I professional Ayurvedcharya
(BAMS)

Subject Code: AyUG-PV

Padartha Vijnanam
FUNDAMENTAL PRINCIPLES OF AYURVEDA AND QUANTUM MECHANICS

Total number of Teaching hours: 230			
Lecture hours (LH) - Theory		**90 Hours**	**90 Hours (LH)**
Paper I	45 Hours		
Paper II	45 Hours		
Non-Lecture hours (NLH) – Theory		**140 Hours**	**140 Hours (NLH)**
Paper I	70 Hours		
Paper II	70 Hours		
Non-Lecture hours (NLH) - Practical		**Hours**	

Examination (Papers & Mark Distribution)					
Item	**Theory Component Marks**	**Practical Component Marks**			
		Practical	**Viva**	**Elective**	**IA**
Paper I	**100**	**100**	**60**	**10 (Set-FB)**	**30**
Paper II	**100**				
Sub-Total	**200**	**200**			
Total marks	**400**				

PREFACE

All Medical sciences whether ancient or modern, needs frequent updating. Acharya Vagbhata stresses upon reform of Ayurveda according to the present time (yuganurupasandarbha). The syllabus of Ayurveda also needs reformation for effective dissemination of principles of Ayurveda which is strongly based on Padartavijnanam. Acharya Vagbhata says one who seeks long life should respect Ayurveda by four strategies that are knowedge (Adhiti), comprehension (Bodha) skill (Acharana) and Attitude(pracharana). These teaching methodologies are evolved from the ancient upanishadic way of teaching (Adhyapanavidhi). The new principles of teaching strategies of blooms taxonomy correlate with the ancient way of teaching and the syllabus of Padarthavijnanam has been revamped according to the need of hour.

Padartha Vijnanam is a unique and mandatory subject needed for learning the stream of Ayurveda. It is the combination of science and philosophy. One can say that the science and philosophy are the two sides of the same coin. The search behind "existence of world/self" when progresses outward it travels the path of science and when this search is inwards it becomes philosophy. Thus, Padartha Vijnanam is an essential base of Ayurveda education. When the foundation becomes strong building also becomes strong.

Padartha Vijnanam not only provides the platform to understand Ayurveda better but it also helps the students to appreciate the moral values beneficiating them in developing the personality. As mentioned in graduate attributes this subject helps the student to become eloquent communicator and self-directed learner who constantly endeavors to advance knowledge and skills to improve healthcare and social well-being.

This syllabus reform of Padartha Vijnanam has taken care of adopting the modern teaching-learning methodology well-merging with the ancient one. This will definitely enhance the understanding of the subject in a better way.

Introduction of practicals is the zest for the subject. As we all know- "I hear, and I forget. I see and I remember. I do, and I understand". The teaching learning process must be joyful along with lecture methods like group discussions, debate, roleplay and PBL. They are also mentioned and the flexibility is kept. Here in this syllabus, the activity book is introduced to induce activity-based learning. This will definitely create the interest in the subject. There are some self-learning activities also which will induce the thirst for the knowledge in the student. This will help the student to understand theoretical concepts ina lucid way and also provides hands on experience.

Course Code and Name of Course

	Course code	Name of Course
	AyUG-PV	Padartha Vijnanam (Fundamental Principles of Ayurveda and Quantum Mechanics)

AyUG-PV Course

Table 1- Course learning outcomes and matched PO.

CO	**Course learning Outcomes** (CO) **AyUG-PV** At the end of the course AyUG-PV, the student should be able to-	**Course learning Outcome matched with program learning outcomes.**
CO 1	Illustrate the scope and utility of Ayurveda	PO1
CO 2	Explain Philosophical foundation of Ayurveda, Principles (Siddhantha) of Darshana along with their similarities and relevance in Ayurveda and contemporary sciences.	PO1, PO2, PO6
CO 3	Analyse and interpret Padartha (Prameya) in Darshana and Ayurveda. Recognize their applications in Ayurveda.	PO1, PO2, PO9
CO 4	Distinguish, analyse and apply concept of Pramana shastra (Epistemology) in Darshana and Ayurveda. Demonstrate their applications in Ayurveda.	PO1, PO2, PO9
CO 5	Analyse and apply concept of Karya Karana Bhava in Ayurveda.	PO1, PO2, PO9

Table 2 : Contents of Course AyUG-PV

Sr No	A2 List of Topics AyUG-PV Paper I	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours
1	Ayurveda Nirupana 1.1 Lakshana of Ayu, composition of Ayu. 1.2 Lakshana of Ayurveda. Swaroopa and Prayojana of Ayurveda 1.3 Lakshana and classification of Siddhanta. 1.4 Introduction to Basic Principles of Ayurveda and their significance.	I		5	6
2	Padartha and Darshana Nirupana 2.1 Padartha Lakshana, Enumeration and classification of Padartha, Bhava and Abhava Padartha, Padartha according to Acharya Charaka (Karana-Padartha). 2.2 Etymological derivation of the word "Darshana". Classification and general introduction to 9 Schools of Indian Philosophy with an emphasis on: Nyaya, Vaisheshika, Sankhya, Yoga, Meemamsa and Vedanta darshana. 2.3 Ayurveda as unique and independent school of thought (philosophical individuality of Ayurveda). 2.4 Principles and examples in contemporary sciences which will enhance understanding concept of Padartha. 2.5 Relevance of Study of Darshana and Padartha Vignana in Ayurveda	I	25	10	14
3.	Dravya vijnaneeyam 3.1 Dravya: Lakshana, Classification and Enumeration 3.2 Panchabhuta: Various theories regarding the creation (theories of Taittiriyopanishad, Nyaya-Vaisheshika, Sankhya-Yoga, Sankaracharya, Charaka and Sushruta), Lakshana and qualities of each Mahabhoota. 3.3 Kala: Etymological derivation, Lakshana , division / units and significance. 3.4 Dik: Lakshana ,division and significance. 3.5 Atma: Lakshana, classification, seat, Gunas, Linga according to Charaka, the method / process of knowledge formation (atmanah jnasya pravrittih). 3.6 Purusha: According to Ayurveda - Ativahikapurusha/ Sukshmasharira/ Rashipurusha/ Chikitsapurusha/ Karmapurusha/ Shaddhatvatmakapurusha. 3.7 Manas: Lakshana, Synonyms, Qualities, Objects, Functions, dual nature of mind (ubhayaatmakatvam), as a substratum of diseases,Influence of Panchabhoutika aahara and aushadha (penta-elemental diet)on manas. 3.8 Role of Panchamahabhuta and Triguna in Dehaprakriti and Manasaprakriti respectively. 3.9 Tamas as the tenth Dravya. 3.10 Practical study/Application and Importance of each Kaarana dravya in Ayurveda. 3.11 Principles and examples in contemporary sciences	II	48	14	20

	which will enhance understanding concept of Kaarana dravya.				
4.	Guna vijnaneeyam 4.1 Etymological Derivation, Classification and Enumeration according to various Darshana and Charaka, 4.2 Lakshana and Classification of Sartha Guna, Gurvadiguna, Paradiguna, Adhyatmaguna (41 Guna) 4.3 Gunapradhanyata (Importance of Guna) 4.4 Practical / clinical application of each Guna in Ayurveda 4.5 Principles and examples in contemporary sciences which will enhance understanding concept of Guna.	**II**		**4**	**6**
5.	Karma vijnaneeyam 5.1 – Introduction of concept of Karma According to Darshanaand Ayurveda – Classification of Karma 5.3 - Practical application of karma 5.4 - Principles and examples in contemporary sciences which will enhance understanding concept	**II**		**2**	**4**
6.	Samanya vijnaneeyam 6.1 – Introduction of concept of Saamaanya According to Darshana and Ayurveda. – Classification of Saamaanya 6.3 - Practical application of saamaanya 6.4 - Principle and examples in contemporary sciences which will enhance understanding theconcept of Saamanya.	**III**	**27**	**3**	**6**
7.	Vishesha vijnaneeyam 7.1 – Introduction of concept of Vishesha according to Darshana and Ayurveda 7.2 - Classification of Vishesha 7.3 - Practical Application of vishesha 7.4- Principles and examples in contemporary sciences which will enhance understanding the concept of Vishesha	**III**		**3**	**6**
8.	Samavaya vijnaneeyam 8.1 – Introduction of concept of Samavaaya According toDarshana and Ayurveda. 8.2 – Practical application of Samavaaya 8.3- Principles and examples in contemporary sciences which will enhanceunderstanding theconcept of Samavaya	**III**		**2**	**4**
9	Abhava vijnaneeyam 9.1 – Introduction of concept of Abhaava According to Darshana and Ayurveda. 9.2 – Classification of Abhaava. 9.3 – Practical application of Abhaava 9.4- Principles and examples in contemporary sciences which will enhance understanding the concept of Abhava.	**III**		**2**	**4**

Paper II					
	A2 List of Topics – AyUG-PV	**B2 Term**	**C2 Marks**	**D2 Lecture hours**	**E2 Non-Lecture hours**
1	Pariksha 1.1. Definition, Significance, Necessity and Use of Pariksha. 1.2. Definition of Prama, Aprama, Prameya, Pramata, Pramana. 1.3. Significance and importance of Pramana, Enumeration of Pramana according to different schools of Philosophy. 1.4. Four types of methods for examination in Ayurveda (Chaturvidha-Parikshavidhi), Pramana in Ayurveda. 1.5. Subsudation of different Pramanas under three Pariksha. 1.6. Practical application of methods of examination (Parikshavidhi) in Nidan and Chikitsa.	I	26	6	12
2	**2. Aptopdesha Pariksha/Pramana** 2.1. Lakshana of Aptopadesha, Lakshana ofApta. 2.2. Lakshana of Shabda, and its types. 2.3. Shabdavritti-Abhidha, Lakshana, Vyanjana and Tatparyakhya.Shaktigrahahetu. 2.4. Vaakya: Characteristics, Vaakyarthajnanahetu- Aakanksha, Yogyata, Sannidhi. 2.5. Importance of Aptopadesha in maintaining Health, Prevention of Diseases, Diagnostics, Therapeutics and Research.	**I**		6	10

3.	**3. Pratyaksha Pariksha/Pramana** 3.1. Lakshana of Pratyaksha, types of Pratyaksha- Nirvikalpaka- Savikalpaka with description, description of Laukika and Alaukika types and their further classification. 3.2. Indriya-prapyakaritvam, six types ofSannikarsha. 3.3. Indriyanam lakshanam, classification and enumeration of Indriya. Description of Panchapanchaka, Penta-elemental nature of Indriya (*Panchabhautikatwa* of Indriya) and similarity in sources (*Tulyayonitva*) ofIndriya. 3.4. Trayodasha Karana, dominance ofAntahkarana. 3.5. Hindrances in direct perception (*pratyaksha-anupalabdhikaarana*), enhancement of direct perception (Pratyaksha) by various	**II**	42	8	14
	instruments/ equipments, necessity of other Pramanas in addition to Pratyaksha. 3.6. Practical study/ application of Pratyaksha in Sharir, Nidan (Diagosis), Chikitsa(Treatment) and Anusandhan (Research).				
4.	**4. Anumanapariksha/Pramana** 4.1. Lakshana of Anumana. Introduction of Anumiti, Paramarsha, Vyapti, Hetu, Sadhya, Paksha, Drishtanta. Types of Anumana mentioned by Charaka and Nyayadarshana. 4.2. Characteristics and types of Vyapti. 4.3. Lakshana and types of Hetu, Description of Ahetu and Hetwabhasa. 4.4. Characteristics and significance of Tarka (logic). 4.5. Practical study/ application of Anumanapramana in Sharir, Nidan, Chikitsa and Anusandhan.	II		10	15
5.	**5. Yuktipariksha/Pramana** 5.1. Lakshana and description. 5.2. Importance in Ayurveda. 5.3. Practical study and utility in diagnostics, therapeutics and research.	III		2	2
6.	**6. UpamanaPramana** 6.1. Lakshana. 6.2. Application in Sharir, diagnostics, therapeutics and research.	III		2	4

7.	**Karya- Karana Siddhanta** 7.1. Lakshana of Karya and Kaarana. Types of Kaarana. 7.2. Significance of Karya and Kaarana in Ayurveda. 7.3. Different opinions regarding the manifestation of Karya from Kaarana: Satkaryavada, Parinamavada, Vivartavada, Asatkaryavada, Arambhavada, Paramanuvada, Kshanabhanguravada, Pilupaka, Pitharpaka, Anekantavada, Swabhavavada, Swabhavoparamavada. Importance/ Utility of each of these in Ayurveda 7.4 Study of cause effect relationship, causality, causation in Contemporary sciences.	III	32	11	13

Table 5: Non Lecture Activities Course AyUG-PV

Table 5- Course AyUG-PV Non Lecture Activities- 140

	List non lecture Teaching-Learning methods *	No of Activities
1	GROUP DISCUSSION	20
2	**PRACTICALS AND DEMONSTRATIONS**	45
3	ACTIVITY BASED LEARNING	10
4	PROBLEM BASED LEARNING	10
5	ENQUIRY BASED LEARNING	8
6	CASE BASED LEARNING	6
7	GAME BASED LEARNING	8
8	FLIPPED CLASSROOMS	6
9	DEBATE	8
10	SEMINARS	6
11	TUTORIALS	5
12	ROLE PLAY	5
13	SELF DIRECTED LEARNING	3
		140

Table 6: Assessment Summary AyUG-PV

6 A - Number of Papers and Marks Distribution

S.No.	Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
				Practical/ Clinical	Viva	Electives	IA	Sub Total	
1.	**AyUG-PV**	2	200	100	60	10 (Set-FB)	30	200	400

6 B - Scheme of Assessment (formative and Summative)

SR.NO.	PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
		First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
1	First	3 PA & First TT	3 PA & Second TT	3 PA & UE

PA: Periodical Assessment; TT: Term Test; UE: University Examinations

6 E- Paper Layout **I PROFESSIONAL BAMS EXAMINATIONSAyUG-PV**

Paper-I

Time: 3 Hours Maximum Marks: 100 INSTRUCTIONS: All questions compulsoryTOTAL MARKS 100

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

I PROFESSIONAL BAMS EXAMINATIONS

AyUG PV

Paper-II

Time: 3 Hours Maximum Marks: 100 INSTRUCTIONS: All questions compulsoryTOTAL MARKS 100

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

7. References /Resourses

Reference Books

	PadarthaVignana books	**Authorus**
1.	Padarthavigyan	Acharya Ramraksha Pathak
2.	AyurvediyaPadarthaVigyana	Vaidya Ranjit Rai Desai
3.	Ayurved Darshana	Acharya Rajkumar Jain
4.	PadarthaVigyana	Kashikar
5.	PadarthaVigyana	Balwant Shastri
6.	SankhyatantwaKaumadi	GajananShastri
7.	Psycho Pathology in Indian Medicine	Dr. S.P. Gupta
8.	CharakEvumSushrutkeDarshanik Vishay	Prof.Jyotirmitra Acharya
9.	AyurvediyaPadarthaVigyana	Dr. Ayodhya Prasad Achal
10.	PadarthaVigyana	Dr. Vidyadhar Shukla
11.	Post graduate text book of Samhitha&Sidhanta	Dr P.P.Kirathamoorthy and Dr Anoop AK
12	Padartha Vigyana	Dr. Ravidutta Tripathi
13.	AyurvediyaPadarthaVigyana	Vaidya Ramkrishna Sharma Dhand
14.	AyurvediyaPadartha Vigyan Parichaya	Vaidya Banwarilal Gaur
15.	AyurvediyaPadartha Darshan	Pandit Shivhare
16.	Scientific Exposition of Ayurveda	Dr. Sudhir Kumar
17	Padarthavignana and Ayurveda itihasa	Dr C R Agnives
18	Essentials of padarthavignana	Dr Vinodkumar MV
19	Padarthavignanevam Ayurveda Itihas	Dr RamnihorTapsi Jaiswal
20.	AyurvediyaPadarthavignana	Dr C R Agnives
21	AyurvediyaMoulikaSiddhanta	Dr V J Thakkar

professional Ayurvedcharya
(BAMS)

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Subject Code: AyUG-SA1

Samhita Adhyayan 1

Total number of Teaching : 400			
Lecture (LH) - Theory		**140**	**140 (LH)**
Paper I	140		
Non-Lecture (NLH) – Theory		**260**	**260 (NLH)**
Paper I	260		

Examination (Papers & Mark Distribution)					
Item	**Theory Component Marks**	**Practical Component Marks**			
		Practical	**Viva**	**Elective**	**IA**
Paper I	**100**	**--**	**75**	**10 (Set-FC)**	**15**
Sub-Total	**100**	**100**			
Total marks	**200**				

PREFACE

The main purpose of Samhita teaching is to enable the students to read, understand and practice the Samhitas. Samhita is nothing but an ancient Practical Manual of Ayurveda. Samhita teaching and learning process need to be practically oriented for a better understanding of the subject. It is the need of time to make some addition in the current teaching and learning process of Samhita to make it more relevant, practical, and contemporary. New teaching technology tools will certainly be helpful in the effective delivery of knowledge of Samhita. As per the revised regulation, the nomenclature of the subject is **Samhita Adhyayana-I**.

