), Guna (qualities) and Karma (functions). Samanya Chikitsa Siddhanta of Manasa Roga.	10	05

Sr. No.	TOPIC	DESCRIPTION	NO OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
6	Nutritional deficiency disorders	Principles & Management of Nutritional deficiency disorders	05	05
7	Vardhakyajanita vikara, Indriyapradoshjoa vikara	Management of Vardhakyajanita vikara, Indriyapradoshjoa vikara, Alzheimer's Disease, Sleep disorders, General debility.	10	05
8	Genetic, Environmental and Iatrogenic factors	General introduction and principles of Management of diseases produced by Genetic, Environmental and Iatrogenic factors, Disorders due to drug and Food allergy and their management and other allergic conditions.	10	05
Part – B				50 Marks
1	Detailed description of Chikitsa Sutra and Management of Jwara	Detailed description of Chikitsa Sutra and Management of Jwara and its types. Etiopathogenesis & relevant Ayurvedic and Modern management of following types of Fevers-Typhoid, Pneumonia, Pleurisy, Influenza, Mumps, Meningitis, Encephalitis, Tetanus, Yellow fever, Plague, Dengue Fever, Chikun Guniya, Leptospirosis, Viral Fever, Anthrax, Masurika (Small pox), Laghu Masurika (Chicken pox), Romantika (Measles).	15	05
2	Chikitsa sutra and Management of the diseases of Rasavaha Srotas	Pandu, Amavata, Madatyaya, Hridroga, Hridshoola, Hypotension, Hypertension, Anaemia, Rheumatoid arthritis.	10	10
3	Chikitsa sutra and Management of the diseases of Raktavaha Srotas	Raktapitta, Kamala, Kumbhakamala, Halimaka, Daha, Mada, Murcha, Sanyasa, Vatarakta, Plihadosh, Yakrutdosha, Haemolytic disorders, Hepatitis, Cirrhosis of Liver, Leukaemia, Kushta, Shvitra, Visarpa, Sheetapitta, Udarda, Kotha and Kshudra Roga.	10	10
4	National Health Programmes and the relevant Ayurvedic Management	Knowledge of National Health Programmes and the relevant Ayurvedic Management of the following diseases enlisted by World Health Organisation- Malaria, Filariasis, Kala Azar, Leprosy, Tuberculosis, AIDS.	10	05
5	General principles of maintenance of health and management of diseases	Yoga, Naturopathy, Unani, Siddha, Physiotherapy and Rehabilitation.	5	05
6	Diseases of different Endocrine Glands	Thyroid, Parathyroid, Pituitary, Pancreas and Adrenal glands and their management.	10	03
7	Vyadhi Kshamatwa	General introduction, types and	5	02

Sr. No.	TOPIC	DESCRIPTION	NO OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		Management of diseases caused by Vyadhi Kshamatwa Hinata (Immuno - deficiency disorders), Auto Immune Disorders.		
8	Emergency Conditions management	Description and Management of following Emergency Conditions- Acute haemorrhage, Hypertensive Emergencies, Acute abdominal pain (Renal colic, Biliary colic, Gastritis, Pancreatitis, Peritonitis and Appendicitis), Acute abdomen, Anuria/Oliguria, Congestive Heart Failure, Myocardial Infarction/Angina, Shock, Syncope, Convulsions, Hyperpyrexia, Hyperglycaemia, Hypoglycaemia, Status Asthmaticus, Acute Respiratory distress Syndrome, Drowning and Electric shock.	10	05
9	AnuktaVyadhi	AnuktaVyadhi - management and treatment	05	05
PAPER – II			150 Hours	100 Marks
PART A				50 Marks
1	Pranavaha Srotas - Chikitsa sutra and Management	Such as - Kasa, Shwasa, Hikka, Rajayakshma, Urakshata, Parshwashoola, Bronchitis, Bronchiectasis, Emphysema and COPDs	15	10
2	Udakavaha Srotas - Chikitsa sutra and Management	Such as- Shotha, Jalodara, Trishna, Water & Electrolyte Imbalance.	10	05
3	Annavaha Srotas- Chikitsa sutra and Management	Such as – Agnimandya, Aruchi, Ajirna, Anaha, Atopa, Adhmana, Alasaka, Vilambika, Visuchika, Chardi, Grahani, Amlapitta, Gulma, Shoola, Bhasmaka, Acid peptic disorders.	20	10
4	VataVyadhi- Principles of treatment and management	Such as - Pakshavadha, Ekanjavata, Sarvangavata, Ardita, Avbahuka, Kati Graha, Manyastambha, Gridhrasi, Vishwachi, Khalli, Khanja, Pangu, Padaharsha, Padadaha, Vatakantaka, Kroshtukashirsha, Udavarta, Kampavata, Dhatugata and Ashayagata AvaranaVata, other Vata Rogas, Parkinsonism.	20	20
5	Neuro-muscular diseases -Principles of treatment and management	Nidana and Chikitsa of Urusthambha, Gullian Barrie syndrome, Muscular Dystrophy, Myasthenia Gravis, Motor Neuron Diseases and Neuralgia.	15	05
Part -B				50 Marks
1	Mamsavaha Srotas and Medovaha Srotas- Chikitsa	Such as- Gandamala, Galaganda, Mamsashosha, Arbuda, Apachi, Prameha, Sthaulya, Karshya, Diabetes	10	05

Sr. No.	TOPIC	DESCRIPTION	NO OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
	Sutra and Management	Mellitus, Dyslipidaemia.		
2	Asthi and Majjavaha Srotas Chikitsa Sutra and Management	Such as Asthimajja Vidradhi, Asthisoushrya, Asthikshaya, Sandhigata Vata, Osteo Arthritis, Osteomyelitis, Osteoporosis, Osteopenia.	10	05
3	Shukravaha Srotas-Chikitsa sutra and management	Such as Klaibya, Shukralpata, Shukradosha, Kshinashukra, Dhvajabhanga	5	05
4	Mutravaha Srotas:Chikitsa Sutra and Management of diseases	Such as -Mutrakricha, Mutraghata, Ashmari, Cystitis, Nephritis, Nephrotic Syndrome, BPH, Renal Failure.	5	05
5	Purishavaha Srotas: Chikitsa Sutra and Management of diseases	Such as – Atisara, Pravahika, Arsha, Purishaj Krimi, IBS and Ulcerative Colitis.	5	05
6	Sexually Transmitted Diseases-Chikitsa Sutra and Management	Such as – Phiranga, Puyameha, Upadamsha, Lymphogranuloma inguinale, Syphilis, Gonorrhoea.	5	05
7	Manas Bhava and it's management	Introduction, Definition and Management of Kama, Krodha, Lobha, Moha, Mada, Matsarya, Shoka, Bhaya, Vishada, Dainya, Harsha and Pragyaparadha	5	02
8	Marma Chikitsa	Clinical application of Marma Chikitsa in various diseases.	03	05
9	General knowledge of Snehapakalpana	Sneha kalpana such as – Aushadhi Siddha Ghrita, Taila with their specific utility and actions	02	03
10	Rasayana	Derivation, definition and synonyms of Rasayana, Importance of Rasayana and its benefits. Indications of Rasayana therapy. Classification of Rasayana. Kutipravesika and Vatatapika Rasayana. Indications of Vatatapika Rasayana. Knowledge of Kayakalpa, Achara Rasayana. Procedures of Kutipravesika, Poorvakarma and specific schedules to be followed after Kutipravesha, Benefits of Kutipravesika Rasayana, Duration of process, Rasayana yoga and directions for their use. Determination of dose of Rasayana according to age. Rules and regulation after Rasayana therapy, Importance of Immunomodulators and	10	05

