

DPU

Dr. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

Regulations and Curriculum of

AYURVEDA

DEGREE COURSE - PG

(I-MD/MS) PROGRAMME

Academic Year 2018-19 onwards



Dr. D.Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

(Re-accredited by NAAC with a CGPA of 3.62 on a four point scale at 'A' Grade)
(An ISO 9001 : 2015 Certified University)

Dr. A. N. Suryakar
Registrar

Ref. No. : DPU/847(7)/2018
Date : 10/08/2018

NOTIFICATION

In pursuance of the MHRD Notification No. F.10-12/ 2016-U.3 (A) dated 23rd February, 2018 the Dr. D. Y. Patil College of Ayurved and Research Centre, Pimpri, Pune have been included under the ambit of Dr. D. Y. Patil Vidyapeeth, Pune (Deemed to be University).

And whereas in pursuance of the resolution passed by the Board of Management at its meeting held on 21st July, 2018 vide Resolution No.BM-21(ii)-18 the Curriculum of Ayurveda Degree Course-PG (I-MD) Programme for the Academic Year 2018-19 & onwards is hereby published.

The curriculum of PG (I-MD) Programme consists syllabus for following courses:

Pre-clinical specialty	Ayurveda Samhita Siddhant
	Rachana Sharir
	Kriya Sharir
Para-clinical specialty	Rasa Shastra Avum Bhaishajya Kalpana
	Dravyaguna Vigyana
	Agada Tantra, Vyavahar Ayurved evan vidhi vaidyak
	Rog Nidan Avum Vikruti Vidnyan
Clinical specialty	Swasthavritta & Yog
	Stri Rog evam Prasutitantra
	Kaumarabhrutya
	Panchakarma
	Kayachikitsa
	Shalakya Tantra
	Shalya Tantra

This syllabus will be useful to all the concerned. This will come into force with immediate effect.



Suryakar
(Dr. A. N. Suryakar)
Registrar

Copy to:

1. PS to Chancellor for kind information of Hon'ble Chancellor, Dr.D.Y.Patil Vidyapeeth, Pune.
2. PS to Vice Chancellor for kind information of Hon'ble Vice Chancellor, Dr. D. Y. Patil Vidyapeeth, Pune.
3. The Principal, Dr. D. Y. Patil College of Avurved & Research Centre, Pimpri, Pune
4. The Controller of Examinations, Dr. D. Y. Patil Vidyapeeth, Pune.
5. Director (IQAC), Dr. D. Y. Patil Vidyapeeth, Pune.

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1. INTRODUCTION

The regulation of the M.D./M.S.(Ayurveda) programme conducted by the Dr. D. Y. Patil Vidyapeeth (DPU) Pune, Deemed to be University is in accordance with rules and regulations of the Central Council of Indian Medicine with the basic objective of Providing quality education of different branches of Ayurveda to enable students to undertake responsibilities and cope with challenges, problems and opportunities through active learning and continued education with competence and concern to ensure the practice of holistic health.

2. GOALS OF THE M.D./M.S.(Ayurveda) PROGRAMME

The Goals of the post-graduate degree courses shall be to provide orientation of specialties and super-specialties of Ayurveda, and to produce experts and specialists and/or Teachers-

- 2.1 Who can be competent and efficient teachers, physicians, surgeons, gynaecologists and obstetricians (Stri Roga and Prasuti Tantragya), pharmaceutical experts, researchers and profound scholars in various fields of specialisation of Ayurveda.
- 2.2 Who shall recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the National health policy.
- 2.2. Who shall have mastered most of the competencies, pertaining to the speciality, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system.
- 2.3. Who shall be aware of the contemporary advance and developments in the field of Ayurveda.
- 2.4. Who shall have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology.
- 2.5 Who can promote research in the field of Ayurveda to contribute in the advancement of the system.

3. PROGRAMME OBJECTIVES & OUTCOMES

At the end of the Post Graduate training in the discipline concerned the student shall be able to;

- 3.1 Recognize the importance to the concerned specialty in the context of the health needs of the community and the national priorities in the health sector.
- 3.2 Practice the specialty concerned ethically and in step with the principles of primary health care.
- 3.3 Identify social, economic, environmental, biological and emotional determinants of health in a given case, and take them into account while planning therapeutic, rehabilitative, preventive and primitive measure/strategies
- 3.4 Diagnose and manage majority of the conditions in the specialty concerned on the basis of clinical assessment, and appropriately selected and conducted investigations
- 3.5 Plan and advice measures for the prevention and rehabilitation of patients suffering from disease and disability related to the specialty.
- 3.6 Demonstrate competence in basic concepts of research methodology and epidemiology, and be able to critically analyze relevant published research literature.
- 3.7 Develop skills in using educational methods and techniques as applicable to the teaching of Ayurveda UG students, general physicians and paramedical health workers.

4. PROGRAMME SPECIFIC OUTCOMES

- 4.1 At the end of the Preliminary MD/MS Ayurveda training in the discipline concerned the student shall be able to:
 - ❖ Demonstrate competence in basic concepts of research methodology and epidemiology, be able to critically analyze relevant published research literature, be able to understand the impact of research on Ayurveda.

- ❖ Understand Basic Concepts of Ayurveda and their applications to various streams.
- ❖ Outline and plan research project which they are going to undertake and submit a synopsis of their project

4.2 At the end of the MD/MS Ayurveda training in the discipline concerned the student shall be able to:

- ❖ Submit their completed research project duly approved by their respective guide in their specialty
- ❖ Who shall have mastered most of the competencies, pertaining to the specialty, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system.

5. REGULATIONS OF MD/MS AYURVEDA PROGRAMME

5.1 SPECIALTIES IN WHICH POST-GRADUATE DEGREE SHALL BE CONDUCTED

Post graduate degree courses shall be in the following branches.