The subject includes Ashtanga Hridayam Sutrasthana 1 to 15 chapters and Charaka Samhita Sutrasthana 1 to 12 chapters as a part of Samhita Adhyayana-I for First Professional BAMS course. In this revision, NCISM has tried its best to take Samhita teaching beyond the four walls of the classroom and connected it with todays' living of people and society. For effective content delivery and to create interest in the subject of Samhita, it becomes evident to teach Samhita with practical demonstrations.

Samhita Path is the first step and most effective method of Samhita teaching adopted and practiced by our ancient acharyas. In order to facilitate practice the ancient Samhita learning, twice the non-lecture class of the total classes is exclusively reserved for Samhita learning activity. To make baseline uniformity in the process of learning, teaching methodology guidelines are provided which shall be followed while teaching the chapters of both the Samhitas. Students learn various principles of Ayurveda in Samhitas. Terminologies make the task initially difficult. Hence to make the Samhita learning more interesting, various education technology tools are included in the curriculum at various places understanding the need of the topic. Activity-based learning will enable the internalization of the concepts and will build a strong platform while learning other subjects of Ayurved.

As explained in Samhitas things learned in shastra (Science) and experience practically both when happens together will enhance the knowledge. It will further lead to application in practice.

Course Code and Name of Course

	Course code	Name of Course
	AyUG-SA1	**Samhita Adhyayan 1**

AyUG SA1 Course

Table 1- Course learning outcomes and matched PO.

SR1 **CO** **No**	**A1** **Course learning Outcomes (CO) AyUG SA1** **At the end of the course AyUG-SA1, the students should be able to-**	**B1** **Course learning Outcomes matched with program learning outcomes.**
CO1	Distinguish the different *Samhitas*, their importance and methodology and familiarize with the tools of *Samhita Adhyayan*. (eg: *tantrayukti*)	PO2, PO9
CO2	Interpret and apply the *sutras* from the *Samhitas*.	PO1
CO3	Apply and evaluate the *Tridosha*, *Saptadhatu* and *Mala* principles (theory).	PO1, PO3, PO5
CO4	Practice and prescribe *Dincharya* (daily regimen), *Ritucharya* (seasonal regimen) and dietary principles for preservation of health.	PO2, PO7, PO8
CO5	Explore and distinguish different types of food, food groups and medicinal *dravyas* mentioned in *Samhitas*.	PO1, PO2
CO6	Identify various etiopathological factors and predict different treatment principles	PO1, PO5
CO7	Recognize and explain the fundamentals behind various therapeutics (*Shodhan* and allied) and parasurgical therapies.	PO2, PO5
CO8	Develop a code of behavior and show mature behaviour in particular to the scientific deliberations.	PO 6, PO 9

Table 2 : Contents of Course AyUG-SA1

Sr No	A2 List of Topics AyUG-SA1	B2 Term	C2 Marks	D2 Lecture	E2 Non-Lecture
1.	Introduction to Samhita- i. Definition of Samhita and its types and nomenclature**.** (Samhita- forms, nomenclature, commentary, types etc.) ii. Brief Introduction of Samhitas (Bruhatrayee), their commentaries and commentators (Preceptors, aut hours, redactors, commentators) iii. Tantrayukti, Tantraguna and Tantradosha iv. RachanaShaili & BhashaShaili (Composition and Language style) of Bruhatrayee. v. Anubandha Chatushtya vi. Ashta-Prashna vii. Trividha Jnyanopaya	1	(Indicated in Viva)	15	09
Ashtang Hriday Samhita - Sutrasthan (1-15 Adhyaya) -			50 marks		
2.	AH Su.1. Ayushkamiya Adhyaya- i. Ashtang Hridaya parichaya (Introduction to Ashtang Hridaya) ii. Dosha-dhatu-mala parichaya (Introduction to dosha, dhatus and mala) iii. Agni- koshtha swarup (Concept of digestive fire and bowel habits) iv. Rasa, virya, vipaka prabhav guna parichaya (Introduction to rasa, virya, vipaka, prabhav and guna) v. Rog-aarogya swaroop (Concept of health and disease) vi. Roga-aatur parikshan (Assessment of disease and diseased) vii. Desha and kaala parichaya (Introduction to habitat and time) viii. Chikitsa bheda (Types of treatment) ix. Pada chatushtaya Swaroopam (Concepts of four factors of treatment) x. Vyadhi sadhyasadhyatva (Types of prognosis)	1		08	03

	xi. Recitation of important shlokas				
3.	AH Su.2. Dinacharya Adhyaya- i. Dincharya vihaar (Importance of various regimen in Dincharya) ii. Shuddhi Niyam (Personal hygiene) iii. Dharmapalan evam sadvrutta palan iv. Recitation of important shloka	1		05	04
4.	AH Su.3. Rutucarya Adhyaya- i. Shadrutu (Classification of seasons according to Uttarayan and Dakshinayan) ii. Rutucharya (detailed regimen of the six seasons) iii. Rutusandhi (inter-seasonal period) iv. Recitation of important shlokas	1		05	04
5.	AH Su.4. Roganutpadaniya Adhyaya- i. Adharaneeya vega and chikitsa (symptoms arising due to suppression of natural urges and their treatment) ii. Dharneeya vega (Concept of urges which hav eto be suppressed) iii. Shodhan chikitsa (Importance of purification treatments) iv. Hita-aahar-vihar sevan (Importance of following healthy lifestyle) v. Recitation of important shlokas	I		05	04
6.	AH Su.5. Dravadravya Vijnaniya Adhyaya- i. Jala Varga (Water from different sources, various states of water) ii. Dugdha Varga (Milk and milk products) iii. Ikshu Varga (Sugarcane and its products) iv. Madhu varnana (Properties of honey) v. Tail Varga (Oils of various sources) vi. Madya Varga (Types of alcoholic beverages) vii. Mutra Varnana (Types of urine) viii. Recitation of important shlokas	I		05	04
7.	AH Su.6. Annaswaroopa Vijnaneeya Adhyaya- i. Shuka- DhanyanamSamanya Gunah (Properties of various types of cereals)	II		05	03

	ii. Shimbi- Dhanyananam Samanya Gunah (Properties of various types of Pulses) iii. Mamsasya Samanya Gunah (Properties of meat of various animals) iv. Shakayoh Samanya Gunah (Properties of various types of vegetables) v. Phalayoh Samanya Gunah (Properties of various types of Fruits) vi. Kritanna varganam Samanya Gunah (Properties of various types of cooked food) vii. Aushadhanam Samanya Gunah (Properties of various types of medicinal herbs)				
8.	AH Su.7. Annaraksha Adhyaya- i. Rajnikate- Vaidyasthiti (Important place of Vaidya in Kings palace) ii. Savishanna Lakshanam (Properties of poisoned food) iii. Savishanna Pariksha (Examination of food contaminated with poison) iv. Savishanna-Lakshana- Aushadha (Signs of food poisoning and its treatment) v. Viruddha Aahar (Incompatible food and food practices) vi. Satmikaran Krama (Method of adaptation of wholesome food habits and to taper unwholesome food habits) vii. Aahar-Shayan-Abrahmacharya – Trayopasthambha (Three accessary pillars of Health) viii. Recitation of important shlokas	II		04	03
9.	AH Su.8. Matrashitiya Adhyaya- i. AaharMatra (appropriate quantity of food) ii. Heen-matra, ati-matra bhojan dosha (Demerits of excess and less quantity of food) iii. Alasak, Visuchika (Etiopathogenesis and management principles of Vishuchika and Alasak) iv. Apatarpan chikitsa	II		05	04

	v. Types of Ajeerna (indigestion) and its causes vi. Bhojan-samyak yog (Ideal regimen and time for taking food) vii. KukshiVibhag (Imaginary parts of the stomach) viii. Details of Anupan (Liquid consumed along with or after food) ix. Recitation of important shlokas				
10	AH Su.9. Dravyaadi Vijnaniya Adhyaya- i. Dravya shreshthtva(Predominance of Dravya) ii. Dravyasya panchbhautikatvam (Prevalence of Panchamahabhutas in dravyas) iii. Panchbhautik dravyanaam guna(Characteristics of PanchabhautikDravyas) iv. Principles of dravyas viz Veerya-Vipaka- Prabhava v. Recitation of important shlokas	II		04	04
11	AH Su.10. Rasabhediya Adhyaya- i. Shadrasanaam utpatti (Origin of Shadrasa) ii. Shadrasa parichaya (Identity of Six Rasas) iii. Shadrasa karma, guna, atiyoga lakshana (Functions, properties and presentation of excessive intake of Six Rasas.) iv. Recitation of important shlokas	II		05	04
12	AH Su.11. Doshadi Vijnaniya Adhyaya- i. Importance of dosha dhatu mala ii. Dosha dhatu mala prakruta and vaikruta karma (normal and abnormal functions) iii. Dosha dhatu mala ashraya- ashrayi bhava (relation between dosha and dhatus) iv. Samanya chikitsa siddhanta for dosha dhatu mala vruddhi kshaya (treatment principles) v. Agni (Digestive fire) vi. General pathophysiology for origin of diseases vii. Ojus (Essence of dhatus)	III		08	05

	viii. Vriddhi-kshaya bheshaja ix. Recitation of important shlokas				
13	AH Su.12. Doshabhediya Adhyaya- i. Dosha and dosha bheda (Dosha and their types) ii. Dosha chaya, prakopa, prasham karanani (Causes of dosha accumulation, aggregation and alleviation) iii. Trividhakarana (three causative factors of disease) iv. Trividha Roga marga (three pathways of disease) v. Aatura parikshbhaav (assessment methods) vi. Recitation of important shlokas	III		08	05
14	AH Su.13. Doshopakramaniya Adhyaya- i. Tridosha- upakrama (Treatment principles of vitiated doshas) ii. Shuddha-ashuddha chikitsa lakshana (Accurate and inaccurate treatment) iii. Dosha gati (movement of doshas inside the body) iv. Concept of aama v. Dasha aushadha-kaala (ten types of times for administering medicines) vi. Recitation of important shlokas vii. Research Updates – Langhan : Fasting and autophagy induction – how cell recycle and renew theor content, a process called autophagy.	III		07	06
15	AH Su.14. Dvividhopakramaniya Adhyaya- i. Concept of Langhan and Brihan therapies (Treatment procedures for making the body thin and for nourishment) ii. Concept of Shodhan and shaman therapies (Purification and palliative treatments) iii. Concept of Atistaulya and atikarshya (Obesity and emaciation) iv. Recitation of important shlokas	III		05	05

16	AH Su.15. Shodhanadigana Sangraha Adhyaya- i. Groups of dravyas according to specific action ii. Groups of dravyas according to major ingredient as well as action	III		02	04
	Charak Samhita – Sutrasthan (1-12 Adhyaya):		50 marks		
17	Ch S Su 1. Deerghanjiviteeya Adhyaya- i. Ayurvedavataranam (Genealogy of Ayurveda) ii. Arogsya chaturvarge pradhanam karanam iii. Trisutra Ayurveda iv. Details of Shat padartha v. Ayurvedasya lakshanam tatha prayojan vi. Ayusho lakshanam paryayashcha vii. Samanyavisheshayorlakhanam viii. Tridanda ix. Vyadhinam trividho hetusamgrah x. Vyadhinam ashraya tatha Arogasya karanam xi. Atmano lakshanam xii. Details about Sharira and manas dosha xiii. Sadhyaasadhyata vikara chikitsa xiv. Rasa varnanam xv. Dravya bheda xvi. Aushadhinam nama-rupa-upyog gyan xvii. Bhishagbubhushoh kartavyam xviii. Yuktasya bhaishajyasya lakshanam xix. Bhishaktamasya lakshanam xx. Recitation of important shlokas	1		07	02
18	Ch S Su 2. Apamarga Tanduliya Adhyaya- i. Shiro Virechana Dravya & Main Indications ii. Vamana Dravya & Main Indications iii. Virechana Dravya & Main Indications iv. Asthapana Dravya & Main Indications	II		02	03

	v. Anuvasana Dravya & Main Indications vi. Ashtavimshathi Yavagu vii. Panchakarma Mahatwa & Vaidya Guna viii. Recitation of important shlokas				
19	Ch S Su 3. Aragvadhiya Adhyaya- i. Dwa Trimshath Churna Pradeha & Main Indications	II		01	03
20	Ch S Su 4. Shadvirechana-shatashritiya Adhyaya- i. Shadvirechan aashrya ii. Panchkashaya yoni iii. Panchvidh kashaya kalpana iv. Panch kashaya shatani	II		03	04
21	Ch S Su 5. Matrashiteeya Adhyaya- i. MatravatAhara ii. Nature of Ahara (Guru, Laghu) iii. AharaMatra iv. MatravatAharaPhala v. AharaSevanaVidhana on the bases of its nature vi. Swasthavrutta vii. Anjana viii. Dhumapana ix. Nasya x. Dantadhavana xi. Jivhanirlekhana xii. Gandusha xiii. Abyanga xiv. Parimarjana xv. VastraGandhaMalyadiDharana xvi. Shouchavidhi xvii. Kshoura Karma xviii. PadatraDharana xix. ChatraDharana xx. Important Shlokas for recitation xxi. Research Updates: Role of Dinacharya to maintain circadian rhythm Role of therapeutic message for cell rejuevination Mechanism of satiation and proper quantity of food (Sauhitya Matra)	II		03	05

22	Ch S Su 6. Tasyashiteeya Adhyaya- i. Classification Samvastara ii. Visarga Kala iii. Adana kal;a iv. Shadrutuvivechana and Charya v. Hamsodaka vi. Saatmya vii. Important shlokas for recitation viii. Research Updates: What causes the season: Summer and winter solistice- Equinoxes- Rotation of earth around sun.	II		04	04
23	Ch S Su 7. Naveganadharaniya Adhyaya- i. Adharneeya-Dharneeya vega lakshan, chikitsa ii. Vyayam (Details regarding exercise) iii. Ahita sevan evam varjya vidhi iv. Deha prakruti (Body constitution) v. Agantuja evam Pradnyaapradh janya vyadhi evam chikitsa vi. Impotant Shlokas for recitation vii. Research Updates: Corelation of genomic variation with the classification of Prakriti	II		04	04
24	Ch S Su 8. Indriyopakramaniya Adhyaya- i. Enumeration of Indriya, Dravya, Adhishthana, Artha, Buddhi ii. Manas Lakshana iii. Ekatvam of Manas iv. Sattvikatva, Rajasatva and Tamasatva of Manas v. Indriya PanchaPanchaka vi. Adhyatma Dravya Guna Sangraha vii. Mahabhuta – Indriya sambandh viii. Prakriti – Vikriti hetu ix. SadvrittaAnushthana x. Hetuchatushtaya xi. AnuktaSadvritta xii. Important Shlokas for Recitation xiii. Research updates: Mental health and gut microbiota.	II		04	03
25	Ch S Su 9. Khuddakachatushpada Adhyaya- i. Chikitsa Chatushpada ii. Roga-Arogya Lakshana	II		03	03

	iii. Chikitsa Lakshana iv. Vaidya, Dravya (Bheshaja), Paricharaka, Aatura guna v. Vaidya pradhanatva vi. Adnya chikitsak dosha vii. Sadvaidya lakshana viii. Vaidya kartavya ix. Vaidya Vritti x. Recitation of important Shlokas xi. Research Updates: Medical ethics-principles Soft Skill development for medical students Emotional Intelligence as a crucial component in medical edication				
26	Ch S Su 10. Mahachatushpada Adhyaya- i. Catushpaada-bheshajam alam aarogyaayeti (aatreya-krta) ii. Bheshaja-abheshajayo tulyatva pratipaadana – (maitreya-krta) iii. Its conclusion by Atreya iv. Pareekshya-kaarino hi kusalaa bhavanthi v. Cikitsaa sootram vi. Cikitsaayaam yasolaabhe kaaranam vii. Asaadhyaroga-cikitsaayaam haani viii. Further division of saadhya-asaadhyata ix. Sukha-saadhya lakshanam x. Krcchra-saadhya lakshanam xi. Yaapya lakshanam xii. Pratyaakhyeya lakshanam xiii. Benefit of knowledge of prognosis xiv. The versatile usage of the term 'mithyaa-buddhi' xv. Recitation of important shlokas	II		03	03
27	Ch S Su 11. Tisraishaniya Adhyaya- i. TrividhaEshana (Three Desires of life) ii. Paralokaeshana iii. Chaturvidhapariksha iv. Punarjanma siddhi by Chaturvidhapramanas v. Trayopasthambha vi. Trividhabala	III		06	04

	vii. Trividhaayatana viii. Atiyoga, Heenayoga and Mithya yoga of artha, karma and kaala ix. Trividharoga x. Treatment for manasavyadhi xi. Trividharogamarga xii. Trividhavaidya xiii. Trividhaoushadha xiv. Ashtatrika xv. Important Shloka for Recitation				
28	Ch S Su 12. Vatakalakaliya Adhyaya- i. Vata guna ii. Views of various Acharyas on Vata dosha Guna avum Karma iii. Vayu prakop-prasham karan iv. Akupita, kupita vayu karma v. Vata Dosha – Clinical application vi. Akupita-kupita pitta karma vii. Akupita- kupita kapha karma viii. Atreya's exploration on Tridosha ix. Important shloka for recitation	III		04	05 + 15 (for yearly competitions)
• Note- In this column distribution of 130 activity is given. Remaining 130 is for Samhita Pathan.					