Sr. No.	TOPIC	DESCRIPTION	NO OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		antioxidants in Rasayana therapy.		
10	Vajikarana	Derivation, Definition, Synonyms, Necessity, Benefits, Importance of Fertility, Symptoms of Shûkra (Semen), Vajikaran Dravya and Aushadhi. Properties, Doses, Methods of Administration, Ingredients and methods of formation of Rasayana & Vajikarana formulation. Classification and importance of Vajikarana Dravya	10	05

DISTRIBUTION OF FINAL PRACTICAL EXAMINATION MARKS (UNIVERSITY)
TOTAL- 100 MARKS [Hours 200]

	Daily case record/ 20 cases	1 Long case Patient examination	1 Short case Patient examination	Paper I Viva –voce	Paper II Viva – voce	Internal Assessment	Total Marks
Marks	15	15	10	20	20	20	100

REFERENCE BOOKS:

Sr. No.	Name of the Book	Author	Edition	Publication
1.	Charak Samhita	Chakrapanidatta	2000	Chaukhambha Sanskrit Varanasi
	Sushrut Samhita	Kaviraj Ambikakadatta Shastri	11 th edition 1998	Chaukhambha Sansthan Varanasi
	Ashtanga Samgraha	Vaidya Bhagwan Das	2 nd 1990	Srisaptaguru, Delhi
	Ashtanga Hridaya with their commentaries	Dr.Brahmanand Tripathi	2003	Chaukhambha Prakashan Varanasi
	Madhav Nidana with Madhukosha Commentary	Ayurvedacharya Yadunanda nopadhyay	32 nd 2002	-
2.	Ayurvediya Vyadhi Vigyana	Yadavji Trikamji	3 rd 1983	Baidyanath Prakashan Nagpur
3.	Roga Pariksha Vidhi	Priyavrat Sharma	2003	Chaukhambha Bharati Varanasi
4.	Panchakarma Vigyan	Haridasa Sridhar Kasture	6 th edition 1999	Baidyanath Prakashan Nagpur
5.	Chikitsadarsha	Pandit Rajesvardutta Shastri		
6.	Kayachikitsa I- IV	Ramaraksha Pathak	2004	Chaukhambha Bharati Varanasi
7.	Ayurved Nidan Chikitsa	Prof. R.H.Singh.	3 rd edition 2001	Chaukhambha Amarbharati Varanasi

Sr. No.	Name of the Book	Author	Edition	Publication
	Siddhanta			
8.	Kayachikitsa Vol. I-IV	Prof. Ajay Kumar	Revised 2011	Chaukhambha Orientalia
9.	Kayachikitsa Vol -1 & 2	Prof. Dr. G.H.Yeola, Dr. Subhash Ranade & Dr. Sunanda Ranade	2017	Proficient Publishing House
10.	Principles and Practice of Medicine.	Davidson's	22 nd edition 2014	Churchil Livingstone
11.	API Text Book of Medicine	Y. P. Munjal	20 th edition 2018	JYPWE
12.	Text Bok of Medicine	Harrison	20 th edition 2018	Mc Graw-Hill
13.	Cecil Text Book of Medicine	Lee Goldman, Andrew Schafer	26 th edition 2019	
14.	Panchkarma Illustrated	Dr. G.Srinivas Acharya	2013	Chaukhambha Sanshrit, Delhi

Other relevant publications on subjects concerned

TITLE OF THE COURSE: SHALAKYA TANTRA

COURSE CODE: AA403

**MARKS: THEORY -200(PAPER I & PAPER II) PRACTICAL/VIVA-VOCE - 100
TOTAL - 300**

HOURS: THEORY- 200 PRACTICAL – 150

GOALS

1. Acquire knowledge in the applied aspect of fundamental of Ayurveda
2. Learning the clinical skill for diagnosis and treatment modalities as per principles of Ayurveda
3. Students should able to perform important procedures like -kriyakalpas
4. Acquire the knowledge about the methods and techniques of Research and making use of information & technology

LEARNING OBJECTIVE:

1. To enhance the knowledge acquisition process for UG's in Ayurvedic diagnosis along with modern scientific methods.
2. Treating the patient successfully with the application of shalakyatantra
3. Ability to do counseling for prevention of diseases through health maintenance.

COURSE OUTCOMES

• Cognitive Domain

Recognize importance of Basic Concepts of Shalaky Tantra, Ophthalmology, ENT & Dentistry in context to the health needs of the community

• Psychomotor Domain

Be able to diagnose & treat Ophthalmic & diseases of Ear, Nose, and Throat at primary level.

Be able to perform Kriyakalpas & other local ayurvedic procedures related to Netrarogas & Karna – Nasa- Mukharogas in regular clinical practice.

• Affective Domain

Be able to create community awareness regarding prevention of diseases.

Be able to have effective communication with patient, relatives of patient & community.

Sr. No.	TOPIC	DESCRIPTION	NO OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
PAPER-I NETRA ROGA VIGYANA			100 Hours	100 Marks
1	Introduction	<p>a) Shalakyatantra nirukti, Parichayam, Ithihasam</p> <p>b) Netra rachana shariram (Mandala, Patala, Sandhi, Drushti Vichara) and Netra Kriya Sharira alongwith modern anatomy of Eye.</p> <p>c) Eye examination and knowledge of basic instruments/equipments required for examination of Eye.</p> <p>d) Netrarognanam – Samanya Hetu (Nija and agantuja), Purvarupa, Samprapti, Rupa and Chikitsa.</p> <p>e) Classification of Netraroga and its importance.</p>	10	8
2	Netra Samanya and Vishishta Chikitsa - Kriya Kalpa	<p>a) Netra and Chakshu swasthya hitkara Dinacharya, Rutucharya, Aahara evam Vihara.</p> <p>b) Kriya-kalpa-Seka, Aschyotana, Pindi, Vidalaka, Tarpana, Putapaka, Anjana and importance of Panchkarma in Netra Chikitsa.</p> <p>c) Basic fundamentals of Netra Shastra Chikitsa e.g. Purva – Pradhana - Paschat karma, Ama-Pachyaman-Pakva Vrana shotha, Vranitopasana, Pranastashalya & Vranbandhana. Methods and concepts of sterilization, asepsis and antisepsis as per ancient and modern point of view.</p> <p>d) Basic applied knowledge of Ashtavidha shastrakarma, agni, kshara, raktamokshana in Nerta rogas.</p> <p>e) Essential diagnostic and therapeutic modern pharmacological agents required in Netra Chikitsa</p>	14	10
3	Sandhigata Roga (Diseases of junctional areas of eye)	<p>a) Number of sandhigata rogas, detailed etiology, pathology, clinical features and management of Pooyalasa and Srava Rogas.</p> <p>b) Brief Study of krimi granthi, Parvani and Alaji Rogas.</p> <p>c) Study of Acute and Chronic Dacryocystitis, Epiphora, Blepharitis including their aetiology, pathology, signs & symptoms, differential diagnosis and medical & surgical management</p>	14	14
4	Vartmagata Roga (Diseases of Lids)	<p>a) Number of vartmagata rogas, and detailed knowledge of etiology, pathology, clinical features and management of Anjananamika, Utsangini, Lagana, Vatahata vartma, Pakshma kopa, Sikta vartma, Pothaki, Klinna vartma, Krichhronmeelana and Kukunaka diseases of Vartma.</p> <p>b) Brief Knowledge of Vartmarbuda, Utklishta vartma, Nimesh, Pakshmeshata, Vartmarsha</p> <p>c) Knowledge of Hordeolum, Ptosis, Trachoma, Trichiasis, Entropion, Ectropion including their Etiology, signs and symptoms differential diagnosis and medical & surgical management.</p>	05	10