Sr. No	Name of speciality	Nearest terminology of modern Subject	Department in which post- graduate degree can be conducted
Pre-clinical specialty			
1	Ayurveda Samhita Avum Siddhant	Ayurveda Samhita and basic principles of Ayurveda	Samhita and basic principles of Ayurveda
2	Rachana Sharir	Anatomy	Rachana Sharir
3	Kriya Sharir	Physiology	Kriya Sharir
Para-clinical specialty			
1	Dravyaguna Vigyana	Materia Medica and Pharmacology	Dravyaguna Vigyana
2	Rasa Shastra Avum Bhaishajya Kalpana	Ayurveda Pharmaceuticals	Rasa Shastra Avum Bhaishajya Kalpana

Sr. No	Name of speciality	Nearest terminology of modern Subject	Department in which post- graduate degree can be conducted
3	Rog Nidan Avum Vikruti Vidnyan	Diagnostic Procedure and Pathology	Rog Nidan Avum Vikruti Vidnyan
Clinical specialty			
1	Prasuti evam Stri Roga	Obstetrics and Gynecology	Prasuti evam Stri Roga
2	Kaumarabhritya – Bala Roga	Pediatrics	Kaumarabhritya –Bala Roga
3	Swasthavritta	Preventive Social Medicine	Swasthavritta & Yoga
4	Kayachikitsa	Medicine	Kayachikitsa
5	Shalya	Surgery	Shalya Tantra
6	Shalakyā	Diseases of Eye, Ear, Nose, Throat, Head, Neck, Oral and Dentistry	Shalakyā Tantra
7	Panchakarma	Panchakarma	Panchakarma
8	Agada Tantra	Toxicology and Forensic Medicine	Agada Tantra

5.2 NOMENCLATURE OF POST-GRADUATE DEGREE.-

The nomenclature of post-graduate degree in respective specialties shall be as under:-

Sr. No.	Nomenclature of specialty or degree	Abbreviation
Pre-clinical specialty		
1	Ayurved Vachaspati -Ayurveda Samhita and basic principles of Ayurveda	M.D. (Ayurveda)- Compendium and Basic Principles
2	Ayurved Vachaspati - Rachana Sharir	M.D. (Ayurveda) - Anatomy
3	Ayurved Vachaspati - Kriya Sharir	M.D. (Ayurveda) - Physiology
Para-clinical specialty		
1	Ayurved Vachaspati - Dravyaguna Vigyana	M.D. (Ayurveda) -Materia Medica and Pharmacology

Sr. No.	Nomenclature of specialty or degree	Abbreviation
2	Ayurved Vachaspati - Rasa Shastra Avum Bhaishajya Kalpana	M.D. (Ayurveda) - Pharmaceuticals
3	Ayurved Vachaspati - Rog Nidan Avum Vikruti Vidnyan	M.D. (Ayurveda)- Diagnostic procedure and Pathology
Clinical specialty		
1	Ayurveda Dhanvantari Prasuti evam Stri Roga	M.S. (Ayurveda)- Obstetrics and Gynecology
2	Ayurved Vachaspati - Kaumarabhritya –Bala Roga	M.D. (Ayurveda)- Paediatrics
3	Ayurved Vachaspati - Swasthavritta	M.D. (Ayurveda)- Social and Preventive Medicine
4	Ayurved Vachaspati - Kayachikitsa	M.D. (Ayurveda)- Medicine
5	Ayurveda Dhanvantari- Shalyatantra	M.S. (Ayurveda)- Surgery
6	Ayurveda Dhanvantari – Shalakya tantra	M.S. (Ayurveda)- Diseases of Eye, Ear, Nose, Throat Head, Neck, Oral and Dentistry
7	Ayurved Vachaspati - Panchakarma	M.D. (Ayurveda)- Panchakarma
8	Ayurved Vachaspati - Agada Tantra	M.D. (Ayurveda)- Toxicology and Forensic Medicine

5.3 COURSE OF STUDY

1. Candidate shall complete the course of M.D./M.S. Ayurveda in a specialty subject Within the duration of six years from the date of his admission
2. The Course shall be of three years duration, including one year of house-job,during which the candidate shall be a resident in the campus.
3. The course shall comprise of the followings, namely:
 - (a) Preliminary MD
 - A. Research Methodology & Bio-statistics
 - B. Applied aspects regarding concerned subject.
 - (b) Second Final MD
 - A. Detailed study of the concerned subject & its applied aspect.

5.4 ELIGIBILITY FOR ADMISSION:

1. A person possessing a degree in Ayurveda of a University or Board or Medical institution specified in the Second Schedule of Indian Medicine Central Council Act 1970 shall be eligible for admission to Post-graduate degree course.
2. A person must clear All India PG entrance test (PGET) and will be admitted on the basis of merit as per CCIM / AYUSH norms time to time.

5.5 METHOD OF TRAINING.-

1. In the first year of the course, the students shall have to acquire knowledge in the applied aspects of the fundamentals of Ayurveda.
2. Intensive training shall be provided in classical knowledge along with comparative and critical study in the respective specialty.
3. The emphasis shall be given on intensive applied and hands on training.
4. The student shall have to acquire the knowledge about the methods and techniques of research in the respective fields making use of information technology.
5. In clinical subjects, students shall undertake responsibility in management and treatment of patients independently and deal with emergencies.
6. The student shall undertake training in teaching technology and research methods and shall participate in the teaching and training programs of under-graduate students or interns in the respective subjects during the course of studies.
7. In the clinical training, the student shall have to acquire knowledge of independent work as a specialist.
8. In the specialties of Shalya, Shalakya and Prasuti - Stri Roga, the student shall undergo training of investigative procedures, techniques and surgical performance of procedures and management in the respective specialty.

5.6 ATTENDANCE

1. The student shall have to undergo study for a period of three years after the admission.
2. The student shall have to attend minimum 75% of total lectures, practicals and clinical tutorials or classes to become eligible for appearing in the examination.
3. The student shall have to attend the hospital and other duties as may be assigned to him during the course of study.
4. The PG students of Clinical Subjects / Non-Clinical Subjects shall have to do resident duties.

5. The student shall attend special lectures, demonstrations; seminars, study tours and such other activities as may be arranged by the teaching departments.
6. The maximum duration for completion of the course shall not exceed beyond the period of six years from the date of admission to the course.
7. Web based centralized biometric attendance system shall be required for the attendance of post-graduate students and manual attendance at department level in which student is pursuing the post-graduate course.

5.7 MONITORING PROGRESS OF STUDIES

Every candidate shall maintain a log book and record of his/her participation in training programmes conducted by the department such as journals reviews, seminars, etc. The log book shall be scrutinized and certified by the Head of the Department and head of the institution, and presented in the university practical examination, if called for. Special mention may be made of the presentations by the candidate as well as details of experiments or laboratory procedures conducted by the candidate. The presentation will be assessed by the faculty members and peers.