Table 4 : Practical/ Activities for AyUG - SA 1

Term wise distribution of allotted time				
Term	**Total teaching Hours**	**Lecture (140 hrs)**	**Non Lecture (260hrs)**	
			Samhita Pathan(130 hrs)	**Activities- In class / Hospital(130 hrs)**
I	**130 hrs.**	**50 hrs.**	**50**	**30**
II	**140 hrs.**	**50 hrs.**	**40**	**50**
III	**130 hrs.**	**40 hrs.**	**40**	**50**

Table 5: Non Lecture Activities Course AyUG-SA1

Non Lecture activities- (Samhita Pathan / In Class Activities & Hospital Based activities) : 260 hrs

SN	Name of Practical	Term	
1.	Samhita Pathan	I, II, III	Total 130 in all three terms. (Term I-50 hrs; Term II - 40hrs; Term III - 40hrs)
	In Class Activities/ Case Based Activities/ Field Activities		

2.	1. Introduction to Samhita Problem based learning : Application of Tantrayukti for chapter number 1, 2 of Ashtang Hridaya and chapter 1st of charak Samhita.	I	5 hrs.
	Group Activity Interpret Anubandha Chatushtya with examples Interpret Ashta Prashna with example	I	4 hrs
	Ashtang Hriday Samhita - Sutrasthan (1-5Adhyaya)		
3.	AH Su 1. Ayushkamiya Adhyaya Commentary Based activity- Fetch the meaning of important terms on the basis of commentary. (Any 30 important words). Make your own dictionary.	I	3 hrs
4.	AH Su 2. Dinacharya Adhyaya- Survey Activity: Application of concepts- Dincharya and its application: Proforma based assessment in healthy volunteers/ patients. Daily routine shall be recorded on the basis of predesigned proforma and then shall discuss. Communication Skill introduction. Survey Role play.	I	4 hrs
5.	AH Su 3. Rutucarya Adhyaya- Application of concepts- Ritucharya and application - Proforma based assessment in healthy individuals or patients.	I	4 hrs
6.	AH Su 4. Roganutpadaniya Adhyaya- Case Based Activity/Learning- Assess the sign and symptoms of given case on the basis of learning of Adharaneeya Vegas and find out the probable causative factors on the basis of principles taught.	I	4 hrs

7.	AH Su 5. Dravadravya Vijnaniya Adhyaya Group Activity-(Group presentation)- Utility of Dravyas:- Allocate the Dravadravya Vargas among student groups. Every group will Justify (represent) the practical utility of dravyas allotted to them.	I	4 hrs
8.	6. Annaswaroopa Vijnaneeya Adhyaya- Group presentation- Justify the utility of this chapter in present era- Every group will illustrate the utility of their assigned Aahara Dravya Varga (Discuss practically available dravyas)	**II**	3 hrs
9.	7. Annaraksha Adhyaya- Discussion- Explore the present dietary habits- Explore the Various diet combinations used in present society (by four family/ Relatives/ neighborhood) on the basis of principles learned for viruddhahar. Discuss them in class. Trayopastambha -Importance of Nidra- Flipped classroom- Share the prerecorded videos/ other material with students before class. On the basis of these have discussion.	**II**	4 hrs
10.	8. Matrashitiya Adhyaya- Case Based learning- Determine adverse effects of heena matra (inadequate quantity of food) and atimatra (excess quantity of food) ahara:- (Video clip of patient suffering from a type of Ajeerna can be shared in class and then group wise discussion on the concept.) Group Activity- Differentiate between the food items recommended and non-recommended for daily use:- Cross refer the previous chapters and demonstrate the rationale behind the wholesome or unwholesome nature of these enlisted Dravyas referring their qualities.	**II**	4 hrs

11.	9. Dravyaadi Vijnaniya Adhyaya- Application of concepts- Enlist the dravyas according to Rasa, Veerya, Vipaka, Prabhav. (Can refer chapter 5,6,10 of Ashtang Hriday and Chapter 2, 3, 4 of Charak Samhita). Apply the concepts learned in present chapter to understand the action of Dravyas.	**II**	4 hrs
12.	10. Rasabhediya Adhyaya- Case based learning- Prepare proforma enlisting the sign and symptoms of excess consumption of six Rasas and regular diet pattern. Asses the predominance of Rasa consumption in patients or healthy volunteeres. Then Correlate with the case findings.	**II**	4 hrs
13.	11. Doshadi Vijnaniya Adhyaya- Case Based learning-(CBL)- Assess the patient for Vriddhi and Kshaya Lakshanas of Dosha-Dhatu-Mala, based on predesigned proforma. Discuss these case findings later in class.	**III**	5 hrs
14.	12. Doshabhediya Adhyaya- Model making Activity- Working models on Dosha Sthanas or Subtypes of Doshas, Chaya, Prakop and Prashama of Doshas: PBL/CBL Give one problem/case based on Samanya Dosha Nidan. Student will identify possible causative factors responsible for vitiation of Doshas in given problem	**III**	5 hrs
15.	13. Doshopakramaniya Adhyaya- Case Based learning-(CBL)- Group activity- Observe the signs and symptoms of Ama in any five patients (Group wise) and present and discuss it in class. Seminar Presentation- a. Understand Aushadha Kaal in relation with suntypes of Vata Dosha. b. Recognize the principles applicable during treatment of Saam Dosha and Dushyas.	**III**	6 hrs

16.	14. Dvividhopakramaniya Adhyaya- Case based learning- Find out the causative factors of Atishualya in present era (On the basis of predesigned proforma) CBL Share video clip of any patient suffering from Atikarshya- On the basis of previous learning discuss the contributing factors responsible for malnourishment. (Explore Dhatu Sneha Parampara in present context).	**III**	5 hrs
17.	15. Shodhanadigana Sangraha Adhyaya- Group Presentation- Divide the various Aushadha Vargas among students and a group will represent each varga and related practical information.	**III**	4 hrs
	Charak Samhita – Sutrasthan (1-12 Adhyaya)		
18.	CS Su 1. Deerghanjiviteeya Adhyaya- Compilation work: (based on commentry) ● Student has to write 20 terminologies with meanings referring Chakrapani commentary. Then after these terms shall be discussed in class.	I	2
19.	CS Su 2. Apamarga Tanduliya Adhyaya- Visit to Dravyaguna Department- Identify the dravyas on the basis of different karmas	**II**	3 hrs
20.	CS Su 3. Aragvadhiya Adhyaya-Group Discussion- Probable mode of action of drugs applied externally? In which form they will more absorbable? (May take help of published literature; discuss linking with Ayurveda fundamentals.) Practical demonstrations in Panchakarma unit on patients. Workshop/ demonstration of preparation of different lepas useful in different conditions.	**II**	3 hrs

21.	CS Su 4. Shadvirechana-shatashritiya Adhyaya- Practical Demonstration: Visit to Dravyaguna Department and demonstration of various Mahakashay and its uses (Integration with Dravyaguna department)	**II**	4 hrs
22.	CS Su 5. Matrashiteeya Adhyaya- Visit to Panchakarma Unit of Hospital – Demonstration of abhyanga, mardana,udvartana and other procedures to be followed in daily routine (Integration with Panchakarma Department) Group Project : Gather information about nutritive values of Nitya Sevaniya Dravyas. Assess their classical properties. Discuss why these dravyas are specially advised for regular consumption.	**II**	5 hrs
23.	CS Su 6. Tasyashiteeya Adhyaya-Documentation- Festival and rutu- Documenting the changes in the food habits and lifestyle as per the rutu with the parents and elders and also discussing on relevance of rutucharya concept with Indian festivals. Short Essay writing /Poster making- Does and don'ts to be followed according to various seasons (Refer both the Samhitas for this activity)	**II**	4 hrs
24.	CS Su 7. Naveganadharaniya Adhyaya:- Vedio clip making Activity- Educating people about harms of vega dharana by social media campaigns Group Discussion- Finding reasons for vega dharana in present day lifestyle.	**II**	4 hrs

25.	CS Su 8. Indriyopakramaniya Adhyaya- Group Presentation- Sadvrutta – Interpreting relevance of different sadvrutta in present scenario. Developing new sadvruttas as per todays' lifestyle referring classics.	**II**	3 hrs
26.	CS Su 9. Khuddakachatushpada Adhyaya- Doctor Patient communication introduction, Role play. Feedback collection of chikitsa chatushpada Group activity- Collect Feedback on qualities of Vaidya from rogi and upasthata. Collect Feedback on qualities of rogi from vaidya and upasthatha Collect Feedback on qualities of upasthatha from rogi and Vaidya Collect feedback on qualities of dravya from the experts of dravyaguna and rasa shastra	**II**	3 hrs
27.	CS Su 10. Mahachatushpada Adhyaya- Developing proforma for sadhya asadhya vyadhi lakshanas-	**II**	3 hrs
	Guide students on how to prepare a proforma to assess any available parameters.		
28.	CS Su 11. Tisraishaniya Adhyaya- Debate :- Punarjanma siddhant as per different thoughts. Debate on punarjanma with different references as per classics and contemporary understanding.	**III**	5 hrs
29.	CS Su 12. Vatakalakaliya Adhyaya- Role Play (Enact sambhasha parishad) – Distribute the characters of the rishis given in chapter. And guide them with the script. Arrange a forum where these students will be doing sambhasha parishad on vata kala-akala. Decode the sutras- Students in groups will use different tools like infographics/ animation/ ppts to illustrate the normal functions of Vata Dosha explained in present chapter. (Refer Chakrapani commentary thoroughly to understand the meaning of Sanskrit shlokas). Introduction to Group Dynamics. Communication skills for Group Discussions.	**III**	5 hrs

30.	Shloka Recitation Competition- At the end of the year/ every term such competition shall organized by department.	**III**	5 hrs
31.	Ayurveda Quiz- On the basis of assigned syllabus.	**III**	5 hrs
32.	Poster making Competition / SA writing completion / Making video clips for general people to make awareness about Ayurved living.	**III**	5 hrs

Table 6: Assessment Summary

6 A- Number of Papers and Marks Distribution

S.No.	Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
				Practical/ Clinical	Viva	Electives	IA	Sub Total	
1.	AyUG-SA1	1	100	-	75	10 (Set-FC)	15	100	200

6 B - Scheme of Assessment (formative and Summative)

SR.NO.		PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
			First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
1	AyUG-SA1	First	3 PA & First TT	3 PA & Second TT	3 PA &UE
	PA: Periodical Assessment; TT: Term Test; UE: University Examinations				

6 C - Calculation Method for Internal assessment Marks (15 Marks)

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 15 Marks (D/15*15)	Term Test (Marks converted to 15) (15 Marks)	Sub Total _/30 Marks	Term Assessment (…./15)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							

	Maximum Marks in Parentheses *Select an Evaluation Methods which is appropriate for the objectives of Topics from the Table 6 D for Peroadic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert to 15 marks.

6 D - Evaluation Methods for Periodical Assessment

S. No.	Evaluation Methods
1.	**Activities Indicated in Table 3 - Column G3 as per Indicated I, II or III term in column I3.**
2.	Practical / Clinical Performance
3.	Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
4.	Open Book Test (Problem Based)
5.	Summary Writing (Research Papers/ Samhitas)
6.	Class Presentations; Work Book Maintenance
7.	Problem Based Assignment
8.	Objective Structured Clinical Examination (OSCE),Objective Structured Practical Examination (OPSE),Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
9.	Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
10.	Small Project

6 E - Paper Layout

I PROFESSIONAL BAMS EXAMINATIONSAyUG-SA1 Time: 3

Maximum Marks: 100 INSTRUCTIONS: All questions

compulsoryTOTAL MARKS 100

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

7. Reference books/Resourses

- **Introduction to Samhita**

1. Ashtanghridayam with the commentaries 'Sarvangasundara' of Arundatta and 'Ayurvedarasayana'of Hemadri, Collated by Dr. Anna Moreshwar Kunte and Krishna Ramchandra Shastri Navre
2. Sushruta Samhita by Dr. Ambikadutta Shastri
3. Ayurvedeeya Padartha Vijnaan by Prof. C. R. Agnivesh
4. Ayurvedeeya Padartha Vijnaan and Ayurvedeeya itihaasam by Prof. C. R. Agnivesh
5. Ayurvediya Padarth Vidnyan by Vd. Ranjit Rai Desai
6. History of Medicine in India by Aacharya Priyavrat Sharma
7. History of Indian Medicine by J. Jolly

- **Ashtang Hridaya**

1. Ashtanghridayam with the commentaries 'Sarvangasundara' of Arundatta and 'Ayurvedarasayana'of Hemadri, Collated by Dr. Anna Moreshwar Kunte and Krishna Ramchandra Shastri Navre
2. Ashtanga Hridaya : English commentary by Dr. T. Shreekumar
3. Ashtanga Hridaya : English commentary by Dr. Vishwavasu Gaur
4. Ashtang Hridayam : English translation by Prof. K.R. Srikantha Murthy
5. Ashtanga Hridaya –English translation by Vd. Anantram Shastri
6. Ashtanga Hridayam by Dr. B. Ramarao
7. Illustrated Ashtanga Hridaya text with English Translation by Dr. R. Vidyanath
8. Ashtanga Hridaya: Hindi commentary by Lalchanda Vaidya
9. Ashtanga Hridaya: Hindi commentary by Vd. B.L.Gaur

- **Charak Samhita**

1. Charakasamhita by Agnivesha Revised by Charaka and Dridhbala with the Ayurveda Dipikacommentary of Chakrapanidatta Edited by Vaidya Yadavji Trikamji Acharya
2. Charak Samhita (English Commentary): Dr. Ram Karan Sharma and Vd. Bhagwan Dash orAacharya Priyavrata Sharma
3. Charak Samhita with translation of Chakrapani commentary by Harishchandra Kushvaha
4. Charak Samhita by Aacharya P.V.Sharma
5. Charak Samhita (Hindi commentary): Vaidya Jayadev Vidyalankar
6. Charak Samhita (Hindi commentary): Vaidya Atridev Vidyalankar
7. Charak Samhita (Hindi commentary): Prof. Gorakhanath Chaturvedi and Kashinath Shastri
8. Charak Samhita (Hindi commentary): Dr. Brahmanand Tripathi
9. Charak Samhita (Hindi commentary): Dr. Ravidatta Tripathi
10. Charaka Samhita –Ayurveda Dipika Commentary- Hindi translation by Dr. B.L.Gaur
11. Legacy of Charak – M S Valiathan
12. Charak e-Samhita –National Institute of Indian Medical Heritage –http://niimh.nic.in/ebooks/ecaraka
13. Charakasamhitaonline.com- Charak Samhita New Edition (carakasamhitaonline.com)

NCISM

I Professional Ayurvedcharya (BAMS)

Subject Code: AyUG-RS

Rachana Sharir

(Human Anatomy)

Summary

AyUG-RS Total number of Teaching hours: 500			
Lecture hours (LH) - Theory		**180 Hours**	**180 Hours (LH)**
Paper I	90 Hours		
Paper II	90 Hours		
Non-Lecture hours (NLH) – Theory		**80 Hours**	**320 Hours (NLH)**
Paper I	40 Hours		
Paper II	40 Hours		
Non-Lecture hours (NLH) - Practical		**240 Hours**	

Preamble

AyUG-RS Examination (Papers & Mark Distribution)					
Item	**Theory Component Marks**	**Practical Component Marks**			
		Practical	**Viva**	**Elective**	**IA**
Paper I	**100**	**100**	**70**	**--**	**30**
Paper II	**100**				
Sub-Total	**200**	**200**			
Total marks	**400**				

The primary purpose for teaching Rachana sharir to undergraduate students is to provide a thorough understanding of the basic principles of Sharir. Gross and microscopic structure and development of the human body in perspective of ancient and modern sciences, as well as to acquire necessary skills. Sharir in Ayurveda also provides in depth views to concepts like Marma and srotas.Learning of Sharir is most useful in further years in diagnosis and management of the diseases. Various teaching and learning methods, including didactic, demonstration, tutorial, group discussion, seminars, Integrated Teaching (IT), Problem Based Learning (PBL), and Early ClinicalExposure (ECE), Case-Based Learning (CBL), Virtual Dissection, and cadaveric dissection, are used totransfer knowledge to students, and the syllabus is constructed accordingly. As a result, the studentsappreciate being a part of the teaching and learning process. This will help the students to become competent, self-assured, caring, and concerned humans capable of providing ethical medical treatment.