5	Shuklagata Roga(Diseases of sclera and conjunctiva)	a) Number of Shuklagata rogas, detailed knowledge of etiology, pathology, and management of Arma, Arjuna and Shuktika b) Brief Knowledge of Sira pidika, Sira jala, Pishtaka, Balasgrathita. c) Study of Pterygium, Scleritis, Episcleritis, Sub-Conjunctival Hemorrhage including their Etiology, signs and symptoms, differential diagnosis and medical & surgical management.	10	10
6	Krishnagata Roga (Diseases of cornea and uvea)	a) Number of krishnagata rogas, detailed knowledge of Etiology, Pathology, Clinical features, differential diagnosis, complications and Management of Savrana /kshata Shukla (Shukra), Avrana shukra (Shukla) b) Brief knowledge of Sira shukla, Akshipakatyaya and Ajakajata. c) Knowledge of Corneal ulcer, Corneal Opacity, Uveitis, Acute Iridocyclitis, Staphyloma, their aetiology, pathology, symptoms, differential diagnosis, complications and management.	10	10
7	Sarvagata Roga (Diseases effecting all parts of eye)	a) Number of Sarvagata rogas, detailed knowledge of etiology, pathology, clinical features, complications, differential diagnosis and Management of Abhishyanda, Adhimantha, Hatadhimantha and Shushkakshipaka. b) Brief Knowledge of Amloshit, Vata paryaya, Anyato vata, Sashopha & Ashophakshipaka- Pilla roga, Sirotpata and Siraharsha. c) Knowledge of Conjunctivitis, Glaucoma, Dry Eye Syndrome including their etiology, pathology, clinical features, differential diagnosis, complications and their management.	12	15
8	Drishtigata Roga (vision disorders)	a) Number of Drishtigata rogas detailed knowledge of - etiology, pathology, clinical features, differential diagnosis and management of Timira, Kacha and Linga nasha. b) Brief Knowledge of Abhighataja lingnasha, sanimittaja & Annimittaja Lingnasha Doshandhya/Kaphavidagdha drishti, Naktandhya, Ushna vidagdha drishti, Pittavidagdha drishti, Dhumadarshi, Hriswajadya, Gambhirika, Nakulandhya, Nayanabhighata. c) Knowledge of Refractive errors, Cataract including their etiology, pathology, clinical features, differential diagnosis, complications and their management. d) Study of Eale's disease, Hypertensive & Diabetic Retinopathies, Age related Macular degeneration, Strabismus, Retinitis pigmentosa, Night blindness, Amblyopia, Central serous retinopathy, Optic Neuritis and Optic atrophy	15	15
9	Miscellaneous Diseases	a) Xerophthalmia and other malnutritional eye disorders. b) Knowledge of ocular trauma and their	10	08

		management. c) Introduction to Eye bank, Eye donation, Corneal Transplantation d) Preventive Ophthalmology and Community Ophthalmology		
PAPER-II SHIRA – KARNA – NASA – MUKHA			100 Hours	100 Marks
1	Samanya Chikitsa	a) Study of therapeutic procedures like Sweda, Kavala, Gandusa, Dhuma, Murdhni Taila, Nasya, Pratisarana, Karna Purana, karna prakshalana, nasa prakshalana Mukha Lepa. b) Ashtavidha shastrakarma and anushastrakarma used in the treatment of Shira, Karna, Nasa evam Mukha Rogas.	10	15
2	Shiro Roga	a) Importance and Superiority of Shira. b) Number, general etiology, pathology and cardinal features of shiro rogas and kapalgata rogas along with their common line of management/ treatment. c) Detailed study of Vataja, Pittaja, Kaphaja shirashoola, Suryavarta, Ardhavabhedaka, Khalitya, Palitya. d) Brief Knowledge of Raktaja shiraha shoola, Krimija shiraha shoola, Kshayaja shiraha shoola & Sannipataja shiraha shoola, Ananta vata, Indralupta, Darunaka. e) Detailed study of Headache, Migraine its differential diagnosis and treatment.	15	15
3	Karna Roga	a) Detailed study of Rachana and Kriyasharir of Karna (Ear) & Shravanendriya as per Ayurvedic and modern view, Examination of Ear along with instruments/equipments required in Ear examination. b) Detailed study of etiology, pathology, classification, clinical features and management of diseases of Karna – karna shool, karna nada & shweda, Badhirya, karnastrava, karna pratinaha, pootikarna, karnagoothaka, karnavidradhi. c) Brief Knowledge of karna kandu, karnapaka, karnarsha, karnarbuda, krimikaran & karnapali rogas , Karna sandhana(Auroplasty), fundamentals, method and Vaikritpaham d) Detailed study of Otalgia, ASOM, CSOM, Deafness, wax including their etiology, pathology, clinical features, differential diagnosis, complications and medical & surgical management e) Brief Knowledge of Otomycosis, Otosclerosis, Tinnitus, Vertigo , Foreign body in ear and Noise pollution	20	20
4	Nasa Roga	a) Detailed study of Rachana and Kriyasharir of Nasa (Nose and paranasal sinuses) & Ghranendriya as per Ayurvedic and modern view, Examination of Nose along with instruments/equipments required in Nose examination.		