5.8 DISSERTATION

1. The title of dissertation along with synopsis, with approval of the ethics committee constituted by the institute as per regulations of concerned university, shall be submitted to the university within a period of six months from the date of admission to PG course.
2. If the student fails to submit the title of dissertation and synopsis within the period specified under sub regulation (1) as above, his term for final exams will be extended for six months or more in accordance with time of submission of the synopsis to the university.
3. The synopsis of the proposed scheme of work should indicate the familiarity of the student with proposed theme of work, the name of the department and the name and designation of the guide or supervisor and co-guide, if any. The university should approve the synopsis not later three months after submission of the synopsis.
4. For approving the title, a Research & Recognition Committee shall be constituted by the University.

5. The subject of every dissertation shall be research, practical oriented, innovative and helpful in the development of Ayurveda. The subject of the dissertation shall be related to the subject matter of the respective specialty.
6. Once the title for the dissertation is approved by the scrutiny committee of the university, the student shall not be allowed to change the title of the proposed theme work without permission of the university.
7. No students shall be allowed to submit the dissertation before six months of the final year. However, the student shall continue his or her regular study in the institution after submission of dissertation to complete three years.
8. The dissertation shall contain the methods and data of the research carried out by the student on the problem selected by him and completed under the guidance of the teacher approved by the universality.
9. The dissertation shall consist critical review of literature, methodology, results of the research, discussion on the basis of research findings of the study summary conclusion. And references cited in the dissertation should be suitable for the publication.
10. The dissertation shall consist of not less than forty thousand words.
11. The dissertation shall contains, at the end, a summary of not more than one thousand five hundred words and the conclusion not exceeding one thousand words.
12. The Guide shall be a person of status of a Professor or a Reader/Asst. Professor, Lecturer with minimum five years university approved teaching experience in the concerned subject or three years as Co-guide.
13. A Co-guide may be included provided the work requires substantial contribution from a sister department or from other institution recognized by CCIM.
14. Five copies of the bound dissertation along with a certificate from the Guide should reach the office of the registrar of the university six months before the final examination.

15. The dissertation shall be valued by two external and two internal examiners appointed by the university.
16. Approval of dissertation work is an essential precondition for a candidate to appear for the final examination. The dissertation shall be accepted only after approval of the four examiners appointed and in case of disapproval by one examiner, the same shall be referred to fifth examiner. If it is not approved by the fifth examiner also, the same shall be returned to the student with the remarks of the examiner and the student can resubmit the dissertation after making the necessary improvement in the light of examiner's report to the university within a further period of six months.
17. If the dissertation is not accepted by two examiners, the same shall be returned to the student with the remarks of the examiners and the student can resubmit the dissertation after making the necessary improvement in the light of examiners report to the university within a further period of six months.
18. **The dissertation should be written under the following headings:**
 - Introduction
 - Aims and Objectives of study
 - Review of literature
 - Methodology (Materials & Methods)
 - Results
 - Discussions
 - Summary
 - Conclusion
 - Bibliography/References Annexures
19. **Guide Students ratio:-** The teacher student ratio shall be such that the number of post graduates teachers to the number of post graduate students admitted per year is maintained at 1:3 in case of Professor 1:2 in case of Reader/Asst. Professor and 1:1 in case of Lecturer having minimum 5 years concerned PG subject teaching experience.
20. **Change of Guide** In the event of a registered guide leaving the college for any reason including transfer or in the event of death of guide, guide may be changed with prior permission from the university.

5.9 CRITERIA RECOGNITION OF PG TEACHER

Eligibility Criteria for PG Teacher: Professor, Associate Professor (Reader) possessing a recognized Post Graduate Degree (MD / MS) in Ayurveda or Assistant Professor (Lecturer) holding a recognized Post Graduate Degree (MD / MS) in Ayurveda with minimum Five Years of teaching experience as a Assistant Professor (Lecturer).

(a) Educational qualification and experience for selection of Co-Supervisor (Co-Guide);

The Co-guide shall be recognized Postgraduate teacher of CCIM.

Lecturer with minimum five years university approved teaching experience in the concerned subject or three years can work as Co-guide according to norms of CCIM.

5.10 STUDENT/ SUPERVISOR (GUIDE) RATIO

- a. The student – Supervisor (Guide) ratio shall be 3:1 if the Guide or Supervisor is of Professor Cadre.
- b. The Student – Supervisor (Guide) ratio shall be 2:1 if the Guide or Supervisor is of Reader Cadre.
- c. The Student – Supervisor (Guide) ratio shall be 1:1 if the Guide or Supervisor is of Lecturer Cadre.

Note:- The supervisor (guide) shall be from the teaching faculty of the Ayurved College wherein the concerned student has taken admission.

6. EXAMINERS

- (1) The preliminary examination shall be conducted by a team of two examiners, out of which one examiner shall be external from any other institution and the final examination shall be conducted by a team of four examiners, out of which two examiners shall be external from any other institution.
- (2) A teacher with five years teaching or research experience in concerned subject or specialty shall be considered eligible for being appointed as an examiner.

7. REQUIREMENTS FOR POST GRADUATE TEACHING CENTRE

The post-graduate institute where under-graduate course is in existence shall fulfill following requirements, namely:-

- (1) The under-graduate institution which has completed minimum four and half years of under-graduate teaching shall be eligible for applying to start post-graduate courses.
- (2) The institute shall satisfy all the minimum requirements of under-graduate training as specified in the Indian Medicine Central Council (Requirements of Minimum Standard for under-graduate Ayurveda Colleges and attached Hospitals) Regulations, 2016 as amended from time to time.
- (3) The institute shall have all the equipment and research facilities required for training in the related speciality and subject as specified in the Indian Medicine Central Council (Requirements of Minimum Standard for under-graduate Ayurveda Colleges and attached Hospitals) Regulations, 2016 as amended from time to time.
- (4) The institute shall have Central Research Laboratory and Animal House for starting post-graduate Course, Animal House shall be either owned or in collaboration.
- (5) The existing post-graduate Institutions shall fulfill the requirement as specified in sub-regulation (4) before the 31st December, 2016.
- (6) The Additional Ancillary staff like Biochemist, Pharmacologist, Bio Statistician, Microbiologist to be appointed and the Qualification shall be Post Graduate degree in the subject concerned or equivalent qualification from a recognised University.
- (7) The minimum additional teaching staff required for starting post-graduate course shall be one Professor or Reader and one Lecturer of the concerned subject, in addition to the teachers stipulated for under-graduate teaching, and the specialty which does not exist as independent department at under-graduate level shall have minimum one Professor or Reader and one Lecturer for starting post-graduate course.