Course Code and Name of Course

	Course code	Name of Course
	AyUG RS	**Rachana Sharir (Human Anatomy)**

AyUG RS

Table 1- Course learning outcomes and matched PO.

SR1 CO No	**A1 Course learning Outcome (CO) AyUG RS At the end of the course AyUG RS, the student should be able to-**	**B1 Course learning Outcome matched with program learning outcomes.**
1	Describe the fundamentals of Rachana Sharir, interpret and analyze it in relevant context and recognize its significance in Ayurveda	**PO1, PO2**
2	Explain Garbha Sharir and Embryology in Ayurveda and modern science respectively with clinical significance	**PO1, PO2**
3	Describe and demonstrate all the bones and joints with attachments of associated structures and its clinical application	**PO1, PO2**
4	Explain the concept of Sira-Dhamani-Strotas, their organization in the human body and its applied aspect	**PO1, PO2**
5	Identify the Marmas and understand its classification along with its importance in preventive and therapeutic aspect	**PO1, PO2**
6	Explain and demonstrate the gross anatomy of the organs of various systems and their applied anatomy in perspective of Ayurveda and Modern science	**PO1, PO2, PO3**
7	Explain the Indriya Sharir and Sensory organs with its application in preventive and therapeutic domain.	**PO1, PO2**
8	Identify and locate all the structures of body and mark the topography of the living Sharir.	**PO1, PO3**
9	Respect the cadaver and perform dissection with commitment to reiterate the theoretical aspect of Ayurved Rachana Sharir and contemporary sciences.	**PO1, PO3, PO5**
10	Describe the basic principles of imaging technologies and identify the anatomical structures in the radiograph	**PO1, PO2, PO3**

Table 2: Contents of Course AyUG-RS

Paper I					
SN	**A2** **List of Topics AyUG-RS**	**B2** **Term**	**C2** **Marks**	**D2** **Lecture hours**	**E2** **Non-Lecture hours**
1	**Shariropkramaniya Shaarira** • Sharir and Shaarir vyakhya (definitions of sharira and sharira) • Shadangatvam (Six regions of the body) • Anga Pratyanga vibhaga (subdivisions) • Sharir shastra vibhag • Sharir gyan prayojan and its description in contemporary science with its clinical importance	**I**	6	4	2
2	**Paribhasha Shaarira** • Kurcha, Kandara, Jala, Asthisamghata, Seemnta, Seevani, Rajju, and lasika • Terminologies related shadang sharir	**I**	4	3	1
3.	**Garbha Shaarira** • Garbha Vyakhya (Definition of Garbha) • Concept of Shukra and Artava • Garbhavkranti. Masanumasik grabhavruddhi • Role of panchamahabhoot in Garbhavruddhi • Concept of Beeja, Beejabhaga, Beejabhagavayava • Garbhposhana • Apara nirmiti, Garbhanabhinadi • Garbha Angapratyanga utpatti according to different Acharya • Garbha Vikruti	**I**	15	17	5
4.	**Asthi Shaarira** Enumeration of Asthi, Types, asthi swaroopa, with its applied aspect	**I**	4	2	1
5.	**Sandhi Shaarira** • Description of Sandhi and its enumeration, • Types of Sandhi with its clinical importance • Introduction of diseases of Sandhi explained in Ayurveda	**II**	4	2	3
6.	**Snayu sharir** Concept of Snayu and its clinical importance	**II**	3	2	1
7.	**Peshi Shaarira** • Description of Peshi, • Utpatti, types, Swaroop, function with its importance	**II**	3	2	1
8.	**Kesha, Danta, Nakha Sharir** • Description of Panchbhautik swaroop and its applied value • Explanation of its swabhava (Pitruja) and its applied value • Description of Prakrita (normal) and Vikruta(abnormal) Swaroop (appearance) of kesha, danta, nakha in concern with disease • Importance of examination of kesha, danta, nakha	**II**	4	2	1

	as diagnostic tool				
9	**Embryology** • Definitions and branches of embryology. • Embryo and Fetus. Sperm and Ovum, Fertilization, Cleavage. • Germ layers formation and their derivatives. • Laws of heredity, Sex determination and differentiation, Month-wise development of embryo. • Fetal circulation, Placenta formation, Umbilical cord formation	**I**	5	7	2
10	**Osteology** • Bone: structure, types and ossification. • Description of each bone with clinical anatomy	**I**	12	9	6
11	**Arthrology** • Joints: structure, types and movements. • Description of joints of extremities, inter-vertebral joints and temporomandibular joint with their clinical anatomy.	**II**	10	10	6
12	**Myology** • Structure and types of muscles. Description of important muscles: origin, insertion, actions, nerve supply and clinical anatomy. • Muscle movements in Yogasana	**II**	4	6	2
13	**Nervous System** • Nervous system: Introduction and classification • Meninges • Description of Brain and Spinal cord. • Description of Peripheral Nervous System: Cranial and Spinal nerves, Brachial, Cervical, Lumber and Sacral nerve plexus, • Anatomical consideration of Autonomic Nervous System, • Formation and circulation of cerebrospinal fluid • Blood supply of Brain and Spinal cord.	**III**	14	14	4
14	**Endocrinology** • Description of endocrine glands (Pituitary, Thyroid, Parathyroid, Thymus, Pineal and Suprarenal glands) with clinical aspects. • Histology of all glands.	**III**	8	8	3
15	**Lymphatic system** • Introduction Structure included in lymphatic system: Lymph vessels, Lymph nodes, Lymph glands with their clinical importance.	**III**	4	2	2

Paper II AyUG-RS

SN	**A2** **List of Topics AyUG-RS**	**B2** **Term**	**C2** **Marks**	**D2** **Lecture hours**	**E2** **Non-Lecture hours**
1	**Pramana Sharira:** Anguli pramana & Anjali praman with its applied importance	**II**	2	2	1

2	**Koshtha Evam Ashaya Sharira** • Definition of Kostha with its applied importance and • Enumeration of Koshthanga and its description • Concept of Ashaya with its clinical importance	**I**	4	2	1
3.	**Sira Sharir** • Concept of Sira • Nirukti, types, enumeration of Sira and its applied aspect • Introduction to Sira vedha	**II**	4	3	1
4.	**Dhamani Sharir** • Concept of Dhamani • Nirukti, types, enumeration of Dhamani and its applied aspect	**II**	2	2	1
5.	**Strotas Shaarira** • Concept of Strotas • Nirukti, types, number of Srotas, Strotomool and its applied aspect • Types of Strotas and its description. • Applied aspect of Strotas	**II**	7	8	3
6.	**Kala Shaarira** • Definition and etymology of Kala • Enumeration and description of Kala • Applied aspect of Kala	**III**	4	2	2
7.	**Indriya Shaarira** • Definition of Indriya, Indriya artha and Indriya adhisthan, • Number and importance of Indriya • Description of Gyanendriya, Karmendriya and Ubhayendriya (Manas). • Ayurved sharir of Indriya adhistan- Karna, Twacha, Netra, Jivha, Nasa • Applied aspect of Indriya	**III**	3	3	1
8.	**Twacha Sharir** Definition, types and characteristics of Twacha with its clinical importance, significance of Twacha adhisthana in disease manifestation, its relation with Dhatu.	**III**	3	2	2
9	**Marma Sharira** • Marma: definition, enumeration, classification, location • Surface demarcation of Marma • Explanation of Trimarma	**II**	15	13	4
	• Detail description of Marma with its applied importance.				
10	**Respiratory System** • Bronchial tree and Lungs with their clinical aspects. • Respiratory tract: Nasal cavity, Pharynx, Larynx, Trachea • Pleura with its clinical aspects • Diaphragm and its opening • Histology of all organs	**II**	10	6	4

11	**Digestive system** • Regions of abdomen • Organs of digestive tract (alimentary tract) with their clinical aspects. • Digestive glands: Liver, Spleen and Pancreas. • Description of peritoneum with its clinical aspects • Histology of all organs	**I**	12	10	6
12	**Cardiovascular system** • Description of Heart • Structure of artery & vein • Importance blood vessels with their course and branches. • Pericardium with applied aspect • Histology of Heart	**II**	8	8	3
13	**Urinary System** • Urinary tract: Kidney, Ureter, Urinary Bladder and Urethra with their clinical aspects • Histology of all organs	**II**	10	8	3
14	**Reproductive system** • Male Reproductive system: Reproductive organs, Scrotum and glands (Testis, Prostate and Seminal vesicles) with their clinical aspects. • Female reproductive system: Introduction of external genital organ in brief and internal reproductive organs in detail, tract and glands with clinical importance. • Histology of all organs	**III**	6	7	3
15	**Sensory organs** Description of structures of Eye, Ear, Nose, Tongue and Skin with their clinical aspects.	**III**	10	14	5

SN	Name of the Practical	Term	Hours
P1	• Branches of anatomy. History of Anatomy • Ethics in dissection hall	I	2
P2	Anatomical Terminologies Anatomical position, Planes, and explanation of anatomical terms related to skin,fasciae, bones, joints and their movements, muscles, ligaments, tendons, blood vessels, nerves.	I	4
P3	Preservation methods of the cadaver, Mrut sharir Samshodhan • Different methods of preservation techniques. Brief introduction of chemical composition of preservative fluid.	I	2
P4	Introduction of Anatomy Act and Brief detailing about Bio medical waste management act 1960	I	2
P5	Shava vichhedana – detailed dissection of the whole body • Line of incision • Dissection technique • Identification of different tools and its Uses • Identification and characteristics of Different layers and its relation	I	32
	In Extremities: Dissection of extremities & Identification of related structures	II	40
	In Trunk region: Demonstration of visceral relation of thoracic, abdominal and pelvic organ	II	38
	In Head Region: Dissection of head, Identification of Meninges, Major Sulci and gyri, Superficial origin of Cranial Nerve and andvenous Sinus.	III	14
	Dissection of sensory organs	III	22
P6	• Practical study of vital organs, Histological slides • Identification of external features of thoracic, abdominal and pelvic viscera	II	06
P7	Practical study of bones Identification of external features of bones and different attachment	I	36
	Surface and Radiological anatomy **In Radiology Anatomy**: Characteristics of radio imaging film and detailing about its colorcontrasting Identification of Normal alignment of bodily structure – X ray film a. Chest X Ray – A.P And P.A view b. Detailing of A.P view of Shoulder joint, Elbow Joint, Wrist joint, Hip joint, knee joint,Ankle joint. c. Identification of basic clinical finding through X ray film related to long bones and joints	III	22

P8	**In Surface Anatomy Section:** • Identification of Underlying viscera of Nine region based upon Cadaveric and LivingAnatomy • Surface marking of thoracic, abdominal and pelvic viscera	III	6
P9	Practical study of Marma Surface markings of all Marma points and its anatomical demarcation.	III	12
P10	Brief detailing about body donation, organ donation and its awareness (Communication skills)	III	2

Table 5: Non-Lecture Activities Course AyUG-RS

1	**List non lecture Teaching-Learning methods**	**No of Activities (Values in hours)**
a	Seminar / Workshop	14
b	Tutorial (TT) / Group Discussion (GD)	14
c	Problem based learning (PBL)	8
d	Integrated teaching (IT)	8
e	Early Clinical Exposure (ECE)/ Case Base Learning (CBL)	18
f	Self-Directed Learning (SDL) / Summary writing	12
g	Field visit	6
		80
2	**Practical (refer Table 4)**	**240**
	Total	**320**

Other Educational Activities (Additional):

- Field visit (community/anatomy museum) - II & III term
- Practical journal – II & III term
- Summary/ Essay writing (Research papers/Samhitas literature review)- II or III term

Table 6: Assessment Summary

6 A - Number of Papers and Marks Distribution

S.No.	**Subject Code**	**Papers**	**Theory**	**Practical/Clinical Assessment**					**Grand Total**
				Practical/ Clinical	**Viva**	**Electives**	**IA**	**Sub Total**	
1.	**AyUG-RS**	2	200	100	70	-	30	200	400

6 B - Scheme of Assessment (formative and Summative) AyUG-RS

SR.NO.	PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
		First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
1	First	3 PA & First TT	3 PA & Second TT	3 PA & UE

PA: Periodical Assessment; TT: Term Test; UE: University Examinations

6 C - Calculation Method for Internal assessment Marks (30 Marks) AyUG-RS

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 30 Marks (D/15*30)	Term Test (Marks converted to 30)	Sub Total /60 Marks	Term Assessment (…./30)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Methods which is appropriate for the objectives of Topics from the Table 6 D for Peroadic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks) [MCQ (20*1 Marks), SAQ (8*5), LAQ (4*10)] and Practical (100 Marks) Then convert to 30 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No.	Evaluation Methods for Periodical Assessment
1.	Practical / Clinical Performance
2.	Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3.	Open Book Test (Problem Based)
4.	Summary Writing (Research Papers/ Samhitas)
5.	Class Presentations; Work Book Maintenance
6.	Problem Based Assignment
7.	Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination(OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
8.	Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
9.	Small Project
10.	Other activities explained in Table 3 Column G3 as per indicated term and objective of the topic.