		<p>b) Detailed study of Pratishyaya, Dushta pratishyaya, Nasanaha, Kshavathu, Nasagata raktapitta & Nasarsha.</p> <p>c) Brief Knowledge of Putinasa, Bhranshathu, Peenasa, Apeenasa, Nasarbuda, Nasashotha, Dipta, Nasa Sandhana.</p> <p>d) Detailed study of Rhinitis & Sinusitis Epistaxis, Nasal Polyp, DNS, Foreign body including their Etiology, pathology, clinical features differential diagnosis and medical & surgical management.</p> <p>e) Brief Knowledge of Nasal trauma, Tumours of nose and Para nasal sinuses.</p>	20	15
5	Mukha Roga (Diseases of Oral Cavity)	<p>a) Detailed study of Rachana and Kriyasharir of Mukha Rogaadhisthana– oshtha, dantamoola, danta, jivha, talu, gal, sarvasara (Oral cavity) as per Ayurvedic and modern view along with their Basic examination including instruments /equipments required for the examination</p> <p>b) Mukha and Danta Swasthya as per ancient and modern concepts including prevention of malignancy of oral cavity.</p> <p>c) Number and general aetiology, pathology, cardinal features of Mukha rogas along with their common line of management/treatment.</p> <p><u>Oshtha Roga (Diseases of Lips)</u></p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of - Oshtha prakopa, khandoshtha</p> <p>b) Brief Knowledge of Gandalaji, Jalarbuda, Kshataja Oshthaprakopa</p> <p>c) Knowledge of cleft lip.</p> <p><u>Dant Mula Gata Roga (Diseases of Periodontia)</u></p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of - Shitada, Dantaveshta, Upakush, Danta Nadi, Danta Vidradhi, Adhimansa</p> <p>b) Brief Knowledge of dantapupputaka, Saushira, Mahasaushira, Danta Vaidarbha , Paridara, Vardhana.</p> <p>c) Detailed study of Etiology, pathology, classification, clinical features and management of Gingivitis, Apical abscess, Periodontitis (Pyorrhoea).</p> <p><u>Danta Roga (Dental Diseases)</u></p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of Daalan, Krimidanta, Dantaharsha, Danta sharkara, Hanumoksha</p> <p>b) Brief Knowledge of karala, Bhanjanak , Kapalika, Shyava Danta, Danta bheda,</p> <p>c) Danta chaal, Adhidanta, Danta Utpatana</p>	30	20

		<p>including Jalandhar bandha method and Danta Purna.</p> <p>d) Knowledge of Dental Caries, Dental Tartar & Tooth extraction.</p> <p><u>Jihwa Gata Roga (Diseases of Tongue)</u></p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of - jivha kantaka (vataja, pittaja and kaphaja)</p> <p>b) Brief Knowledge of Upajihva, Adhijihva, Alasa.</p> <p>c) Knowledge of Glossitis, Tongue Tie, Ranula, Benign and Malignant Tumors of tongue.</p> <p><u>Talu Roga (Diseases of Palate)</u></p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of - Gala shundika, Talushosha, Talupaka</p> <p>b) Brief Knowledge of Talupupputa, Adhrusha, Kacchapa, Talvarbuda, Mamsasanghata.</p> <p>c) Knowledge of Cleft palate, palatitis, uvulitis and tumours of the palate.</p> <p><u>Kantha and Gala gata Roga (Diseases of Pharynx & Larynx)</u></p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of - Tundikeri, Kantha shaluka, Gilayu, Galaganda , Swrabhedha , Galavidradhi.</p> <p>b) Brief Knowledge of Rohini, Galashotha, Kantharbuda, Kanthavidradhi, Galarbuda Galaugham, Vrindam, Ekavrindam, Valaya, balasa, Shataghni, Swaraghna.</p> <p>c) Detailed study of Etiology, pathology, classification, clinical features and management of - Pharyngitis, Laryngitis, Tonsillitis & Adenoiditis</p> <p>d) Brief Knowledge of foreign body in the throat, Carcinoma of Larynx & Pharynx, Dysphagia Diphtheria & diseases of salivary glands.</p> <p><u>Sarvasara Mukha Roga (Generalised mucosal affections of the oral cavity)</u></p> <p>a) Detailed study of Etiology, pathology, classification, clinical features and management of Sarvasar mukhapaka</p> <p>b) Brief Knowledge of urdhvaguda, putivaktrata, mukharbuda</p> <p>c) Detailed Knowledge of Stomatitis.</p>		
6	Miscellaneous Diseases	National Programme for Prevention and Control of Deafness.	05	15

PRACTICAL TRAINING [150 Hours]

Identification, Uses, Demonstration of surgical/non-surgical equipment/ instruments, materials used in shalaky chikitsa. Method of sterilization. Training of case taking, bedside clinics and case presentation. Training in para- surgical procedures

- 1) Kshara karma
- 2) Agnikarma
- 3) Raktamokshana
- 4) Training of ward procedures. Application of bandages, wound management
- 5) Training of minor procedures (ashtavidha)
- 6) Observation of surgical procedures in Shalaky

Clinical Training 04 Months (OPD, IPD OT and kriya kalpa)

DISTRIBUTION OF FINAL PRACTICAL EXAMINATION MARKS (UNIVERSITY)

TOTAL- 100 MARKS

	Long Case	Short Case	Identification of Instruments, equipments, medicines etc.	Viva-Voce	Daily Record (Case record)	Internal Practical Assessment	Total Marks
Marks	30	15	15	10	10	20	100

REFERENCE BOOKS:-

Sr. No.	Name of the Book	Author	Edition	Publication
1.	Shalaky Tantra	Dr. Rama Nath Dwivedi	2017	Chaukhamba Prakashan Varanasi
2.	Shalaky Vigyan	Dr. Ravindra Chandra Choudhary	2008	Chaukhamba Prakashan Varanasi
3.	Abhinava Netra Chikitsa	Acharya Vishva Nath Dwivedi	-	Chaukhamba Prakashan Varanasi
4.	Netra Chikitsa Vigyan	Dr. Ravindra Chandra Choudhary	-	Chaukhamba Prakashan Varanasi
5.	Netra Roga Chikitsa	Dr. Munje	-	-
6.	Netra Roga Vigyan	Dr. Hans Raj	-	Springer
7.	Parson's Diseases of Eye	-	22 nd Edition 2012	Elsevier
8.	Diseases of ENT	Log and Turner	11 th Edition 2016	CRC Press
9.	Shalaky Tantra	Shiv Nath Khanna	-	Chaukhamba Prakashan Varanasi
10.	A text book of ophthalmology in Ayurveda	Dr. P.K.Shantha kumara	-	Atlantic Publication
11.	Shalaky Kriya Kalpa Vigyan	Prof. K. S. Dhiman	-	Chaukhamba Vishwabharati
12.	Useful portions of Charak, Sushrut, Vagbhata			Chaukhamba Orientalia

TITLE OF THE COURSE: SHALYATANTRA

COURSE CODE: AA404

MARKS: THEORY -200 PRACTICAL - 100 TOTAL - 300

HOURS: THEORY - 200 PRACTICAL – 150

GOALS

The extensive goal of the Shalyatantra teaching to graduate students is to supply comprehensive knowledge of the fundamental principles of Shalyatantra and its relevance for the management of surgical disorders.

LEARNING OBJECTIVE

This is significant as a foundation for making an ideal practitioner. To achieve this goal, the graduate student in Shalyatantra should be given an overall exposure to the subject, teaching aptitudes and basic technologies.