- (8) The post-graduate department or specialty shall have minimum one Professor in concerned subject or specialty from the academic session 2017-18.
- (9) In each of the department of Rachana Sharira, Kriya Sharira, Dravyaguna, Rasa Shastra evam Bhaishajya Kalpana, Roga Nidana evam Vikriti Vigyana and ShalyaTantra, the following non-teaching staff shall be required in addition to the under-graduate staff requirement:
- | | | | |
|--|---|---|-------|
| (i) Laboratory technician | - | 1 | (one) |
| (ii) Laboratory assistant | - | 1 | (one) |
| (iii) Attendant or Peon or Multipurpose worker | - | 1 | (one) |
- (10) The institute shall have a fully equipped hospital consisting of minimum one hundred beds with specialty-wise adequate facilities in all departments as specified in the Indian Medicine Central Council (Requirements of Minimum Standard for under-graduate Ayurveda Colleges and attached Hospitals) Regulations, 2016 as amended from time to time.
- (11) In the post-graduate institute having under-graduate course with upto sixty seats, ten post-graduate seats in clinical subjects shall be admissible within the bed strength as specified in sub-regulation (10) and for more than ten post-graduate seats in clinical subjects, additional beds in the student: bed ratio of 1:4 shall be provided over the bed strength as specified in the sub-regulation(10).
- (12) The post-graduate in pre-clinical or para-clinical subject as specified in regulation 4 at serial number 1 to 6 shall be admissible on the basis of bed strength as specified in sub-regulation (10).
- (13) The post-graduate institute having under-graduate course with sixty-one to hundred seats shall require additional beds for post-graduate seats in clinical subjects in the student: bed ratio of 1:4 over the bed strength as specified in sub-regulation (10).

- (14) The minimum annual average bed-occupancy in In-Patient Department of the hospital during last one calendar year (i.e. 365 days and 366 days in case of a leap year) shall be more than fifty per cent. and minimum daily average attendance of patients in Out-Patient Department of the hospital during last one calendar year (300 days) shall be minimum one hundred and twenty patients per day for the colleges having post-graduate course(s) with upto sixty under-graduate seats and minimum two hundred patients per day for the colleges having post-graduate course (s) with sixty-one to hundred under - graduate seats.
- (15) In clinical departments, for additional beds increased for clinical post-graduate seats, one Clinical Registrar or Senior Resident or Resident Doctor shall be provided for every twenty beds.

8. SCHEME OF EXAMINATION:

The post graduate degree course shall have two examinations in the following manners:-

- a. The preliminary examination shall be conducted at the end of one year after admission;
- b. The final examination shall be conducted on completion of three academic years after the admission to PG course;
- c. Examination ordinarily held in the month of June or July and November or December every year;
- d. For being declared successful in the examination, students shall have to pass all the subjects separately in the preliminary examinations & Final Examinations.
- e. The post-graduate degree shall be conferred after the dissertation accepted and the student passes the final examination.
2. The examination shall be aimed to test the clinical acumen, ability and working knowledge of the students in practical aspect of the specialty and his/her fitness to work independently as specialist.
3. The clinical examination shall aim at a careful assessment of the competence of the student, so that his/her familiarity with Ayurveda and scientific literature in the specialty could be judged.
4. The viva-voce part of the practical examination shall involve extensive discussion on any aspect of subject/specialty.

8.1 Examination Pattern for Pre MD Theory (Research Methodology)

Examination	Duration	Marks
PART – A (60 marks)		
L.A.Q		10 marks x 3 questions =30
S.A.Q. Attempt any 6 out of 7		5 marks x 6 questions =30
PART – B (40 marks)		
L.A.Q.		10 marks x1 questions =10
S.A.Q. Attempt any 6 out of 7		5marks x 6 questions =30
Total	3 hrs.	100

8.2 Examination Pattern for Pre MD Theory (Concerned subjects)

Examination	Duration (3 hours)	Marks
PART - A		
L.A.Q		10 marks x3 questions =30
S.A.Q. Attempt any 4 out of 5		5 marks x4 questions =20
PART - B		
L.A.Q.		10 marks x3 questions =30
S.A.Q. Attempt any 4 out of 5		5marks x4 questions =20
Total		100

8.3 Examination Pattern for Pre MD Practical Examinations / Viva voce

:-

Practical examination/Viva Voce pattern for each subject will be different & shall be mentioned in the syllabus particular subject.