6 H - I - Distribution of Practical Exam

Practical 100 Marks + (Viva 70 + IA 30) Marks

SN	Heads	Marks
1	Spotting (Refer Table 6 H II below)	**20**
3	Kostha Ashay Sharir, Dissected organs and histology slides	**20**
4	Ashti, Sandhi, Peshi, Bones and Joints,	**20**
5	Marma Sharir, Surface & Radiological anatomy	**20**
6	Practical record (15 Marks) and Communication Skill (5 Marks)	**20**
7	Viva-Voce (Objective Structured) (Refer table 6 H – III)	**70**
8	Internal assessment	**30**
	Total Marks	**200**

6 H - II Practical Spot examination Questions – (20 marks)

SN	Question	Mark allotment
Topic- Garbha/Sira/Kala		
1	Identify the structure & give the Drushtant/ Metaphor related with it. e.g.- Gunja Phala- Artava, Spatik-Shukra, etc	Identification- 1 Drushtant- 1
Topic- Marma		
1	Identify the Marma & write its type as per Parinama & Rachana	Identification- 1 Type-1
2	Identify the Marma & write its Pariman & any two anatomical structures related to the Marma	Identification- 0.5 Pariman – 0.5 Anatomical structure - 1
3	Identify the Marma & write its applied aspect	Identification- 1 Viddha-1
Topic- Bones, Muscles		
1	Identify the bone & write its peculiarities (Any 2) e.g.- Atlas vertebra	Identification- 0.5 Peculiarities- 1.5
2	Identify the indicated part on the bone & write its attachment (Any 2) e.g., Scapula spine	Identification- 1 Attachment- 1
3	Identify the side of the given bone & write side determination points	Side identification- 0.5 Points- 1.5
4	Identify the side of the given bone & write its applied anatomy (Any 2 points)	Identification-1 Applied -1
5	Write the type of the given bone as per Ayurved & Modern science e.g., Tibia- Nalakasthi, long bone	Ayu. Type- 1 Modern type- 1
6	Identify the indicated muscle on the bone & write whether it originates or inserts there	Muscle identification- 1 Origin/insertion- 1
7	Identify the indicated muscle & write its action (Any 2)	Identification- 1 Action-1
8	Identify the indicated muscle& write its blood supply/nerve supply	Identification-1
		Supply-1
9	Identify the indicated muscle& write its applied anatomy	Identification-1 Applied -1
10	Identify the bone and write any two processes	Identification-1 Processes -1

11	Identify the bone and write any two angles	Identification-1 Angle -1
12	Identify the bone and write any one peculiarity related to gender e.g., Hip bone, Clavicle, Sacrum	Identification-1 Peculiarities- 1
Topic- Joints		
1	Identify the joint & write its ligaments (Any 3)	Identification- 0.5 Ligaments- 1.5
2	Identify the joint & write names of actions occurring there (Any 3)	Identification- 0.5 Actions- 1.5
3	Identify the joint & write the type of joint as per Ayurved & Modern science	Identification- 1 Ayu. Type- 0.5 Modern type- 0.5
4	Identify the joint & write its clinical anatomy (Any two)	Identification- 1 Clinical anatomy-1
5	Identify the joint & write its relation (Any two)	Identification- 1 Relation -1
6	Identify the joint & write the movements along with the muscle	Identification- 1 Movement -0.5 Muscle – 0.5
Topic- Organs		
1	Identify the organ & write name of the Srotas related to it	Identification- 1 Sroras-1
2	Identify the organ & write name of the kala related to it	Identification- 1 Kala-1
3	Identify the organ & write its Utpatti as per Ayurved	Identification- 1 Utpatti-1
4	Identify the organ & write its visceral impressions (Any 3)	Identification- 0.5 Impressions-1.5
5	Identify the organ & write its blood/nerve supply	Identification- 0.5 Supply-1.5
6	Identify the organ & write it's the borders (Any two)	Identification- 1 Borders -1
7	Identify the organ & write its surfaces (Any two)	Identification- 1 Borders -1
8	Identify the organ& write its applied anatomy (Any 3 points)	Identification-0.5 Applied -1.5
Topic- Radiology		
1	Identify the X-ray & write the structures seen in it (Any 3)	Identification- 0.5 Structures-1.5
2	Identify the view of the X-ray & write the marked structures (Any two)	Identification- 1 Structures-1
Topic- Central Nervous System/ Sense organs		
1	Name the lobes of the given organ e.g., cerebrum	Each lobe – 0.5 Total -2
2	Identify the sense organ & write its nerve supply e.g., tongue	Identification- 1 Supply-1
3	Identify the marked structure and write its applied aspect (Any two)	Identification- 1 Applied aspect-1

6 H - III Viva Voce (70 Marks)

Recall Questions	Comprehention Questions	Application Questions
40 Marks	20 Marks	10 Marks
1. Sira-Dhamani-Strotas 2. Shariropakramaniya Sharir 3. Paribhasha Shaarir 4. Praman Shaarira 5. Anatomical terminologies 6. Kalaa Sharir 7. Indriya Sharir & Sensory organ 8. Reproductive system	1. Nervous system 2. Endocrine system 3. Lymphatic system 4. Cardiovascular system 5. Urinary system	1. Garbha Sharir, 2. Embryology 3. Respiratory system 4. Digestive system
e.g., Definition, types, numbers, planes, parts, Shlokas, etc.	e.g., Relations, Blood supply, Nerve Supply, Venous & Lymphatic drainage, etc.	e.g., Applied anatomy, Clinical anatomy, Surgical anatomy, Congenital anomalies etc.

7. Reference and Resources

1. Parishadhya Shabdarth Sharir
2. Pratyaksha sharirıram
3. Sharisthana of all Samhita
4. Sushrut Samhita Sharirshtana- Dr. Bhaskar Govind Ghanekar
5. Brihat Shariram Vaidyaratna- P.S. Varrier
6. Abhinava Shariram- Acharya Damodar Sharma Gaur
7. Manava Sharir (Revised Edition)- Prof. Dinkar Govind Thatte
8. Sharir Rachana Vigyan (English)- Vaidya P.G. Athawale
9. Manual of Practical Anatomy Cunnigham Practical Manual Vol-1, Vol-2, Vol-3
10. Clinical Anatomy in Ayurveda - Prof. D.G. Thatte & Prof. Suresh Chandra
11. Ayurvedic Human Anatomy - Prof. Dr. Giridhar M. Kanthi
12. Sharir Rachana Vigyan Vol I & II– Dr. Sunil Kumar Yadav
13. Regional Anatomy - B. D. Chaurasia
14. Rachana Sharir Vigyana - Dr. Mahendra Sing
15. Relevant chapters of Brihtrayee and Laghuthrayee
16. Gray's Anatomy
17. Text Book of Human Anatomy- Inderbir Singh
18. Clinical Anatomy- Richard S Snell
19. Fundamentals of Human Anatomy- Dr. Chakraborthy
20. Human Osteology - Poddar

A Handbook of Anatomical Terminology, Dr. Nidhi Shrivastava, Dr. Ravi Kumar Shrivastava, Dr. RakeshKumar Sharma.

NCISM
I professional Ayurvedcharya
(BAMS)

SAMSKRITAM EVAM AYURVED ITHIHAS
(SUBJECT CODE-AyUG-SN & AI)
SANSKRIT AND HISTORY OF AYURVEDA
(Applicable from 2021-22 batch onwards for 5 years or until further notification by NCISM, whichever is earlier)

Summary

AyUG-SN & AI Total number of Teaching hours: 300			
Lecture hours (LH) – Theory		**100 Hours**	**100 Hours (LH)**
Paper I	50 Hours		
Paper II (Sanskrit 40+ AI 10)	50 Hours		
Non-Lecture hours (NLH) – Theory		**140 Hours**	**200 Hours (NLH)**
Paper I	74 Hours		
Paper II (Sanskrit 46+ AI 20)	66 Hours		
Non-Lecture hours (NLH) – Practical		**60 Hours**	

Examination (Papers & Mark Distribution)					
Item	**Theory Component Marks AyUG-SN & AI**	**Practical Component Marks**			
		Practical	**Viva**	**Elective**	**IA**
Paper I	**100** Sanskrit 100 Marks	**--**	**75***	**10 (Set-FA)**	**15**
Paper II	**100** Sanskrit 80 Marks and Ayurved Itihas 20 Marks				
Sub-Total	**200**	**100**			
Total marks	**300**				
	*Viva voce examination shall be for Sanskrit and not for Ayurved Ithihasa				

Preface

Sanskrit is an ancient still most scientific language of India. The ancient literature created about various subjects in this region is in Sanskrit. The richness of Sanskrit language is accepted by intellectuals across the world. The literature of Ayurveda is also found in Sanskrit. Without understanding the language of the science, it is really hard to read and understand the terminologies, theories, principles of the science given in the Samhitas. Many of the students coming for the course partly introduced or not at all introduced to the Sanskrit language previously. Hence for understanding Ayurveda in its originality, Sanskrit is one of subject in First year BAMS curriculum. Similar to any language Listening, Reading, Writing and Speaking are the four pillars of a sanskrit. Reading, writing and understanding samhitas will be emphasized and listening and speaking can give confidence to the student and enhance the study.

Learning a language just by studying the theory is not enough hence curriculum of Sanskrit is designed by combining traditional Sanskrit teaching with new teaching health science education technologies.

This changed curriculum involves many new teaching learning techniques and assessment methods. Based on the course outcomes, curriculum is devided in papers. Importantent objectives are appropriately planned as per domains of learning. Supported by interactive methods of teaching and learning by using Audio-visual aids. There will be practicals and demonstrations based on Language Lab activities for enhancement of practical use of Sanskrit. Practicals can give a chance of acquiring skills by practice of use of Sanskrit in Samhitadhyayan. Application of learned Sanskrit will be practically ensured by reading newly introduced Ashtang Hrudayam. Students can experience of application of Sanskrit Grammer in Samhitadhyayan. Introduction to Niruktis, dictionaries and Shabdakoshas can motivate students to derive and understand meanings from Sanskrit verses on their own. As this is a language, learning to communicate in this language is very much essential. Addition of Sanskrit communication as a part of curriculum is for overcoming the fear of learning a new language.

History of Ayurved is also added in second part of the Sanskrit. As an ancient science, its gradual development. Important milestones, different Schools of thoughts, impotant traditions, followers in traditions, thier contribution etc will be introduced in History. Contribution of Scholars of modern era, Important institutes and globalization are few more points for history. Activity based learning and objective assessment are the most important changes to change perception towards study of history.

Course Code and Name of Course

	Course code	Name of Course
	AyUG SN & AI	Sanskrit and Ayurved Itihas

AyUG SN & AI Course

Table 1- Course learning outcomes and matched PO.

CO	At	PO
CO	Course learning, On course [CO] ayUG SN & AI	Course learning outcomes matched with program learning outcomes
No	At the end of Course on AyUG SN & AI, the student should be able to-	
Sanskrit		
CO1	Read and recite Kaivi (गद्य) and Padya (पद्य) with the appropriate pronunciation and intonation. Understand the meaning of the text.	PO-5, PO-6, PO-7, PO-8, PO-9
CO 2	Apply various Technical Terms in Ayurveda (Nomenclature), Nouns & Pronouns (सर्वनाम), Verbs (क्रियापद), and Tenses (काल) from Sanskrit Grammar for advanced interpretation of Ayurveda texts (ग्रन्थ). Translate, identify, and explain literary devices, and apply this knowledge to comprehend the text.	PO-1, PO-7, PO-9
CO 3	Demonstrate and interpret the Classical terminology (परिभाषा) used in various sections of Ayurveda texts (ग्रन्थ), identify, and explain their significance in the context.	PO-5, PO-7, PO-9
CO 4	Formulate the Procedure (प्रक्रिया) of Dosage Forms in Ayurveda. Understand, identify, and describe the meaning (अर्थ), and determine the Scientific Rationale (तर्क) and to Translate (Explain) it in other languages. Understand, identify, and explain the concept (सिद्धान्त)	PO-5, PO-6, PO-7, PO-8, PO-9
CO 5	Interpret the Nomenclature (नाम), and Basic Principles (सिद्धान्त) of Ayurveda. Translate, identify, and describe the principles (सिद्धान्त), and explain their significance in the context.	PO-5, PO-7, PO-9
CO 6	Speak, Write, and Communicate and Express in Sanskrit (संस्कृत) effectively in various professional contexts.	PO-5, PO-6, PO-7, PO-8, PO-9
CO 7	Develop the ethical responsibility towards the profession, society, and literary heritage.	PO-6, PO-9
Ayurved Itihas		
CO 8	Analyze and explain the experimental evidences for the efficacy of Ayurveda.	PO-1
CO 9	Appreciate the relevance of Ayurveda in different time periods and Contributions made by different Acharyas in Ayurveda.	PO-1

Table 2 : Contents of Course As UG SN & AI

Sr. No	A2 List of Topics AyUG-SN & AI Paper I	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours
Paper I Sanskrit					
1	संस्कृतभाषायाः परिचयः – महोदयमुनिना, उपनयनसंस्कारेण, आश्रमव्यवस्थया, व्यवस्थया उपवर्णितं	I	05	3	10
2	धातुः- 2.1 - भवति:, सेवते, उच्चारयितुम्:, अनुसरेत्, पठन्, गच्छ:, उच्चरेत्, पुनः, वृद्धेः [विस्तरेण पठनम् - Detailed teaching] 2.2 - हा, सेवः:, उपायः, उदरः, अनुसरः, सर्वेः, कर्मः, Dinaḥ, मधुरम्, [सङ्क्षिप्त पठनम् – Brief teaching]	2.1 – I 2.2 – II	05	05	-
3.	शब्दाः - उच्चारणं विभक्तयः स, एतत्, यत्, सत्, अयम्, अस, सेतु, ईदृ, पुमन्, दृ, सि, स्वयम्, ह्रि, अस्मि, अस्मि, अस्मि, दृ, उत्, अस्मि, अस्मि, पक्षे, तत् |	II	05	02	03
4.	अव्ययानि 4.1 - च अपि स्वयम् हि तु किल नूनम् वा च एव 4.2- पुनः लिख उच्चैः कदा एकम् सह सार्धम् कृत्वा कथम् –तत्र यत्र यत्र इति वाक्यस्य अन्ते सर्वत्र वाक्यम् न पूर्णं अपि पुनः लिखन्तु लिख्य इव अथ तत्र अवश्यं अवश्यं पूर्णं एवम् कदा अन्यत्र एवम् [विस्तरेण पठनम् - detailed teaching] A) Identify अव्ययानि B) Explain the meaning with reference to the context C) Construct the sentences using अव्ययानि	I A II B III C	5	I -01 II-01	I-01 II-0 III-03
5.	व्याकरणम् – सन्धयः, सन्धिनाम्, अजन्तप्रकरणम्, हलन्तप्रकरणम्, अजादि प्रकरणम्, अभ्यासप्रकरणम्, वाक्यम्, उपपदविभक्तिः कृत्तद्धितयोः च परिचयं कृत्प्रकरणानि प्रकृतिं च प्रत्ययानि | A) Discriminate the Sandhi and their meaning B) Identify the karakas from Ayurveda texts like चरक, सुश्रुत C) Construct sentences D) Translate sentences from English to Sanskrit & from Sanskrit to English	I A II B III C, D	15	I- 05	II-05 III-05
6.	क्रियाः 6.1 - अस् धातोः/प्रकृतिः - एत् धातोः -धातुं प्रति, पुनः क्रियाः=आदुः पृच्छितुम्-पृच्छिति, अवलोकय क्रियाः - एतेषां प्रकारान् /भेदान् वि	II	15	10	10