COURSE OUTCOME :-

a. Cognitive domain:

Be acquired with knowledge of Shalyatantra, surgical and para-surgical procedures.
Should possess knowledge of surgical disease along with diagnostic investigation

b. Psychomotor domain:

Have proper knowledge of surgical management and treatment of diseases mentioned in classical ayurvedic texts

c. Affective domain

Should have thorough knowledge of surgery and para-surgical procedure mentioned in modern and ayurved methods

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
Paper I			100 Hours	100 Marks
Part A				
1	Shalya Tantra	Definition of Shalya, Shalya Tantra and its importance. Introduction to Shalya Tantra: Historical background and progress made. <ul style="list-style-type: none">• Target - Fluency in textual reading and comprehension.• Preferable targets - Know recent developments and controversies.	1	3
2	Yantra, Shastra, Anushastra	Description of Yantra, Shastra, Anushastra: Definition, number, types, uses, Dosha, Guna, Karma. Relevant	3	3

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		modern instruments. <ul style="list-style-type: none"> • Target - Basic understanding of the concepts of Yantra and Shastra. Acquaintance with commonly used surgical instruments. Knowledge of textual descriptions. • Preferable targets - Knowledge about currently used surgical instruments, their specifications, procurement sources etc. 		
3	Nirjantakarana (Sterilization)	Methods, types and its role in surgical practice. <ul style="list-style-type: none"> • Target - Basic surgical discipline of maintaining asepsis. • Preferable targets- Knowledge of recently developed chemicals, instruments for sterilization. 	3	3
4	Sangyahan (Anaesthesia)	Definition and Types. <ol style="list-style-type: none"> i. Local anaesthesia ii. Regional and General anaesthesia- Drugs, Techniques, Indications, Contraindications, Complications and their Management. <ul style="list-style-type: none"> • Target-Basic knowledge of the drugs and instruments of anaesthesia. To observe the process of induction, monitoring and recovery. • Preferable targets- Assisting and handling anaesthesia. 	5	3
5	Trividha Karma	Purva Karma, Pradhana Karma and Paschat Karma. <ul style="list-style-type: none"> • Target- Capability to identify conditions which can affect the outcome of surgery in pre, intra and post- operative period. • Preferable targets- Experience of handling incidents. 	5	3
6	Ashtavidha Shastra Karma	Surgical procedures- Ayurvedic & Modern <ul style="list-style-type: none"> • Targets- Appreciation and comprehension of concepts and indications of different procedures. • Preferable targets –Hands on experience of surgical procedures. 	4	3

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
	Yogya	<p>Experimental Surgery</p> <ul style="list-style-type: none"> • Target –Appreciation and comprehension of concepts of Yogya. Idea of patient’s safety in experimental training. • Preferable targets- Hands on training on mannequins. 	3	3
8	Marma	<p>Nirukti, types, description and importance.</p> <ul style="list-style-type: none"> • Target –Clinical application of concepts of marma. • Preferable targets- Study of relevance of marma in the light of current anatomical and surgical knowledge. 	5	3
9	Kshara and Kshara Karma	<p>i. Nirukti, Pradhanyata, Guna, Dosha, Karma, Prakara, Yogya, Ayogya, Procedure, Upadrava and Chikitsa.</p> <p>ii. Kshara nirmana vidhi, knowledge of KsharaVarti, Taila and Pichu.</p> <p>iii. Kshara Sutra – Preparation, Indications, Contraindications and Method of application, Complications and their Management.</p> <ul style="list-style-type: none"> • Target – Capability to identify and practice the use of kshara, kshara sutra in common clinical conditions. • Preferable targets – Broader knowledge of current trends and ongoing researches in kshara application. 	4	3
10	Agnikarma	<p>Nirukti, Pradhanyata, Guna, Dosha, Karma, Prakara, Mahatva, Upakarana, Vidhi, Akrutibheda, Yogya, Ayogya and Upadrava Chikitsa. Contemporary techniques and tools of Agnikarma.</p> <ul style="list-style-type: none"> • Target - Capability to appreciate the clinical indications and comprehend Agnikarma procedure. • Preferable targets - Hands on experience of use of cautery in surgical practice. 	4	3
11	Raktamokshana	<p>Mahatva, Prakara - Siravyadha, Pracchanna, Shringa, Alabu, Jaloukavacharana – Yogya,</p>	4	3

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		<p>Ayogya, Procedure, Upadrava and Chikitsa.</p> <ul style="list-style-type: none"> Target- Capability to appreciate and comprehend clinical indications of Jaloukavacharana and other Raktamokshana procedures. Preferable targets - Uses of bloodletting in current therapy. 		
12	Bandha Vidhi	<p>Prayojana, Dravya, Indications, Contraindications, Prakara, Upadrava, Pichu, Plota, Kavalika and Vikeshika.</p> <ul style="list-style-type: none"> Target- Hands on experience of techniques of bandaging. Preferable targets - New generation of bandaging and splintage tools. 	3	3
13	Pranasta Shalya and Nirharana Upaya	<ul style="list-style-type: none"> Target – Importance of concepts of Sushruta in the management of Shalya and concerns of patient safety. Identification and management of foreign bodies. Preferable targets- Current concepts and diagnostic tools of dealing with foreign bodies. 	3	3
14	Fluid, Electrolyte, Acid Base Balance and Nutrition	<ol style="list-style-type: none"> Introduction of physiology of fluids and electrolytes. Dehydration and overhydration. Specific electrolyte loss, Acidosis, Alkalosis, Symptomatology and Management. Electrolyte changes in specific diseases like pyloric stenosis, intestinal obstruction and anuria. Various replacement fluids in surgery, mode of administration and complications. Nutrition. <ul style="list-style-type: none"> Target – Capability to identify and manage fluid and electrolyte imbalance. Ability to administer parenteral fluid. Preferable targets - Advanced techniques of fluid and electrolyte assessment and management. 	6	3
15	Rakta Mahatwa, Raktasrava /	<p>Prakara and Lakshana.</p> <ol style="list-style-type: none"> Raktastambhana –Haemostasis. 	4	3

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
	Haemorrhage	<ul style="list-style-type: none"> ii. Blood Transfusion –Blood groups, Compatibility, Indications, Contraindications and Complications with Management. iii. Component therapy. <ul style="list-style-type: none"> • Target-Knowledge of achieving haemostasis in haemorrhage. • Preferable targets – Detail knowledge of blood bank techniques. 		
16	Antibiotics, analgesics, anti-inflammatory and emergency drugs in surgical practice	<ul style="list-style-type: none"> • Target – Working knowledge of commonly used drugs. • Preferable targets - Advanced pharmacological study of the above drugs. 	4	3
17	Diagnostic techniques	<p>Imaging techniques: - X-ray, Ultrasonography, CAT Scan, MRI, Biopsy / Cytological study.</p> <p>Diagnostic Techniques – Gastroscopy , Colonoscopy, Laparoscopy, Cystoscopy, Sigmoidoscopy, C-ARM</p> <ul style="list-style-type: none"> • Target- Knowledge of proper indications for optimum investigational tools and their interpretation. • Preferable targets - Capability to work independently in the field of diagnostic techniques. 	4	2
PART B				50 MARKS
1	Shat Kriyakala in surgical practice	<ul style="list-style-type: none"> • Target- Clinical utility of the concepts. • Preferable targets - Applied aspects of Kriyakalas in the light of current concepts of pathogenesis. 	3	6
2	Vranashotha, Vidhradi Etc.	<p>Nirukti, Nidana, Samprapti, Prakara, Lakshana, Sadhya - asadhyata, Upadrava and Chikitsa of the following disorders.</p> <ul style="list-style-type: none"> i. Vranashotha -Inflammation ii. Vidhradi - Abscess iii. Pidika -Boils iv. NadiVrana - Sinus /Fistulae vi. VranaGranthi - Keloid / Hypertrophic scar Marmagata -Shock vii. Kotha – Gangrene and Principles of Amputation. viii. Granthi -Cyst ix. Arbuda -Tumour 	5	6