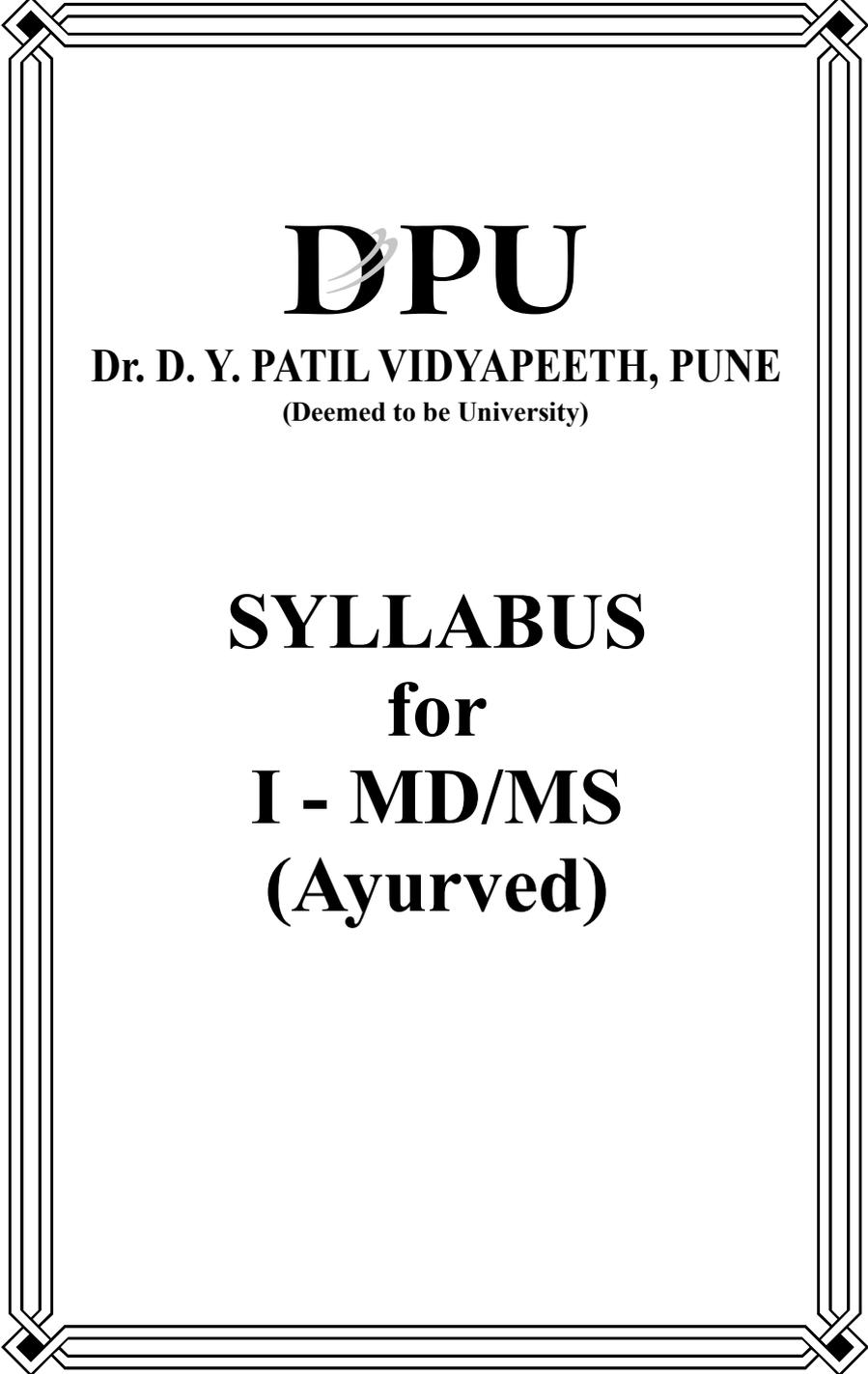
8.4 Subjects of examination.-

- (1) The preliminary examination at the end of one academic year after admission shall be conducted in the following subjects, namely:-
Paper I- Research Methodology and Bio or Medical Statistics;
Paper II-Applied aspects regarding concerned subjects.
- (2) The student shall have to undergo training in the department concerned and shall maintain month-wise record of the work done during the last two years of study in the specialty opted by him as under:-
 - (a) study of literature related to specialty;
 - (b) regular clinical training in the hospital for student of clinical subject;

- (c) practical training of research work carried out in the department, for student of pre-clinical and Para-clinical subject;
 - (d) participation in various seminars, symposia and discussions; and
 - (e) Progress of the work done on the topic of dissertation.
- (3) The assessment of the work done by the students of first year post-graduate course during the first year as specified in sub-regulation (2) shall be done before the preliminary examination.
 - (4) The final examination shall include dissertation, written papers and clinical or practical and oral examination.
 - (5) There shall be four theory papers in each specialty and one practical or clinical and viva-voce examination in the concerned specialty or group of sub-specialties selected by the student for special study.
 - (6) The student shall publish or get accepted minimum one research paper on his research work in one journal and one paper presentation in regional level seminar.

9. Eligibility for Examination-

1. Student must have minimum 75% attendance in theory and practical coursework
2. Before appearing for preliminary examinations, each student enrolled for clinical as well as non clinical subjects shall have to complete houseman ship in clinical departments as per instructions of the head of the institution.
3. While studying in main course (second year) and before appearing in final examination he/She shall:-
 - A. Present at least 1 research paper concerned with enrolled specialty at national/ International/ State Seminars.
 - B. Publish 1 Article concerned with enrolled specialty at national / International / State Journals.
 - C. Attend 2 national / International / State level Seminars / workshops / symposium related to his/her enrolled specialty. (Attended during 3 years course).
 - D. Deliver at least 10 theory lectures in front of his/her Guide / HOD / Other teacher of concerned Department.
 - E. Maintain a log book with due certification.



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SYLLABUS
for
I - MD/MS
(Ayurved)