	प्रत्ययं, लोप सन्धि -लोपः, शाकल्यस्य, वावसन्धि -एतेन गणेशः, पूर्वरूपसन्धि- हरः गणेशश्च, प्रकृतिभावः- सर्वम् विजानाति , गुरु एषः अति विनम्र। पूर्वरूपसन्धिं पदं परिभाष्य सूत्रव्याख्यापूर्वकं उदाहरणं च प्रस्तौति 6.2 - हल्सन्धिः /व्यञ्जनसन्धिः - श्चुत्वसन्धि - सः शुभ- सच्, श्चुत्वसन्धि- मुन श्चुः, ष्टुत्वसन्धि -कृष्णा ष्टौकेन, अनुनासिकसन्धि - षड्भ्यो लुकि षड्भ्य आमि नलोपे पदान्तस्य पदान्तस्य नित्यम्, पदान्त -लोपे /ना पदान्तस्य, चर्त्वसन्धिः सः च, पूर्वजन्मसन्धिः- तपोऽतप्यत्तपस्तप्तम्, श्चुत्वसन्धिः सत्संगतिः/ सत्सङ्गतिः सत्सङ्गः, अनुनासिकसन्धि - वाङ्मनसः, श्चुत्वसन्धिः- हि पुरुषे पुरुषेऽवसाद, व्यञ्जनसन्धिः -सत्सङ्गात् पूर्वरूपसन्धिं पदं परिभाष्य सूत्रव्याख्यापूर्वकं उदाहरणं च प्रस्तौति 6.3 - विसर्गसन्धिः - अकारसन्धिः-सत्सङ्गे रः, उत्वसन्धिः-अहो देवस्यानुग्रहेति च, ये हि, यो मनो अयो अनुशंस दोषान् , तेषुक्षि , सत्सङ्गे कुशलेऽवसाद्य -सत्सङ्गे लभेत, नीतिः नीतौ चैव पदकृत्यम्। कृत्सन्धिप्रकरणं एवं परिभाष्य सूत्रव्याख्यापूर्वकं उदाहरणं च प्रस्तौति। 6.4.- व्यञ्जनसन्धिः- [सङ्क्षिप्त पाठ्यम् – Brief teaching] श्चुत्वसन्धिः- सच्, चेत्, यच्, तच् आदि ष्टुत्वसन्धिः- तत्, षष्ठ, तत्, षष्ठ आदि जश्त्वसन्धिः- वाक्, वेद, दिक्, दिग् आदि चर्त्वसन्धिः- सत्, चित्, तत्, तद् आदि अनुनासिकसन्धिः- वाङ्, मनः, दिक्, दिग् आदि लत्वसन्धिः- तत्, लयः, दिक्, दिग् आदि				
7.	समासः 7.1 - समासीकरणम्- 7.1.1 - समासः विभक्तिप्रत्ययौ लुप्त्वा अर्थाभिव्यक्तये पदानां परस्परसम्बन्धस्य समासः। समासस्य प्रातिपदिकसंज्ञा भवति। 7.1.2. - समस्त पदविग्रहः/ समासस्य पूर्वम् 'समासविग्रहः' पुनः समासनामः/ पूर्वपदप्रधानः उत्तरपदप्रधानः	11	15	09	10
	7.2 - समासस्य भेदाः - द्विविधा विग्रहवाक्यानुसारेण समासभेदाः, एतेषां समासानां पृथक्करणं, प्रत्येकस्य पृथक् पृथक्, स्वरूपं च समासेषु अव्ययीभावः, तत्पुरुषः, कर्मधारयः, द्विगुः, बहुव्रीहिः, द्वन्द्वः, समासानि तत्पुरुषसमासः, अव्ययीभावः, द्विगुः, समासस्य विशेषताः 7.3 - बहुषु द्वन्द्वः - अनेकसमासयोः 7.4 - द्वन्द्वसमासः - सर्वे द्वन्द्वः पूर्वरूपसन्धिं पदं परिभाष्य सूत्रव्याख्यापूर्वकं उदाहरणं च प्रस्तौति।				
8.	वाक्यरचना 8.1 - पूर्णवाक्यः वाक्यरचना अकारान्तः - वाक्, वेद, मन्, दान आदि इकारान्तः - अग्नि, मुनि आदि उकारान्तः - शम्भु, भानु मृदु आदि ऋकारान्तः - पितृ, मातृ, दिव् आदि	1	10	02	14

	ओकारान्त – गो आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि **8.2** – [illegible] [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि **8.3** – [illegible] [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] – [illegible] आदि [illegible] [illegible] | [illegible] | **8.4** – [illegible] – [illegible] आदि				
9.	[illegible] – [[illegible] -detailed teaching] 9.1 – [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]	1	10	05	05

	स्वादि गण- क्रीञ्, क्रयणे, क्रीणाति, क्रीणीतः, क्रीणन्ति स्वादि गण- क्षु, क्षिप्तौ, क्षुणोति, क्षुणुतः अदादि गण- एधृ, अर्द्धौ वर्द्धने च, एद्धे, एधाते, एधन्ते कुटादि गण- तप्, सन्तापे, तपति, तपतः, तपन्ति, तप्यते, तप्यतः प्रकरणम् दि- स्वादि गण - दृ, दारणे, दृणाति, दृणीतः, दृन्ति, दृणीते, दृन्ते अदादि गण - दीङ्, क्षये, दे कुटादि गण- मन प्रज्ञानिशामने, मनति तिपादि गण- अर्ति ऋदुपदेश, ऋ, ऋच्छति स्वादि गण- षिधृ, संराद्धौ दृढादि गण- दृङ्, आदरे, दृणाति, दृणीते, दृणन्ति, दृणते, दृन्ते स्वादि गण- क्रीञ्, क्रयणे, क्रीणाति, क्रीणीतः, क्रीणन्ति स्वादि गण- क्षु, क्षिप्तौ, क्षुणोति, क्षुणुतः अदादि गण- एधृ, अर्द्धौ वर्द्धने च, एद्धे, एधाते, एधन्ते कुटादि गण- तप्, सन्तापे, तपति, तपतः, तपन्ति अकर्तरिलिङ् सु सिजभ्यस्त तिप्तस्झि सीयुट् तिङ्शित्सार्वधातुकम् अनिटकम् 9.2 - तृतः , अनर्तरिलिङ्, लिङ , तृतृत, तृत [स्मृतिम् कलम्-Brief teaching] स्वादि गण, अदादि गण, कुटादि गण, तिपादि गण, स्वादि गण, दृढादि गण, स्वादि गण, स्वादि गण, स्वादि गण, कुटादि गण दृढादिभ्यश्चेक्त्रय स्यसिजभ्यां तथासाथां ध्वमिड्वा	II	10	05	6
10.	रलम 10.1 – स्व - स्वप्, स्वन् – अनीक्, क्षु – क्षास्, स्फुट् - स्फुट्, स्वन - स्वन्, ध्वनि, निनद, ध्वन् रलकाम् प्रकीर्ण स्व कुरुत:
11	विविध विषय	II	05	02	03

Paper II – Part A Sanskrit					
	A2 List of Topics (Maximum Marks– 80 (SAQ & LAQ only)	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours
1	विविध स्वा वर्णित पदानि– A) स्वादु, स्वर्ग, स्व , अनिल: अमल, अस्त्र, विमल, स्वर: B) एष, एत, एवम, ऐव, अस्मि, स्वस्त, शुक्ल, ईश्वरस्तुतौ:, स्वादु, स्वस , ज्ञान C) दी, धृति, स्मृति, वृद्धि, मति , ख्याति , पुत्र, पुत्रेण, एतेन, अस्मत्, एतत्, विज्ञान्	A- I B – II C- III	15	7 (A-1, B-3, C-3)	13 (A- 4, B-4, C-5)

	दीपः, फेनवीणेखला, आदि				
2	पर्यायवाचयः – A) आकृतिः, वस्त्रस्य भूमिः, शिक्षणम्, लेखा, कला, वृक्षम्, स्मर्तः, सविनयः B) ज्ञानं, गुरुः, सर्वं, आकाशः, विद्वांसः, मुखं, जलं, प्रकृतिः, विकृतिः, जलं, आलोकः, दयाः, व्याकरणम्, लेखनीः: वेदः, दया, सर्वम्, विद्वान्, कार्यालयम् C) सौख्यम्, श्वेतः, आलस्यम्, विश्वासम्, विश्वासः, विजयः, विद्युत्, सत्यम्, सौन्दर्यम्, उत्साहम्, उत्साहम्, आलस्यम्, आलस्यम्, सत्यम्, गौरवम्, सत्यम्, आलस्यम्, गुणवान्, अवसादः, वेदः, विश्वम्, सत्यम्, लोभः, दुःखम्, अनृतम् आदि	A - I B - II C - III	20	10 (A-3, B-4, C-3)	15 (A-5, B-5, C-5)
3.	समासविग्रहम् - A) अव्ययीभावः बहुव्रीहिः - अव्ययतः अर्थानुसारं सूचनम् 1. अनुरूपम् 2. निरपराधी 3. निर्दुःखम् B) तत्पुरुषः द्वन्द्वसमासः - उत्तरपदतः अर्थानुसारं सूचनम् नञ्तत्पुरुषः षष्ठीतत्पुरुषः सप्तमीतत्पुरुषः द्विगुतत्पुरुषः C) निम्नलिखितपदानां विग्रहं कुरुत - (Write the compounds - (पाठ्यक्रमे निर्दिष्टं पदमेव विग्रहं कुरुत) दशः 1, 2 दिनम् 1, 7 दृष्टिः 9 चतुर्थी: 2, 3 दण्डम्: 2, 3 षष्ठ: 1, 4, 7 पञ्च: 2, 5, 13 अष्ट: 13, 12 नव: 12, 13 दश: 1, 15 एकादश: 1, 2 द्वादश: 1, 6 नवम: 1, 7, 8, 9	A - I B - II C - III	30	20 (A-3 B-8, C- 8)	14 (A-4, B-5, C- 5)

	चतुर्थः 2, 3, 4 पञ्चमः 7,10 षष्ठः 1, 6 सप्तमः 1, 4 अष्टमः 1,2,3 एकोनविंशतिः 2, 3, 4 विंशतिः , 12, 3, 4 पञ्चिकापूर्णं च प्रश्नपत्रं परीक्षायाम्| पाठ्यांशे विद्यमानाश्च अन्याः अपरायां भाषायां (हिन्दी) पुनः प्रश्नाः				
4.	पाठ्यक्रम-व्याप्तिविश्लेषणम् च समाधानं अध्या ०१ सृष्टिविज्ञानीयः अध्या अध्या०२ चतुर्दशविद्यानां अध्या अध्या०३ ज्ञानस्य भेदाः अध्या०४ विषयस्य पूर्वापेक्षितम् अध्या०५ बहुविधेषु अध्या पञ्चिकापूर्णं अपि अन्तर्भवेत् च प्रश्नाः	III	15	85	04

Paper II – Part II – Ayurved Itihas –					
	A2 List of Topics As UG 58 & AI (Maximum Marks – 20 (MCQ only)	B2 Term	C2 Marks	D2 Lecture hours	E2 Non-Lecture hours
1	Derivation (Vyutpatti and Nirukti) and definition of Itihasa. Necessity, Significance and Utility of knowledge of Ayurveda itihasa. Means and method of study of Ayurveda itihasa. Different Time periods relevant for the study of Ayurveda itihasa (viz. Prevedic, Vedic, Samhita kala, Sangraha kala etc.)	I	5	1	2
2	Origin and lineage of Ayurveda (Ayurvedavatarana) and Introduction of references of Ayurveda in Veda, Upanishad and Puranas.	I		1	2
3	Structure, Specialities, Time period of Ayurveda Samhitas and their commentaries (including Special contribution of authors and commentators): Charaka Samhita, Sushruta Samhita, Ashtanga Sangraha, Ashtanga Hridaya, Bhela Samhita, Harita Samhita, Kashyapa Samhita	I	5	2	2

4	Structure, Contributions and importance of Laghutrayee and Commentaries: Madhava Nidana, Sharngadhara Samhita, Bhavaprakasha.	**II**		1	3
5	Origin and period of different systems of medicine in the world.	**II**	**5**	1	2
6	Introduction to Vrukshayurveda, Hastyayurveda and Ashwayurveda. (Included in Transitional Curriculum)	**II**		-	1
7	Status of Ayurveda during the period of Ashoka, Mughal and British rule.	**II**		1	2
8	Contribution of Scholars of modern era: Acharya Gana Nath Sen, Vaidya Yamini Bhushan Rai, Vaidya Shankar Dajishastri Pade, Acharya Swami Lakshmiram, Acharya Yadavji Tikramji, Dr. PM. Mehta, Vaidya B G Ghanekar, Vaidya Damodar Sharma Gaur, Acharya Priyavrat Sharma, Vaidya C Dwarakanath, Vaidya K R Shrikantamurthy, Vaidya VJ Thakkar, Vaidyaratnam PS Varier, Vaidya B V Gokhale.	**III**	**5**	1	2
9	Globalization of Ayurveda	**III**		1	2
10	1)Developmental activities in Ayurveda in the post-independence period: • Introduction to various committees and their recommendations • Introduction of activities of the following Organizations : Department of AYUSH, CCIM/ NCISM, CCRAS, 2) National institutions Viz- All India Institute of Ayurved (AIIA), National Institute of Ayurveda, Jaipur. ITRA, Jamnagar. Faculty of Ayurveda, BHU, Varanasi. Rashtriya Ayurveda Vidyapeetha, New Delhi.	**III**		1	2

List of Practicals

SN	Name of Practicals	Hours	Marks
11	Use of Palash in Arka and Aksheeb in [illegible]	1	15
12	Translation from Sanskrit to Arabic/Persian language	1	15
13	Translation from Arabic/Persian to Sanskrit	1	15
14	[illegible] Specimen Identification, Classification, Study	1	15
15	At [illegible] Hand Specimen from above Syllabus will be Identified by the Student and Table will be Prepared as Follows:		
	1. [illegible]	1	
	2. [illegible]	1	
	3. [illegible]	1	
	4. [illegible]	01	
	5. [illegible]	1	
	6. [illegible]	01	
	7. [illegible]	1	
	8. [illegible]	1	120 hours
	9. [illegible]	1	
	10. [illegible]	1	
	11. [illegible]	1	
	12. [illegible]	1	
	13. [illegible]	01 01	
	14. [illegible]	01 01	
	15. [illegible]	01 01	
	16. [illegible]	01	

e 5: Non Lecture Activities Course AyUG- SN & AI

List non lecture Teaching-Learning methods	No of Activities	Total
Sanskrit		
Presentation of videos	2	120
Graphical Representation of Vocal system	1	
Guided Reading,	5	
Peer learning	4	
PBL	36	
Quizes, puzzles, cross word, word cloud	13	
Group activities	37	
SDL	17	
Recitation	5	
Practical (Refer Table 4	60	60
Ayurved Itihas	20	20
		200

Topic wise details –

List non lecture Teaching-Learning methods	No of Activities
Presentation of videos about Maheshwar Sutra, Prayatna, Uccharana Sthanani etc.	2
Graphical Representation of Vocal system	1
Reading / Pronounciation (Guided Reading, Peer learning)	7
Preparing different Shabdarupani and recitation (PBL, Peer learning, Quizes, word cloud, crosswords, recitation etc.)	14
Preparing different Kriyapadani. (PBL, Group activities)	5
Practicals on Karakani. (PBL, Group Discussions)	10
Practicals on Pratyayas. (PBL, Group Discussions)	6
Practicals on Sandhis (PBL, Quizes, puzzles, Group activities)	10
Practicals on Samasa (PBL, Quizes, puzzles,)	10
Practicals on Upasargas. (PBL, group activities)	3
Practicals on Avyayas (PBL, group activities)	3
Practicals on Visheshan – Visheshya (PBL)	3
Practicals on Anvay lekhana (PBL, SDL, Group Discussions)	14
Practicals on Nirukti (PBL, SDL, Group Discussions)	13
Practicals on Panchatantra - Vachya of sentences, Writing sentences using appropriate Shabdarupani and Kriyapadani etc. (SDL, PBL, group activities)	4
Practicals on Paribhasha (PBL, SDL, Group Discussions)	15
	120

Ayurved Itihas-

List non lecture Teaching-Learning methods	No of Activities
Group Discussion,	10
Video clips	5
Online Search, Prroject	
Tutorial	
Quiz, Collage, Puzzle	5
	20

Table 6: Assessment Summary

6 A-Number of Papers and Marks Distribution

S.No.	Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
				Practical/Clinical	Viva	Electives	IA	Sub Total	
1.	AyUG-SN & AI	2	200	-	75*	10 (Set-FA)	15	100	300
*Viva voce examination shall be for Sanskrit and not for Ayurved Ithihasa									

6 B - Scheme of Assessment (formative and Summative)

SR.NO.		PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
			First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
1	AyUG- SN & AI	First	3 PA & First TT	3 PA & Second TT	3 PA & UE
	PA: Periodical Assessment; TT: Term Test; UE: University Examinations				

6 C - Calculation Method for Internal assessment Marks (15 Marks)

TERM	PERIODICAL ASSESSMENT*					TERM TEST**	TERM ASSESSMENT	
	A	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 15 Marks (D/15*15)	Term Test (Marks converted to 15) (15 Marks)	Sub Total _/30 Marks	Term Assessment (…./15)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Methods which is appropriate for the objectives of Topics from the Table 6 D for Peroadic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks)(MCQ(20*1 Marks), SAQ(8*5), LAQ(4*10)) and Practical (100 Marks) Then convert total marks to 15 marks.							