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		<ul style="list-style-type: none"> • Target-Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions. 		
3	Vrana	<p>Nirukti and Prakara</p> <ol style="list-style-type: none"> i. NijaVrana – Nidana, Samprapti, VranaVasthu, Prakara, Lakshana, Vrana Pariksha – Sthana, Vrana Akrti, Srava, Gandha, Vedana. Vrana Avastha- Dustavrana, Shuddha Vrana, Ruhyamana Vrana, Samyak Roodha Vrana, Vrana Sadhya-asadhyatha and Vrana Upadrava. ii. Vrana Chikitsa – Pathya-apathya and Shashti Upakrama, Vranitagara and Rakshakarma. iii. Agantuja Vrana: <ol style="list-style-type: none"> a. SadyoVrana - Traumatic wounds – Nidana, Prakara, Lakshana, Upadrava and Chikitsa. b. Management of bites and stings. iv. DagdhaVrana – Burns and scalds. v. Ulcer - Types and their management. vi. Wound healing stages and their management. vii. Pramehapidaka - Diabetic carbuncle and wounds. <ul style="list-style-type: none"> • Target - Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	5	6
4	Twak Vikara	<p>Nidana, Samprapti, Lakshana and Chikitsa of Chipa – Paronychia, Kadara – Corn and Kshudra rogas.</p> <ul style="list-style-type: none"> • Target - Clinical application of the concepts. • Preferable targets - Hands on experience of management of different 	3	6

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		conditions.		
5	Manya Vikara	Nidana, Samprapti, Lakshana and Chikitsa of Galaganda – Goitre, Gandamala, Apachi – Lymphadenitis, Pashanagardhabha – diseases of parotid gland. <ul style="list-style-type: none"> • Target-Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	5
6	Sira Vikara	Venous disorders – Superficial and Deep venous thrombosis, Haemangioma, Varicose veins - Diagnosis and their Management. <ul style="list-style-type: none"> • Target - Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	5
7	Dhamani Vikara	Arterial disorders – Nidana, Samprapti, Lakshana and Chikitsa of Aneurysm, Buerger’s disease, Atherosclerosis, Raynaud’s disease. <ul style="list-style-type: none"> • Target - Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	5
8	Snayu Vikara	Diseases of tendons and ligaments – Tennis elbow, Ganglion and their Management. <ul style="list-style-type: none"> • Target - Clinical application of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	6
9	AIDS - HIV	Care of AIDS - HIV and hepatitis infected patients. <ul style="list-style-type: none"> • Target -Knowledge of safety precautions. 	3	5
Paper II			100 Hours	100 Marks
PART A				
1	Bhagna (Fractures)	Nirukti, Nidana, Samprapti, Prakara, Lakshana, Chikitsa, Skeletal injuries: Prakara including pathological fracture, Samanya Lakshana, Upadrava and Chikitsa. Description of fracture of following bones	5	4

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		<p>with Clinical features, Diagnosis, Complications and Management – scapula, clavicle, humerus, radius, ulna, femur, patella, tibia and pelvis bones.</p> <p>Sandi moksha - Dislocation: Dislocation of following joints with Clinical features, Diagnosis, Complications and Management of shoulder, elbow and hip.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 		
2	Diseases of bone	<p>Diseases of bone: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Osteomyelitis, Cysts, Tumours and Tuberculosis.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	3	4
3	Cranio-cerebral injuries	<p>Mechanism, Pathology, Classification, Investigations, Complications and primary management.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	4
4	Diseases of Spine	<p>Mechanism, Pathology, Classification, Investigations, Complications and primary management of Tuberculosis, Ankylosing Spondylitis and Disc prolapse.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	4
5	Diseases of breast	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Sthana Vidradhi - Breast abscess and Sthana Arbuda - Breast tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. <p>Diseases of chest: Aetiopathogenesis,</p>	4	4

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		Classification, Clinical features, Diagnosis, Complications and Management of Chest injury, Pleural effusion, Pleurisy and Tumours. <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. Diseases of chest: Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Chest injury, Pleural effusion, Pleurisy and Tumours. Target - Clinical utility of the concepts. Preferable targets - Hands on experience of management of different conditions.		
6	Diseases of Oesophagus	Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Oesophagitis, Varices, Ulcer and Tumours. <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	4
7	Gulma Roga	Nidana, Prakara, Lakshana, Upadrava and Chikitsa.	1	4
8	Shoolavyadhi	Nidana, Prakara, Lakshana, Upadrava and Chikitsa. <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of acute abdomen. 	2	4
9	Udara Roga	Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Jalodara - Ascites, Chidrodara – Perforation, Peritonitis and Badhagudodara-Intestinal obstruction. <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	5	4
10	Diseases of stomach and duodenum	Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Pyloric Stenosis, Peptic Ulcer and Tumours. <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on 	4	4

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		experience of management of different conditions.		
11	Diseases of small intestine	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Tuberculosis, Obstruction and Perforation.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	3
12	Diseases of large intestine	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Tuberculosis, Obstruction, Perforation, Tumours, Appendicitis, Crohn's disease and Ulcerative Colitis.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concept. • Preferable targets - Hands on experience of management of different conditions. 	4	3
13	Diseases of Rectum and Anal Canal	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital disorders, Arshas - Haemorrhoids, Parikartika - Fissure-in-ano, Bhagandara - Fistula-in-ano, Guda Vidradi - Anorectal abscesses, Gudabhramsas - Rectal prolapse, Sanniruddaguda - Anal stricture, Incontinence, Rectal Polyp and Tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	2
14	Abdominal injuries and their management	<ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	2

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
Part B				
1	Diseases of Liver	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Yakrit Vidhradi - Abscess, Neoplasia, Portal hypertension and Yakritdalyodar –Hepatomegaly.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	4
2	Diseases of Gallbladder	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Cholecystitis, Cholelithiasis, Obstructive jaundice and Tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	4
3	Diseases of Pancreas	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Pancreatitis, Cysts of Pancreas and Tumours.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	4
4	Diseases of Spleen	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Pleehodara – Splenomegaly and Splenic rupture.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	3	4
5	Diseases of Kidney and Ureters	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Polycystic kidney, Injuries, Perinephric abscess, Calculus and Neoplasms.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of 	5	4