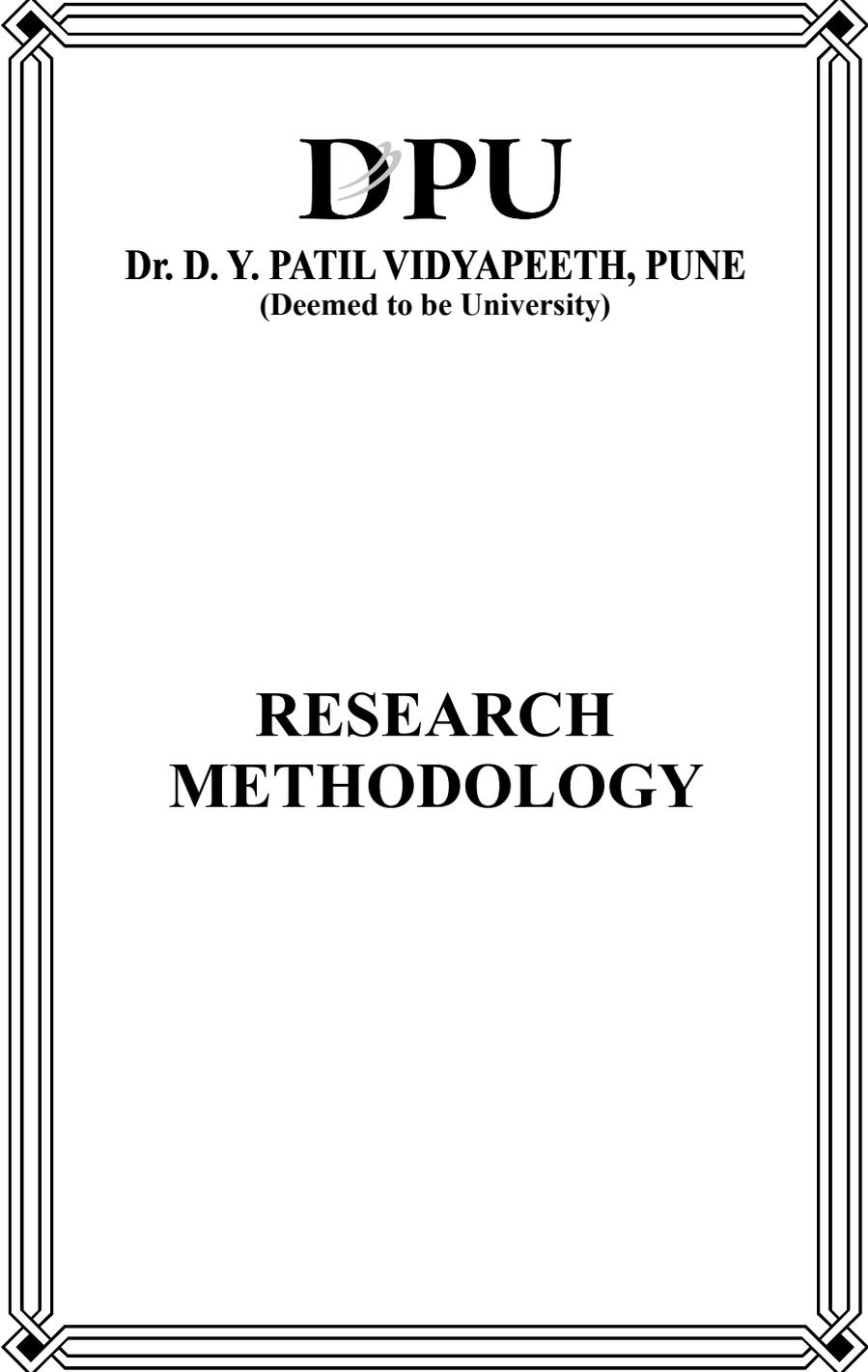


Dr. D. Y. Patil Vidyapeeth, Pune

(Deemed to be University)

Syllabus of PG First Year Ayurved

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**RESEARCH
METHODOLOGY**

TITLE OF THE COURSE :-RESEARCH METHODOLOGY AND MEDICAL STATISTICS
COURSE CODE :- AV100
MARKS :- 200 (Theory 100, Practical 100)

GOALS

The prime aim of this course is to develop a research orientation among the post graduate scholars and to acquaint them with fundamentals of research methods.

LEARNING OUTCOMES

By the end of this course you should have a good, practical understanding of:

research design considerations (question formulation, sample selection and randomisation, study design, and research protocols) data types, and appropriate summaries and graphs of samples and differences standard errors, confidence intervals and p-values parametric and nonparametric assumptions and tests how to select an appropriate statistical test.

LEARNING OUTCOME

• **COGNITIVE DOMAIN**

At the end of the course student will understand some basic concepts of research and its methodologies , problem definition, research design, data collection, ethical issues in research, report writing, and presentation, statistical concepts to include measurements of location and dispersion, probability, probability distributions, sampling, estimation, hypothesis testing, regression, correlation analysis & multiple regression.

• **PSYCHOMOTOR DOMAIN**

1. Identify appropriate research topics
2. Select and define appropriate research problem and parameters
Prepare a project proposal (to undertake a project)
3. Prepare a project proposal (to undertake a project)
4. Organize and conduct research (advanced project) in a more appropriate manner
5. Write a research report and thesis
6. Write a research proposal (grants)

• **AFFECTIVE DOMAIN**

Be a competent researcher

COURSE DESCRIPTION

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight-age (Marks)
1	Introduction to Research	Definition of the term Research. Definition of the term anusandhan, Need of research in the field of Ayurveda	03	05
2	General guidelines and steps in the research process	A. Selection of research problem B. Literature review: different methods (including computer database) with their advantages and limitations C. Defining research problem and formulation of hypothesis D. Defining general and specific objectives E. Research design: observational and interventional, descriptive and analytical, preclinical and clinical, qualitative and quantitative F. Sample design, Collection of the data, Analysis of data. Generalization and interpretation, evaluation and assessment of hypothesis. G. Ethical aspects related to human and animal experimentation. Information about Institutional Ethics Committee (IEC) and Animal Ethics Committee (AEC) and their functions. Procedure to obtain clearance from respective committees, including filling up of the consent forms and information sheets and publication ethics.	08	20

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight-age (Marks)
3	Preparation of research.	proposals different disciplines for submission to funding agencies taking EMR-AYUSH scheme as a model	04	10
4	Scientific writing and publication skills.	Familiarization with publication guidelines- Journal specific and CONSORT guidelines. Different types of referencing and bibliography. Thesis/Dissertation: contents and structure, Research articles structuring: Introduction Methods Results and Discussions (IMRAD)	05	10
5	Classical Methods of Research.	Concept of Pratyakshadi Pramana Pariksha, their types and application for Research in Ayurveda. Dravya-, Guna-, Karma- Parikshana Paddhati, Aushadhi-yog Parikshana Paddhati, Swastha. Atura Pariksha Paddhati, Dashvidha Parikshya Bhava Tavidya sambhasha, vadmarga and tantrayukti	10	25
6	Comparison between methods of research in Ayurveda.	Pratigya, Hetu, Udaharana, Upanaya, Nigaman and contemporary methods in health sciences	05	20
7	Different fields of Research in Ayurveda	Fundamental research on concepts of Ayurveda a. Panchamahabhuta & tridosha. b. Concepts of rasa, guna, virya, vipak, prabhav and karma Concept of prakriti-saradi bhava, ojas, srotas, agni, aam and koshta.	10	20

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight-age (Marks)
8	Literary Research-	Introduction to manuscriptology: Definition and scope. Collection, conservation, cataloguing. Data mining techniques, searching methods for new literature; search of new concepts in the available literature. Methods for searching internal and external evidences about authors, concepts and development of particular body of knowledge.	05	20
9	Drug Research (Laboratory-based)-	Basic knowledge of the following: Drug sources: plant, animal and mineral. Methods of drug identification. Quality control and standardization aspects: Basic knowledge of Pharmacopoeial standards and parameters as set by Ayurvedic Pharmacopoeia of India. Information on WHO guidelines for standardization of herbal preparations. Good Manufacturing Practices (GMP) and Good Laboratory Practices (GLP).	15	20
10	Safety aspects	Protocols for assessing acute, sub-acute and chronic toxicity studies. Familiarization with AYUSH guidelines (Rule 170), CDCSO and OECD guidelines.	03	10