6 E- Paper Layout

I PROFESSIONAL BAMS EXAMINATIONS

AyUG SN & AI

PAPER-I

Time: 3 Hours Maximum Marks: 100
INSTRUCTIONS: All questions compulsory
TOTAL MARKS 100 Sanskrit

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ) All Sanskrit	20	1	20
Q 2	Short answer questions (SAQ) All Sanskrit	8	5	40
Q 3	Long answer questions (LAQ) All Sanskrit	4	10	40
				100

I PROFESSIONAL BAMS EXAMINATIONS

AyUG SN & AI

PAPER-II

Time: 3 Hours

INSTRUCTIONS: All questions compulsory

TOTAL MARKS 100 = [Sanskrit, (LAQ and SAQ) 80 marks + Ayurved Itihas, (MCQ) 20 marks]

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ) Ayurved Itihas, (all 20)	20	1	20
Q 2	Short answer questions (SAQ) All Sanskrit	8	5	40
Q 3	Long answer questions (LAQ) All SaAnskrit	4	10	40
				100

7. References/ Resources

Sanskrit

Books

1. [illegible] – Sanskrit for Ayurveda part-I and Part-II Published by CCIM New Delhi
2. [illegible] – Ayurvedasya bhasha part I to part-V sanskrita samvardhana pratishthan mumbai
3. लघुसिद्धान्तकौमुदी - [illegible] - Laghusiddhantakaumudi of [illegible]
4. सिद्धान्तकौमुदी – [illegible] siddhantakaumudi
5. [illegible] - Vaidyakiyasubhashitasahityam, [illegible]
6. पञ्चतन्त्रम् [illegible] - Panchatantra aparikshitakarakam The 5 stories
7. शब्दकल्पद्रुमः – Sabdakalpadruma
8. वाचस्पत्यम्- Vachaspatyam
9. अमरकोशः – Amarakosha
10. सिद्धरूपम् - Siddharupam
11. धातुपाठः – Dhatupatha
12. Sanskrit to English and English to Sanskrit Dictionary – Monier Williams
13. Sanskrit to Hindi and Hindi to Sanskrit Dictionary – Va. Shi. Apte
14. Sanskrit to Regional/ Locallike language dictionaries
15. Ayurvediya Shabdakosha
16. Encyclopedic dictionary of Ayurveda – Dr. Kanjiv Lochan, Dr. P.S. Byadgi (Chaukhambha Publications)

Online Resources:-

- [illegible] Online
  [illegible]
- Readymade Sanskrit Puzzles
  [illegible]
- Learning Sanskrit : Pronunciation I
  [illegible]
- Pronunciation of all Sanskrit letters ...
  [illegible]
  [illegible]
  [illegible]
  [illegible]
- Vyakarana -
  [illegible]
- कोश : Dictionaries -
- Cologne Digital Sanskrit Lexicon
  [illegible]

[redacted]

[redacted]

- Sanskrit Computational tools Samsadhan-
  [redacted]
- Learning
  [redacted]
- The Sanskrit Heritage Site
  [redacted]
- Sanskrit Dictionary for Spoken Sanskrit
  [redacted]
  [redacted]

Ayurved Bihan

Reference book

1. Upodghata of Kashyapsamhita (Paragraph of acceptance of Indian medicine) Rajguru Nem Raj Sharma

2. Upodghata of Rasa Yogasagar	Vaidya Hariprapanna Sharma
3. Ayurveda Ka Itihas	Kaviraj Gunta Chand
4. Ayurveda Sara	Rajvaidya Ram Prasad Sharma
5. History of Indian Medicine (1-3 part)	Dr. Girindr Nath Mukhopadhyaya
6. A Short history of Aryan Medical Science	Bhagwat Singh
7. History of Indian Medicine	J. Jolly
8. Hindu Medicine	Zimer
9. Classical Doctrine of Indian Medicine	Filyosa
10. Indian Medicine in the classical age	AcharyaPriyavrata Sharma
11. Indian Medicine (Brockley)	Dr. Barnley
12. Ancient Indian Medicine	Dr. P. Kutumbia
13. Madhava Nidana and its Chief Commentaries (Chapters highlighting history)	Dr. G.J. Mukerbeli
14. Ayurveda Ka Bruhat Itihas	Vaidya Anukta Vidyalankar
15. Ayurveda Ka Vaigyanik Itihas	Acharya Priyavrata Sharma
16. Ayurveda Ka Prarambhik Itihas	Prof. Bhagwat Ram Gupta
17. History of Medicine in India	Acharya Priyavrata Sharma
18. Vedkaleen Ayurveda	Vaidya Ram Gopal Shastri
19. Vedkaleen Ayurveda	Dr. Kapil Dev Dwivedi
20. Science and Philosophy of Indian Medicine	Dr. K.N. Udupa
21. History of Indian Medicine from Pre-Vinayan to Kushana Period	Dr. Jyotirmitra
22. An Appraisal of Ayurvedic Materia in Buddhist literature	Dr. Jyotirmitra
23. Mahayana Granthon mein nihit Ayurvediya Samagri	Dr. Ravidatta Nath Tripathi
24. Jain Ayurveda Sahitya Ka Itihas	Dr. Rajendra Prakash Bhatnagar
25. Ayurveda Prabhakara Jainacharya	Acharya Raj Kumar Jain
26. Charaka Chintana	Acharya Priyavrata Sharma
27. Vagbhata Vimarsha	Acharya Priyavrata Sharma
28. Atharvaveda and Ayurveda	Dr. Kunjabehari
29. Ayurvedic Medicine Past and Present	Pt. Shiv Sharma
30. Ancient Scientist	Dr. O.P. Jaggi
31. Landmarks of Indian Medicine	Dr. K.R. Shrikanta Murthy
32. Ayurveda Ke Bihasa Ka Parichaya	Dr. Ravidatta Tripathi
33. Ayurveda Ke Pramukhacharya	Ramniwas Sharma
34. Ayurveda Itihasa Parichaya	Prof. Banwari Lal Gaur

NCISM

I professional Ayurvedcharya (BAMS)

Subject Code: AyUG KS

Kriya Sharir Summary

AyUG KS Total number of Teaching hours: 600			
Lecture hours (LH) - Theory		**150 Hours**	**150 Hours (LH)**
Paper I	75 Hours		
Paper II	75 Hours		
Non-Lecture hours (NLH) – Theory		**50 Hours**	**250 Hours (NLH)**
Paper I	25 Hours		
Paper II	25 Hours		
Non-Lecture hours (NLH) - Practical		**200 Hours**	

AyUG KS Examination (Papers & Mark Distribution)				
Item	**Theory Component Marks**	**Practical Component Marks**		
		Practical	**Viva**	**IA**
Paper I	**100**	**100**	**70**	**30**
Paper II	**100**			
Sub-Total	**200**	**200**		
Total marks	**400**			

Preface

Kriya Sharir (Human Physiology) is an important subject of the BAMS program for the undergraduate students of Ayurveda. The term sharir means ‘in the sharir’ or ‘related to the sharir’ thus Sharir Kriya deals with the study of the human body concerning its physiological norms i.e., the functioning of the human body in its normal state. This subject refers to the physiology and biochemistry of contemporary medical science.

The swasthya of an individual is based on 3 pillars of the body i.e., dosha, dhatu & mala. Kriya Sharir subject mainly deals with these 3 pillars. The basic concepts, knowledge, and applicability of Tridosha (Vata, Pitta, Kapha), Sapta Dhatus (Rasa, Rakta, Mamsa, Meda, Asthi, Majja, Shukra), and Trimala (Mutra, Purish, Sweda) are very important in the critical understanding of the disease. Kriya Sharir also deals with Prakriti, Strotas, Kostha, Agni, Oja, Mana, Aahar (Basic principles of food), shatkriyakal, the system-wise study of contemporary science, senses function and dysfunction, etc. All these fundamental topics are essential for the proper understanding of etiopathogenesis, diagnosis of disease, and its management which will be covered in para-clinical and clinical subjects.

New curriculum of Kriya Sharir is designed considering cognitive, affective, and psychomotor domains. There are group discussions, workshops, field visits, and activities beyond the textbook during the practical hours like preparation of charts, models, seminar presentations by students. Kriya Sharir subject also deals with teaching-learning methods like role play, flipped the classroom, etc. Some assessment methods like OSPE, PBL, DOPS, CBD, skill assessment, etc are incorporated. The main aim of the curriculum is to highlight the basic knowledge and to give a new scientific approach to undergraduate students to develop their skills of Ayurveda and make them competent to apply in clinical practice and research.

Course Code and Name of Course

Course code	Name of Course
AyUG KS	Kriya Sharir (Human Physiology)

Ay UG KS Course

Table 1- Course learning outcomes and matched PO.

SR1 CO No	A1 Course learning Outcomes (CO) AyUG KS At the end of the course AyUG-KS, the student should be able to-	B1 Course learning Outcomes matched with program learning outcomes.
CO 1	Explain all basic principles & concepts of Kriya Sharir along with essentials of contemporary human physiology and biochemistry related to all organ systems.	PO1, PO2
CO 2	Demonstrate and communicate normal and abnormal variables pertaining to Kriya Sharir such as Sara, Agni, Koshtha, Srotas etc.	PO2, PO3
CO 3	Differentiate between Prakriti and Vikriti in the individuals after carrying out relevant clinical examinations.	PO1, PO2, PO3, PO5
CO 4	Carry out clinical examination and experiments using equipments with interpretation of their results	PO4
CO 5	Differentiate the strengths & limitations of Ayurved and contemporary sciences	PO2
CO 6	Present a short project work / research activity covering the role of Kriya Sharir in preventive and promotive healthcare.	PO5, PO6, PO7, PO8, PO9
CO 7	Show a sense of curiosity and questioning attitude towards the life processes and to display compassion and ethical behaviour	PO2, PO5, PO6, PO7, PO9
CO 8	Effectively communicate verbally and in writing preferably using Ayurvedic terminology along with contemporary terminology among peers, teachers and community	PO8, PO9

Table 2: Contents of Course AyUG KS

Paper I – AyUG-KS					
Sr No	**A2 List of Topics AyUG-KS Paper I**	**B2 Term**	**C2 Marks**	**D2 Lecture hours**	**E2 Non-Lecture hours**
PART-A (Marks-60)					
1	**Sharir:** Definition and synonyms of term Kriya, Sharir & Shaarir. Description of Sharir Dosha and Manasa Dosha. Mutual relationship between Triguna-Tridosha & Panchmahabhuta.	**I**	08	2	1
2	**Basic principles of Ayurveda:** Dosha dhatu mala mulam hi shariram. Description of basics of Srotas	**I**		2	1
3.	**Tridosha:** General description of Tridosha. Inter relationship between Ritu-Dosha-Rasa- Guna. Biological rhythms of Tridosha on the basis of day-night-age-season and food intake. Role of Dosha in the formation of Prakriti of an individual and in maintaining of health. Prakrita and VaikritaDosha.	**I**		3	0
4.	**Vata Dosha:** Vyutpatti (derivation), Nirukti (etymology) of the term Vata, general locations, general properties and general functions of Vata, five types of Vata (Prana, Udana, Samana, Vyana, Apana) with their specific locations, specific properties, and specific functions.	**I**	26	6	2
5.	**Pitta Dosha:** Vyutpatti, Nirukti of the term Pitta, general locations, general properties and general functions of Pitta, five types of Pitta (Pachaka, Ranjaka, Alochaka, Bhrajaka, Sadhaka) with their specific locations, specific properties,and specific functions. Similarities and differences between Agni and Pitta.	**I**		5	1
6.	**Kapha Dosha:** Vyutpatti, Nirukti of the term Kapha, general locations, general properties and general functions of Kapha, five types of Kapha (Bodhaka, Avalambaka, Kledaka, Tarpaka, Śleshaka) with their specific locations, specific properties, and specific functions.	**II**		4	1
7.	**Dosha Vriddhi-Kshaya:** Etiological factors responsible for Dosha Vriddhi, Dosha Kshaya and their manifestations.	**II**		1	1
8.	**Kriyakala:** Concept of Kriyakala, applied physiology of diseases produced due the vitiation of vata, pitta and kapha.	**II**		1	1
9	**Prakriti:** **Deha- Prakriti:** Vyutpatti, Nirukti, various definitions and synonyms for the term "Prakriti". Intra-uterine and extra-uterine factors influencing Deha-Prakriti, classification and characteristic features of each kind of Deha-Prakriti. **Manasa- Prakriti:** Introduction and types of Manasa- Prakriti	**II**		7	3

10.	**Ahara**: Definition, classification and significance of Ahara, Ahara-vidhi-vidhana, Ashta Aharavidhi Viseshayatana, Ahara Parinamkar Bhava.	**III**		3	1
11.	**Agni**: Definition and importance, synonyms, classification, location, properties and functions of Agni and functions of Jatharagni, Bhutagni, and Dhatvagni.	**III**	26	4	1
12.	**Aharapaka** (Process of digestion): Description of Annavaha Srotas and their Mula. Description of Avasthapaka (Madhura, Amla and Katu). Description of Nishthapaka (Vipaka) and its classification. Role of Grahani& Pittadhara Kala. Separation of Sara and Kitta. Absorption of Sara. Genesis of Vata-Pitta-Kapha during Aharapaka process. Definition of the term Koshtha. Classification of Koshtha and the characteristics of each type of Koshtha.	**III**		7	2
PART-B (Marks-40)					
1	**Physiology Homeostasis**: Definition and mechanisms of maintenance of homeostasis. Cell physiology. Membrane physiology. Transportation of various substances across cell membrane. Resting membrane potential and action potential. Acid-base balance, water and electrolyte balance. Study of basic components of food.	**I**	23	5	1
2	**Physiology of Respiratory system**: functional anatomy of respiratory system. Definition of ventilation, mechanism of respiration, exchange and transport of gases, neural and chemical control of respiration, artificial respiration, asphyxia, hypoxia. Introduction to Pulmonary Function Tests.	**II**		5	2
3	**Physiology of Gastrointestinal system**: Functional anatomy of gastro-intestinal tract, mechanism of secretion and composition of different digestive juices. Functions of salivary glands, stomach, liver, pancreas, small intestine and large intestine in the process of digestion and absorption. Movements of the gut (deglutition, peristalsis, defecation) and their control. Enteric nervous system. Digestion and metabolism of proteins, fats and carbohydrates. Vitamins & Minerals- sources, daily requirement, functions, manifestations of hypo and hypervitaminosis.	**II**		7	2
4	**Physiology of Nervous System**: General introduction to nervous system, neurons, mechanism of propagation of nerve impulse, physiology of CNS, PNS, ANS; physiology of sensory and motor nervous system, Functions of differentparts of brain and physiology of special senses, intelligence, memory, learning and motivation. Physiology of sleep and dreams, EEG. Physiology of speech and articulation. Physiology of temperature regulation.	**III**	17	7	3
5	**Physiology of Endocrine glands**: General introduction to endocrine system, classification and characteristics of hormones, physiology of all endocrine glands, their functions and their effects.	**III**		6	2

Paper II – AyUG-KS					
	A2 **List of Topics** **Paper II**	**B2** **Term**	**C2** **Marks**	**D2** **Lecture hours**	**E2** **Non-Lecture hours**
PART-A (Marks-60)					
1	**Dhatu**: Etymology, derivation, definition, general introduction of term Dhatu, different theories related to Dhatuposhana (Dhatuposhana Nyaya)	**I**		2	1
2	**Rasa Dhatu**: Etymology, derivation, location, properties, functions and Praman of Rasa-dhatu. Physiology of Rasavaha Srotas, Formation of Rasa Dhatu from Aahara Rasa, circulation of Rasa (Rasa-Samvahana), role of Vyana Vayu and Samana Vayu in Rasa Samvahana. Description of functioning of Hridaya. Ashtavidha Sara, characteristics of Tvakasara Purusha, conceptual study of Aashraya-Aashrayi Bhaava and its relation to Rasa and Kapha. Manifestations of kshaya and Vriddhi of Rasa	**I**		4	1
3.	**Rakta Dhatu**: Etymology, derivation, synonyms, location, properties, functions and Praman of Rakta Dhatu. Panchabhautikatva of Rakta Dhatu, physiology of Raktavaha Srotas, formation of Raktadhatu, Ranjana of Rasa by Ranjaka Pitta, features of Shuddha Rakta, specific functions of Rakta, characteristics of Raktasara Purusha, manifestations of Kshaya and Vriddhi of Raktadhatu, mutual interdependence of Rakta and Pitta.	**I**	18	3	1
4.	**Mamsa Dhatu**: Etymology, derivation, synonyms, location, properties and functions of Mamsa Dhatu, physiology of Mamsavaha Srotas, formation of Mamsa Dhatu, characteristics of Mamsasara Purusha, manifestations of Kshaya and Vriddhi of Mamsa Dhatu, Concept of Peshi.	**I**		2	1
5.	**Meda Dhatu**: Etymology, derivation, location, properties, functions and Praman of Meda Dhatu, physiology of Medovaha Srotas, formation of Medo Dhatu, characteristics of Medasara Purusha and manifestations of Kshaya and Vriddhi of Meda.	**I**		3	1
6.	**Asthi Dhatu**: Etymology, derivation, synonyms, location, properties, functions of Asthi Dhatu. Number of Asthi. Physiology of Asthivaha Srotas and formation of Asthi Dhatu, characteristics of Asthisara Purusha, mutual interdependence of Vata and Asthi Dhatu, manifestations of Kshaya and Vriddhi of Asthi Dhatu.	**II**	19	2	1
7.	**Majja Dhatu:** Etymology, derivation, types, location, properties, functions and Praman of Majjaa Dhatu, physiology of Majjavaha Srotas, formation of Majja Dhatu, characteristics of Majja Sara Purusha, relation of Kapha, Pitta, Rakta and Majja, manifestations of Kshaya and Vriddhi of Majja Dhatu.	**II**		3	1