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		different conditions.		
6	Diseases of Urinary bladder	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Injuries, Ashmari - Vesical Calculus, Cystitis and Neoplasms.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	4
7	Mutraghata and Mutrakrichra	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management. Retention of urine.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	3	4
8	Diseases of Prostate	<p>Diseases of Prostate - Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Prostatitis, Prostatic abscess, Benign Enlargement of Prostate and Carcinoma of Prostate.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	4
9	Diseases of Urethra	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Urethritis, Stricture and Rupture.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	2	4
10	Diseases of Penis	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Congenital anomalies, Niruddhaprakasha -Phimosis, Parivartika - Paraphimosis, Avapatika - Prepuceal ulcer, Arbuda- Tumours and Lingarsha - Penile Warts.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the 	3	4

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HOURS)	WEIGHTAGE (MARKS)
		<p>concepts.</p> <ul style="list-style-type: none"> • Preferable targets - Hands on experience of management of different conditions. 		
11	Diseases of Scrotum and Testis	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Epididymo-orchitis, Epididymal cyst, Scrotal filariasis, Shukrashmari - Seminal calculus, Torsion of testis, Ectopic testis, Undescended testis and Tumours.</p>	4	4
12	Vriddhi Roga	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Mutravriddhi – Hydrocele.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	3
13	Antra Vriddhi	<p>Aetiopathogenesis, Classification, Clinical features, Diagnosis, Complications and Management of Hernia - Inguinal, Femoral, Epigastric, Umbilical, Incisional and rare forms of Hernia.</p> <ul style="list-style-type: none"> • Target - Clinical utility of the concepts. • Preferable targets - Hands on experience of management of different conditions. 	4	3

PRACTICAL TRAINING [150 Hours]

Content of Practicals:

1. Identification, uses, demonstration of surgical instruments and methods of sterilization.
2. Training of case taking, bed side clinics and case presentation.
3. Demonstration and Practical training in Anaesthesia.
4. Training to develop skills in following Para-surgical and other procedures
 - i. KsharaKarma
 - ii. Agnikarma
 - iii. KsharaSutra
 - iv. Raktamokshana
 - v. Application of bandages and splints
 - vi. Catheterization
 - vii. Wound management procedures like Parisheka and Patradana
 - viii. Ryle's tube aspiration
 - ix. Injections -Intramuscular / Intravenous / Subcutaneous /Intradermal

- x. Incision and drainage of abscess
- xi. Suturing of open wounds

Observation of following procedures

- xii. Circumcision
- xiii. Hydrocele
- xiv. Hernia repair
- xv. Vasectomy
- xvi. Haemorrhoidectomy
- xvii. Fistulectomy
- xviii. Fissurectomy
- xix. Appendisectomy
- xx. Cholecystectomy

5. Training of Surgical Emergencies and Management

Clinical Training (Indoor and Outdoor)

09Months

- Shalya (Samanya) 03 Months (at least one month in OT)
- Shalya (Kshara and Anushastra Karma) 03 Months (at least one month in OT)
- Asthi and Sandhi Chikitsa (Orthopaedics and Trauma) 02 Months
- Anaesthesia 15days
- Radiology 15days

**DISTRIBUTION OF FINAL PRACTICAL EXAMINATION MARKS (UNIVERSITY)
TOTAL-100 MARKS**

	Long case	Short case	Instruments	Daily records	Viva-voce	Internal Assessment	Total Marks
Marks	20	10	20	10	20	20	100

REFERENCE BOOKS:-

Sr. No.	Name of the Book	Author	Edition	Publication
1.	Sushruta Samhita	Vd. Acharya Priyavat Sharma	1 st Edition	Chaukhamba Prakashan
2.	Ashtanga Sangraha	Vd. Shivprasad Sharma	1 st Edition	Chaukhamba Prakashan
3.	Ashtanga Hridaya	Dr. Annamoreswar Kunte	10 th Edition	Chaukhamba Prakashan
4.	Charaka Samhita	Vd. Yadavaji Trikamaji Acharya	1 st Edition	Chaukhamba Prakashan
5.	Shalyatantra Vidnyan	Vd. Shi. Go. Joshi	1 st Edition	Pune Sahitya Vitaraka
6.	The Surgical instruments of the Hindus	Girindranath Mukhopadhyaya	1 st Edition	Chaukhamba Prakashan
7.	Shalya Tantra Samuchchaya	Pandit Ramadesh Sharma	1 st Edition	Chaukhamba Oriental

Sr. No.	Name of the Book	Author	Edition	Publication
8.	Shalya Vigyan (Part 1-2)	Dr. Surendra Kumar Sharma	1 st Edition	Natha Pustaka Bhandar
9.	Shalya Samanvaya (Part 1-2)	Vd. Anantaram Sharma	1 st Edition	Chaukhamba Surabharati
10.	Shalya Pradeepika	Dr. Mukund Swaroop Verma	1 st Edition	K.K.Publications
11.	Soushruti	Dr. Ram Nath Dwivedi	1 st Edition	Chaukhamba Bharati
12.	Clinical Shalya Vigyan	Dr. Akhilanand Sharma	1 st Edition	Chaukhamba Oriental
13.	Bhagna Chikitsa	Dr. Prabhakar Janardhan Deshpande	1 st Edition	Chaukhamba Prakashan
14.	Kshara sutra management in anorectal ailments	Dr. S.K. Sharma, Dr. K.R.Sharma and Dr. Kulwant Singh.	5 th Edition	Dr.S.Das old mayer s court, Kolkata
15.	Anorectal diseases in Ayurveda	Dr. Sizoria and Dr. Praveen Kumar Chowdary.	7 th Edition	Chaukhamba Prakashan
16.	Adhunik Shalya Chikitsa Siddanta	Dr. Katil Narshingham Udupa	1 st Edition	Chaukhamba Prakashan
17.	Agnikarma Technology Innovation	Dr. P.D. Gupta	1 st Edition	Chaukhamba Prakashan
18.	Shalya Tantra Ke Siddhant	Dr. K.K.Takral	1 st Edition	Chaukhamba Prakashan
19.	Recent advances in the management of Arshas /Haemorrhoids	Dr. P. Hemantha Kumar	1 st Edition	Chaukhamba Prakashan
20.	Arsha Evum Bhagander Mein sutra Avacharan	Vd. Kanak Prasad Vyas	5 th Edition	Chaukhamba Oriental
21.	Recent advances in Kshara Sutra	Dr. M. Bhaskar Rao	1 st Edition	Chaukhamba Prakashan
22.	Leech application in Ayurveda	Dr. M. Bhaskar Rao	1 st Edition	Chaukhamba Prakashan
23.	Kshara Sutra	Dr. S.N.Pathak	1 st Edition	Chaukhamba Prakashan
24.	Shalya Shalaky Tantra	Vd. S.G. Joshi	1 st Edition	Pune Sahitya Vitaraka
25.	Surgical ethics of Ayurveda	Dr. D.N. Pande	1 st Edition	Chaukhamba Prakashan
26.	Text book of Surgery	Sabistan	1 st Edition	Modern Books
27.	Operative Surgery	Rob and smith	4 th edition	Modern Books
28.	Ward procedure	Dr. Mansukh Patel	6 th edition	Modern Books
29.	A Manual of Clinical surgery	Dr. S. Das	12 th edition	Modern Books
30.	A concise Textbook of surgery	Dr. S. Das	8 th edition	Modern Books
31.	Bedside clinic in surgery	Dr. Makhnall Saha	2 nd edition	Modern Books
32.	Farquharson's textbook of operative general surgery	Dr. Farquharson	10 th edition	Modern Books
33.	Maingot's abdominal operation	Dr. Michael zinner, Stanley Ashley	12 th Edition	Modern Books