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight-age (Marks)
11	Introduction to latest Trends in Drug Discovery and Drug Development	-Brief information on the traditional drug discovery process -Brief information on the latest trends in the Drug Discovery process through employment of rational approach techniques; anti-sense approach, use of micro and macro-arrays, cell culture based assays, use of concepts of systems biology and network physiology -Brief introduction to the process of Drug development	05	15
12	Clinical research	Introduction to Clinical Research Methodology identifying the priority areas of Ayurveda Basic knowledge of the following:- Observational and Interventional studies Descriptive & Analytical studies Longitudinal & Cross sectional studies Prospective & Retrospectives studies Cohort studies Randomized Controlled Trials (RCT) & their types Single-case design, case control studies, ethnographic studies, black box design, cross-over design, factorial design. Errors and bias in research. New concepts in clinical trial- Adaptive clinical trials/ Good clinical practices (GCP) Phases of Clinical studies: 0,1,2,3, and 4.	18	20

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight-age (Marks)
		Survey studies - Methodology, types, utility and analysis of Qualitative Research methods. Concepts of in-depth interview and Focus Group Discussion.		
13	Pharmacovigilance	Pharmacovigilance for ASU drugs. Need, scope and aims & objectives. National Pharmacovigilance Programme for ASU drugs.	05	10
14	Introduction to bioinformatics	Introduction to bioinformatics, scope of bioinformatics, role of computers in biology. Introduction to Data base- Pub med, Medlar and Scopus. Accession of databases	05	10
15	Intellectual Property Rights	Intellectual Property Rights- Different aspect and steps in patenting. Information on Traditional Knowledge Digital Library (TKDL).	05	10
PART B MEDICAL STATISTICS				
1	Definition of Statistics	Concepts, relevance and general applications of Biostatistics in Ayurveda	03	10
2	Definition, utility and methods)	Collection, classification, presentation, analysis and interpretation of data	05	12
3	Scales of Measurements	Nominal, ordinal, interval and ratio scales. Types of variables – Continuous, discrete, dependent and independent variables. Type of series – Simple, Continuous and Discrete	05	10
4	Measures of Central tendency	Mean, Median and Mode.	06	15

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight-age (Marks)
5	Variability	Types and measures of variability – Range, Quartile deviation, Percentile, Mean deviation and Standard deviation	08	15
6	Probability	Definitions, types and laws of probability,	07	10
7	Normal distribution	Concept and Properties, Sampling distribution, Standard Error, Confidence Interval and its application in interpretation of results and normal probability curve.	06	04
8	Fundamentals of testing of hypotheses	Null and alternate hypotheses, type I and type 2 errors. Tests of significance: Parametric and NonParametric tests, level of significance and power of the test, 'P' value and its interpretation, statistical significance and clinical significance	10	10
9	Univariate analysis of categorical data	Confidence interval of incidence and prevalence, Odds ratio, relative risk and Risk difference, and their confidence intervals	05	12
10	Parametric tests	'Z' test, Student's 't' test: paired and unpaired, 'F' test, Analysis of variance (ANOVA) test, repeated measures analysis of variance	08	15
11	Non parametric methods	Chi-square test, Fisher's exact test, McNemar's test, Wilcoxon test, Mann-Whitney U test, Kruskal – Wallis with relevant post hoc tests (Dunn)	08	15

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight-age (Marks)
12	Correlation and regression analysis	Concept, properties, computation and applications of correlation, Simple linear correlation, Karl Pearson's correlation co-efficient, Spearman's rank correlation. Regression- simple and multiple	06	10
13	Sampling and Sample size computation for Ayurvedic research	Population and sample. Advantages of sampling, Random (Probability) and non random (Non-probability) sampling. Merits of random sampling. Random sampling methods- simple random, stratified, systematic, cluster and multiphase sampling. Concept, logic and requirement of sample size computation, computation of sample size for comparing two means, two proportions, estimating mean and proportions	08	15
14	Vital statistics and Demography	computation and applications - Rate, Ratio, Proportion, Mortality and fertility rates, Attack rate and hospital-related statistics	01	01
15	Familiarization with the use of Statistical software	SPSS/Graph Pad	01	01

I. RESEARCH METHODOLOGY (Practical)				
Practical Hours : 120 Marks :100				
Sr. No.	Topics	Description	No. of Lectures (Hrs.)	Weightage (Marks)
1	Pharmaceutical Chemistry	Familiarization and demonstration of common lab instruments for carrying out analysis as per API	10	05
2	Awareness of Chromatographic Techniques	Demonstration or Video clips of following: <ul style="list-style-type: none"> • Thin-layer chromatography (TLC). • Column chromatography (CC). • Flash chromatography (FC) • High-performance thin-layer chromatography (HPTLC) • High Performance (Pressure) Liquid Chromatography (HPLC) • Gas Chromatography (GC, GLC) 	20	10
3	Pharmacognosy	Familiarization and Demonstration of different techniques related to:- Drug administration techniques-oral and parenteral. Blood collection by orbital plexuses puncturing. Techniques of anesthesia and euthanasia. Information about different types of laboratory animals used in experimental research Drug identification as per API including organoleptic evaluation	20	10
4	Pharmacology and toxicology	Familiarization and demonstration of techniques related to pharmacology and toxicology	10	05
5	Biochemistry (Clinical)	Familiarization and demonstration of techniques related to basic instruments used in a clinical biochemistry laboratory – semi and fully automated clinical analyzers, electrolyte analyzer, ELISA-techniques, nephelometry. Demonstration of blood sugar	20	05

		estimation, lipid profiles, kidney function test, liver function test. HbA1, cystatin and microalbumin estimation by nephelometry or other suitable techniques. Interpretation of the results obtained in the light of the data on normal values.		
6	Clinical Pathology	Familiarization and demonstration of techniques related to basic and advanced instruments used in a basic clinical pathology lab. Auto cell counter, urine analyzer, ESR, microscopic examination of urine.	10	05
7	Imaging Sciences	Familiarization and demonstration of techniques related to the imaging techniques. Video film demonstration of CT-Scan, MRI-scan and PET-scan.	5	05
8	Clinical protocol development		5	25
II. MEDICAL STATISTICS				
Practical Hours : 20				
1	Statistical exercise of examples from Topic number 4, 5, 8-12, 14, 15.		20	30