8.	**Shukra Dhatu:** Etymology, derivation, location, properties, functions and Praman of Shukra Dhatu, physiology of Shukraravaha Srotas and formation of Shukra Dhatu. Features of Shuddha Shukra, characteristics of Shukra-Sara Purusha, manifestations of Kshaya and Vriddhi of Shukra Dhatu.	**II**		3	1
9	**Concept of Ashraya-Ashrayi bhava** i.e. inter-relationship among Dosha, Dhatu Mala and Srotas. Applied physiology of diseases asserting saptadhatu enlisted under dhatu pradoshaj vikar.	**II**		1	1
10.	**Ojas**: Etymological derivation, definition, formation, location, properties, Praman, classification and functions of Ojas. Description of Vyadhikshamatva. Bala Vriddhikara Bhava. Classification of Bala. Etiological factors and manifestations of Ojavisramsa, Vyapat and Kshaya.	**II**		3	1
11.	**Upadhatu**: General introduction, etymological derivation and definition of the term Upadhatu. Formation, nourishment, properties, location and functions of each Upadhatu. **Stanya**: Characteristic features and methods of assessing Shuddha and Dushita Stanya, manifestations of Vriddhi and Kshaya of Stanya. **Artava**: Characteristic features of Shuddha and Dushita Artava. Differences between Raja and Artava, physiology of Artavavaha Srotas. **Tvak**: classification, thickness of layer and functions.	**II**		6	1
12.	**Mala**: Etymological derivation and definition of the term Mala. Aharamala: Enumeration and description of the process of formation of Aharamala. **Purisha**: Etymological derivation, definition, formation, properties, quantity and functions of Purisha. Physiology of Purishavaha Srotas, manifestations of Vriddhi and Kshhaya of Purisha. **Mutra**: Etymological derivation, definition, formation, properties, quantity and functions of Mutra. Physiology of Mutravaha Srotas, physiology of urine formation in Ayurveda, manifestations of Vriddhi and Kshhaya of Mutra. **Sveda**: Etymological derivation, definition, formation and functions of Sveda. Manifestations of Vriddhi and Kshaya of Sveda. Discription of Svedvaha Srotas **Dhatumala**: Brief description of each type of Dhatumala.	**III**	23	6	2
13	**Indriya vidnyan**: Physiological description of Panchagyaanendriya and physiology of perception of Shabda, Sparsha, Rupa, Rasa and Gandha. Physiological description of Karmendriya.	**III**		1	1
14	**Manas**: Properties, functions and objects of Manas. Physiology of Manovaha Srotas.	**III**		2	1
15	**Atma**: Properties of Atma. difference between Paramatma and Jivatma; Characteristic features of existence of Atma in living body.	**III**		2	0
16	**Nidra & Swapna**: Nidrotpatti, types of Nidra, physiological and clinical significance of Nidra; Svapnotpatti and types of Svapna.	**III**		2	0

PART-B (Marks-40)					
1	**Haemopoetic system**: composition, functions of blood and blood cells, Haemopoiesis (stages and development of RBCs, and WBCs and platelets), composition and functions of bone marrow, structure, types and functions of haemoglobin, mechanism of blood clotting, anticoagulants, physiological basis of blood groups, plasma proteins, introduction to anaemia and jaundice.	**I**	18	5	2
2	**Immunity**: classification of immunity: Innate, acquired and artificial. Different mechanisms involved in immunity: Humoral (B-cell mediated) and T-Cell mediated immunity. Hypersensitivity.	**I**		2	0
3	**Physiology of cardio-vascular system**: Functional anatomy of cardiovascular system. Cardiac cycle. Heart sounds. Regulation of cardiac output and venous return. Physiological basis of ECG. Heart-rate and its regulation. Arterial pulse. Systemic arterial blood pressure and its control.	**I**		5	2
4	**Muscle physiology**: comparison of physiology of skeletal muscles, cardiac muscles and smooth muscles. Physiology of muscle contraction.	**II**	07	2	0
5	**Adipose tissue**: lipoproteins like VLDL, LDL and HDL triglycerides. Functions of skin, sweat glands and sebaceous glands.	**II**		2	1
6	**Physiology of male and female reproductive** systems: Description of ovulation, spermatogenesis, oogenesis, menstrual cycle.	**II**	15	5	2
7	**Physiology of Excretion**: functional anatomy of urinary tract, functions of kidney. Mechanism of formation of urine, control of micturition. Formation of faeces and mechanism of defecation.	**III**		4	2
8	**Special Senses, Sleep and Dreams**: Physiology of special senses. physiology of sleep and dreams	**III**		5	1

List of Practicals

PRACTICALS (Marks-100)				
	List of Topics	**Term**	**Lecture**	**Non-Lecture**
1	Dhatu sararata parikshana	**I**	0	10
2.	Demonstrate laboratory equipment (spotting)	**I**	0	1
3.	Demonstrate blood collection	**I**	0	1
4.	Estimate haemoglobin	**I**	0	2
5.	Estimate bleeding time & clotting time	**I**	0	2
6.	Estimate blood grouping	**I**	0	2
7.	Prakriti parikshana	**II**	0	20
8.	Dosha vriddhi kshaya parikshana	**II**	0	4
9.	Dhatu vriddhi kshaya parikshana	**II**	0	5
10.	Nadi parikshana	**II**	0	3
11.	Pulse examination	**II**	0	2
12.	WBC estimation	**II**	0	2
13.	RBC estimation	**II**	0	2
14.	DLC estimation	**II**	0	2
15.	Measurement of Blood pressure	**II**	0	2
16.	Perform the procedure Inspection of respiratory system	**II**	0	2
17.	Perform the procedure Inspection of heart sound	**II**	0	3
18.	Agni parikshana	**III**	0	6
19.	Koshtha parikshana	**III**	0	2
20.	Urine examination	**III**	0	2
21.	Demonstrate ESR, PCV	**III**	0	1
22.	Observe the procedure of ECG	**III**	0	2
23.	Perform the procedure of examining the cranial nerves and reflexes	**III**	0	2

Table 5: Non-Lecture Activities Course AyUG- KS

Theory Non-Lecture 50 (Paper I -25 & Paper II-25)		**No of Activity hours**
1.	Assignment - homework based	3
2.	Brainstorming	2
3.	Buzz group	1
4.	Case based learning	1
5.	Confusion technique	1
6.	Debate	1
7.	Demonstration	2
8.	Direct observation skill (DOPS)	1

9.	Flipped classroom	1
10.	Group Discussion	3
11.	Jigsaw or puzzle	1
12.	Mnemonics	2
13.	Model based learning	1
14.	Online teaching aids	1
15.	Panel discussion	1
16.	Problem based learning	2
17.	Real-life experience	1
18.	Recitation	3
19.	Role Play	1
20.	Self-directed learning	3
21.	Seminar by students	5
22.	Simulated condition	1
23.	Skill assessment	2
24.	Symposium	2
25.	Team project work	1
26.	Think-Pair-Share	2
27.	Tutorial	3
28.	Video show	2
Practical Non-Lecture 100 (200 hours)		
1.	Ayurveda Practicals – 50	100
2.	Modern Practicals – 30	60
3.	Activity based learning – 20	40
	Communication Skills, Small project / Experiment designing, Task-based learning, Teamwork based learning, Team project, Problem Based Learning (PBL)/(CBL), Group Discussion, Workshops, Field visits, Preparation of charts 1, models and computerized simulation models etc., Seminar presentations by students	
	Total Non-Lecture hours	**250**

Additional Suggested topics for tutorials

Point No.	Name of Topic
T – 1 CO 6	*Atma lakshana*
T – 2 CO3	Characteristics of *Prakriti Eka doshaja, dwandwaja and sama prakriti. Clinical importance of deha prakriti, anukatva.*
T – 3 CO5	*Nadi vigyan*
T – 4 CO6	*Anukatva*
T – 5 CO6	*Indriya panch panchak and physiological study of panchajyanendriya and panchakarmendriya.*
T – 6 CO6	*Meanings of terminologies used for dhatu poshana nyaya related to dhatu poshana*
T – 7 CO1	*Ahara dravya vargikarana*
T – 8 CO1	*Avasthapaka & Vipak*

Suggested topics for seminar topics

Sr. No.	Content
S – 1 CO8	*Tridosha*
S – 2 CO8	*Agni*
S – 3 CO8	*Rasa rakta samvahan*
S – 4 CO8	*Pranavah srotas and shwasana prakriya*
S – 5 CO8	*Ashtavidh sara*
S – 6 CO8	*Trividh nyaya*
S – 7 CO8	*Prakriti*
S – 8 CO8	Basic concept of nervous system
S – 9 CO8	Rh Incompatibility
S – 10 CO8	Digesion of Carbohydrates, proteins & fats
S – 11 CO8	Blood clotting mechanism
S – 12 CO8	Immune system
S – 13 CO8	O_2-Co_2 gasious exchange
S – 14 CO8	Hormones
S – 15 CO8	Renal system

Suggested topics for group discussion

Sr. No.	Content
GD – 1 CO1	*Dosha dhatu mala mulam hi shariram*
GD – 2 CO1	*Concept of agni*
GD – 3 CO1	*Concept* of *upadhatu*
GD – 4 CO1	Role of *ranjak pitta in formation of rakta dhatu*
GD – 5 CO1	Concept of *srotas*
GD – 6 CO1	Physiology of *purishadhara kala / asthidhara kala.Pittadhara kala/ majjadhara kala*
GD – 7 CO1	Generation of *doshas*
GD – 8 CO1	*Ashraya-ashrayi bhava sambhadha of asthi and vata*
GD – 9 CO1	Process of *urine formation described in ayurveda compendia*
GD – 10 CO1	*Avasthapaka*
GD – 11 CO1	Concept of *shatkriyakala*
GD – 12 CO1	*Manas Prakruti*

Table 6: Assessment Summary

6 A- Number of papers and Marks Distribution

S.No.	Subject Code	Papers	Theory	Practical/Clinical Assessment					Grand Total
				Practical/ Clinical	Viva	Electives	IA	Sub Total	
1.	AyUG-KS	2	200	100	70	-	30	200	400

6 B - Scheme of Assessment (formative and Summative)

SR.NO.	PROFESSIONAL COURSE	DURATION OF PROFESSIONAL COURSE		
		First Term (1-6 Months)	Second Term (7-12 Months)	Third Term (13-18 Months)
1	Fi rst	3 PA & First TT	3 PA & Second TT	3 PA & UE

PA: Periodical Assessment; TT: Term Test; UE: University Examinations

6 C - Calculation Method for Internal assessment Marks (30 Marks)

TERM	PERIODICAL ASSESSMENT*					TERM TEST **	TERM ASSESSMENT	
	A	B	C	D	E	F	G	H
	1 (15 Marks)	2 (15 Marks)	3 (15 Marks)	Average (A+B+C/3)	Converted to 30 Marks (D/15*30)	Term Test (Marks converted to 30)	Sub Total _/60 Marks	Term Assessment (…./30)
FIRST							E+F	(E+F)/2
SECOND							E+F	(E+F)/2
THIRD						NIL		E
Final IA	Average of Three Term Assessment Marks as Shown in 'H' Column.							
	Maximum Marks in Parentheses *Select an Evaluation Methods which is appropriate for the objectives of Topics from the Table 6 D for Periodic assessment. Conduct 15 marks assessment and enter marks in A, B, and C. ** Conduct Theory (100 Marks) (MCQ (20*1 Marks), SAQ (8*5), LAQ (4*10)) and Practical (100Marks) Then convert to 30 marks.							

6 D - Evaluation Methods for Periodical Assessment

S. No.	Evaluation Methods for Periodical Assessment
1.	Practical / Clinical Performance
2.	Viva Voce, MCQs, MEQ (Modified Essay Questions/Structured Questions)
3.	Open Book Test (Problem Based)
4.	Summary Writing (Research Papers/ Samhitas)
5.	Class Presentations; Work Book Maintenance
6.	Problem Based Assignment

7.	Objective Structured Clinical Examination (OSCE), Objective Structured Practical Examination (OPSE), Mini Clinical Evaluation Exercise (Mini-CEX), Direct Observation of Procedures (DOP), Case Based Discussion (CBD)
8.	Extra-curricular Activities, (Social Work, Public Awareness, Surveillance Activities, Sports or Other Activities which may be decided by the department).
9.	Small Project
10.	Other activities explained in Table 3 Column G3 as per indicated term and objective of the topic.

6 E- Paper Layout Paper-I

I PPROFESSIONAL BAMS EXAMINATIONS

AyUG – KS

Paper – I

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

TOTAL MARKS: 100

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

Paper – II

Time: 3 Hours Maximum Marks: 100

INSTRUCTIONS: All questions compulsory

TOTAL MARKS: 100

		Number of Questions	Marks per question	Total Marks
Q 1	Multiple Choice Questions (MCQ)	20	1	20
Q 2	Short answer questions (SAQ)	8	5	40
Q 3	Long answer questions (LAQ)	4	10	40
				100

7. References / Resourses

- Ayurvediya Kriyasharir - Ranjit Rai Desai
- Kayachikitsa Parichaya - C. Dwarikanath
- Prakrit Agni Vigyan - C. Dwarikanath
- Sharir Kriya Vigyan - Shiv Charan Dhyani
- Abhinava Sharir Kriya Vigyana - Acharya Priyavrata Sharma
- Dosha Dhatu Mala Vigyana - Shankar Gangadhar Vaidya

- Prakrita Dosha Vigyana - Acharya Niranjana Dev
- Tridosha Vigyana - Shri Upendranath Das
- Sharira Tatva Darshana - Hirlekar Shastri
- Prakrita Agni Vigyana - Niranjana Dev
- Deha Dhatvagni Vigyana - Vd. Pt. Haridatt Shastri
- Sharir Kriya Vigyana (Part 1-2) - Acharya Purnchandra Jain
- Abhinava Sharir Kriya Vigyana - Dr. Shiv Kumar Gaur
- Pragyogik Kriya Sharir - Acharya P.C. Jain
- Kaya Chikitsa- Ramraksha Pathak
- Kaya Chikitsa Parichaya - Dr. C. Dwarkanath
- Concept of Agni - Vd. Bhagwan Das
- Purush Vichaya - Acharya V.J. Thakar
- Kriya Sharir - Prof. Yogesh Chandra Mishra
- Sharira Kriya Vijnana (Part 1 and 2) – Nandini Dhargalkar
- Sharir Kriya Vigyana - Prof. Jayaram Yadav & Dr. Sunil Verma.
- Kriya Sharir mcq – Dr. Kiran Tawalare
- Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology) - Dr. Srikant Kumar Panda
- Sharir Kriya – Part I & Part II – Dr. Ranade, Dr. Deshpande & Dr. Chobhe
- Human Physiology in Ayurveda - Dr Kishor Patwardhan
- Textbook of Physiology - Gyton & Hall
- Review of medical physiology – William Ganong
- Essentials of Medical Physiology - Sembulingam, K.
- Concise Medical Physiology - Chaudhari, Sujit. K.
- Fundamental of Anatomy & Physiology - Martini
- Principals of Anatomy & Physiology - Tortora & Grabowski
- Human Physiology - Richards, Pocock
- Samson Wrights Applied Physiology, Keele, Neil, joels
- Ayurveda Kriya Sharira - Yogesh Chandra Mishra
- Textbook of Medical Physiology - Indu Khurana
- Tridosha Theory - Subrahmanya Shastri
- Dosha Dhatu Mala vigyan – S. G. Vartak
- Purush Vichaya – Jayanad Thakar
- All Samhitas.
- Ayurvediya Shabda kosha.
- Vachaspatyam
- Shabdakalpadrum
- Monir Williams Sanskrit dictionary.