TITLE OF THE COURSE: RESEARCH METHODOLOGY AND MEDICAL STATISTICS

COURSE CODE: AA405

MARKS: THEORY - 50

HOURS: 50

GOAL -

- Introduction to basic principles of Research methodology and Medical statistics.
- To propagate & to advocate the fundamental principles and techniques of Research methodology and Medical statistics according to Ayurveda.

LEARNING OBJECTIVES –

At the end of the course, student will be able

1. To develop research orientation.
2. To acquaint with fundamentals of Research Methodology & Medical Statistics

COURSE OUTCOME

At the end of the course, student will

- **COGNITIVE DOMAIN**
Apply basic concepts of research methodology
- **PSYCHOMOTOR DOMAIN**
Visualize published research literature and to present the research data in scientific way
- **AFFECTIVE DOMAIN**
Identify research questions in Ayurveda and implement research in everyday practice of Ayurveda.

COURSE DESCRIPTION

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HRS)	WEIGHTAGE (MARKS)
Part -A				Marks -30
1.	Researches in ayurvedic classics	Brief historical background of research in Ayurved and contemporary medical science Evidences of researches in ayurvedic classics	2	8
2.	Etymology, definitions and synonyms of Research	Etymology, definitions and synonyms (Anveshana, Gaveshana, Prayeshana, Anusandhan and Shodha) of the word Research	2	4

Sr. No	TOPIC	DESCRIPTION	NO. OF LECTURES (HRS)	WEIGHTAGE (MARKS)
3.	Research in Ayurved	Research in Ayurved - Scope, need, importance, utility	2	8
4.	Types of Research	Types of Research (familiarization of the terms) a) Pure and Applied b) Qualitative , Quantitative and Mixed Observational and interventional.	2	8
5.	Research tools	Research tools – Role of the pramanas as research tools	2	8
6.	Scientific Writing	Concept of Evidence Based Medicine and Scientific Writing	2	8
7.	Importance of IT in data mining	Importance of IT in data mining and important research data portals concerned with Ayurved and contemporary medical science (DHARA, PubMed, Ayush Research Portal, Bioinformatics Center, Research Management Informatic System etc.)	2	8
Part – B				Marks -20
8.	Medical-Statistics	Definition, scope and importance of the Medical statistics	1	4
9.	Common statistical terms and notations	a. Population b. Sample c. Data d. Variable e. Normal distribution	8	8
10.	Collection and Presentation of data	a. Tabular b. Graphical c. Diagrammatical	4	8
11.	Measures of location & Measures of Central Tendency	Measures of location a. Average b. Percentile Measures of Central Tendency a. Arithmetic mean b. Median c. Mode	10	8
12.	Variability and its measurement	a. Range b. Standard deviation c. Standard error	4	8
13.	Test	Parametric and non parametric tests	3	8
14.	Probability	Introduction to probability and test of significance	3	8
15.	Statistical soft-wares.	Introduction to commonly used statistical soft-wares.	3	4

Internal Assessment Marks:-

1. Internal Assessment will be done on the basis of theory paper at the end of II & III term for 40 Marks.
2. 10 Marks of Internal Assessment will be added to final university examination.

REFERENCE BOOKS FOR RESEARCH:

Sr. No.	Name of the Book	Author	Edition	Publication
1	Practical Research Methods	Dawson, Catherine,	2002	UBS Publishers' Distributors, New Delhi,
2	Research Methodology- Methods and Techniques	Kothari, C.R.	2019	New2 Age International Pub., Wiley Eastern Limited, New Delhi,
3	Research Methodology-A Step-by-Step Guide for Beginners(2nd.ed)	Kumar, Ranjit	2005	Pearson Education, Singapore,
4	Students guide to research methodology – Undergraduates.	Alexandria Medical Students Association.	-	Alexandria Medical Students Association.
5	Health research methodology. A guide for training in research methods. 2nd edition.	World Health Organization Regional Office for the Western Pacific	2001.	World Health Organization Regional Office for the Western Pacific, Manila,
6	Simplified Research Methodology and Biostatistics	Dr. Yogesh B. Shinde Dr. Nilesh H. Chimne Dr. Hemant J.Pawar	2019	Arihant Excel Medical Book House, Aurangabad, Maharashtra
7	Principles of Research Methods for Ayurveda	Prof. Asmita Wele	1 st Edition 2019	Chaukhamba Orientalia, Varanasi

REFERENCE BOOKS FOR MEDICAL STATISTICS:

Sr. No.	Name of the Book	Author	Edition	Publication
1	Health research methodology. A guide for training in research methods. 2nd edition.	Manila, World Health Organization Regional Office for the Western Pacific	2001	Manila, World Health Organization Regional Office for the Western Pacific,
2	Statistical methods in medical research.	P.Armitage (Ed)	-	Oxford Blackwell
3	Statistical methods	Snedecor GW and Cochran, WG	-	Snedecor GW and Cochran, WG
4	4. Practical statistics for medical research. London: Chapman Principles of Medical Statistics	A. Bradford Hill	1991	Altman, D. G
5	Interpretation and Uses of Medical Statistics	Leslie E Daly, Geoffrey J Bourke, James MC Gilvray.	2000	Blackwell Sci Ltd., Oxford
6	Research in Ayurveda	M S Baghel	-	-
7	Research methodology in Ayurveda	V.J.Thakar	-	Gujarat Ayurved University
8	Ayurveda anusandhan paddhati-	P.V.Sharma	2012	Chaukhamba Orientalia, Varanasi
9	Research methodology methods and statistical techniques	Santosh Gupta		Greenhouse SW
10	The growth and future of biostatistics: (A view from the 1980s). Statistics in Medicine	-	2003	-
11	Clinical epidemiology and	Knapp GR & Miller	-	NMS series

Sr. No.	Name of the Book	Author	Edition	Publication
	Biostatistics, Biostatistics : Principles and practice	MC. Antonisamy B, Christopher S & Samuel PP.		
12	An introduction to Biostatistics,	Sundara Rao PSS & Richard J.	-	PHI
13	Statistical Issues in Drug Development.	Chichester: John Wiley & Sons.	-	Senn S (1997).
14	Methods in Bio-statistics for Medical Students	BK Mahajan	-	JAYPEE- 2010
15	Vaidyakeeya Sankhiki Shastra	Dr.S.S.Savrikar	-	-