EXAMINATION SCHEME

Examination	Duration	Marks
UNIVERSITY EXAMINATION PAPER I:	3 HOURS	100

EVALUATION SCHEME THEORY

Examination	Duration	Marks
PART – A (60 marks)		
L.A.Q		10 marks x 3 questions =30
S.A.Q. Attempt any 6 out of 7		5 marks x 6 questions =30
PART – B (40 marks)		
L.A.Q.		10 marks x1 questions =10
S.A.Q. Attempt any 6 out of 7		5marks x 6 questions =30
Total	3 hrs.	100

EVALUATION SCHEME (PRACTICAL)
MARKS : 100

Examination	Marks
Instrumental spotting test	20
Clinical protocol writing exercise on a given problem	20
Research methodology records	10
Medical statistics records	10
Viva- Voce	40
Total	100

REFERENCE BOOKS:

Sr. No.	Books	Author	Publication, Year of Publication and Edition
Pharmacognosy			
1	“Pharmacognosy Pharmacobiotec- hnoogy”	Aushotosh Kar	New Age International Publisher. Latest Edition. New Delhi.
2	Drug Survey	Mayaram Uniyal	
3	Fahn A	Plant Anatomy	3rd Edition Pergamon Press, Oxford(1981)
4	Kokate C. K. Purohit A. P. Gokhale S. B.	Pharmacognosy	(2010) Nirali Prakashan. Pune.
5	Kokate C. K. Khandelwal Gokhale S. B.	Practical Pharmacognosy	Nirali Prakashan. Pune. (1996).
6	Trease G. E. Evans W C	Pharmacognosy,	Bailliere Tindall, Eastbourne, U K.

Sr. No.	Books	Author	Publication, Year of Publication and Edition
7	Tyler V. C. Brady L. R. Robers J. E.	Pharmacognosy	Lea and Febiger, Philadelphia.
8	Tyler V. E. Jr Schwartzing A. E.	Experimental Pharmacognosy	Burgess Pub. Co, Minneapolis, Minnesota.
9	Wallis- TE	Practical Pharmacognosy (Fourth Edition	Pharma Med Press, Hyderabad. (2011)
10	Wallis- TE	Analytical Microscopy	J & A Churchill limited, London
11	Wallis- TE	Text Book of Pharmacognosy	J & A Churchill Limited, London.
12	Geneva	WHO guidelines on good agricultural and collection practices- (GACP) for medicinal plants	(2003)
13	WHO monographs	Vol. 1. 1.Plants, Medicinal 2.Herbs 3.Traditional medicine	(1999)—. ISBN 92 4 154517 8. WHO Geneva.
Pharmaceutical chemistry, quality control and drug standardization			
1		Ayurvedic Pharmacopoeia of India. Part I- volume 1 to 8 and Part II- volume 1 to 3	Ministry of Health and Family Welfare. Controller of Publication. Govt of India. New Delhi.
2	Brain K. R. Turner T. D.	The Practical Evaluation Phytopharmaceuticals	Wright Sciencetechnica, Bristol. (1975).
3	Galen Wood Ewing	Instrumental Methods of Chemical Analysis	McGraw-Hill College ; Fifth edition
4	Harborne	Phytochemistry Methods.	JB (1973). Chapman and Hall, International Edition, London
5	HPTLC	Fingerprint atlas of Ayurvedic Single Plant Drugs mentioned in Ayurvedic Pharmacopoeia Vol- III and IV	Central Council for Research in Ayurveda and Siddha. New Delhi.

Sr. No.	Books	Author	Publication, Year of Publication and Edition
6	Kapoor R. C.	Some observations on the metal based preparations in Indian System of Medicine.	Indian Journal of Traditional Knowledge. 9(3): 562-575
7	Khopkar S. M.	Analytical Chemistry	New Age International Publishers , 3 rd edition
8	Mahadik K. R. Bothara K. G.	Principles of Chromatography	1st edition, Nirali Prakashan.
9		Laboratory Guide for- The Analysis of Ayurved and Siddha Formulations	CCRAS, New Delhi.
10	Qadry J. S. Qadry S. Z.	Text book of Inorganic Pharmaceutical and Medicinal Chemistry	B. S. Shah Prakashan, Ahmedabad
11		Quality Control Methods for Medicinal Plant Material.	Reprint (2002). WHO- Geneva.
12	Rangari V. D.	Pharmacognosy & Phytochemistry	Vol I, II, Career Publication
13	Sharma B. K.	Instrumental Methods of Chemical Analysis	Goel Publishing House
14	Srivastav V..K. Shrivastav K. K.	. Introduction to Chromatography (Theory and Practice)	
15	Stahl E. Thin Layer Chromatography	A Laboratory Handbook	Springer Verlag, Berlin
16	Sukhdev Swami Handa, Suman Preet Singh Khanuja, Gennaro Longo and Dev Dutt Rakesh	Extraction Technologies for Medicinal and Aromatic Plants -	(2008). INTERNATIONAL CENTRE FOR SCIENCE AND HIGH TECHNOLOGY- Trieste
Biochemistry and Laboratory techniques:			
1	Asokan P.	Analytical Biochemistry	(2003)China publications
2	Campbell, P. N. and A.D .Smith,	Biochemistry Illustrated,	Churchill Livingstone 4 th Ed

Sr. No.	Books	Author	Publication, Year of Publication and Edition
3	David Frifelder W. H. Freeman	Physical Biochemistry	2 edition (1982)
4	David Sultan	Text book of Radiology and Imaging	(2003), Vol-1, 7th Edition.
5	Deb A. C.	Fundamentals of Biochemistry,	Books and Allied (P) Ltd, 2002.
6	Harold Varley	Practical Clinical Biochemistry	Latest Edition
7	Kanai L. Mukherjee	Clinical Pathology: Medical Laboratory Technology	Vol. I.Tata McGrawHill 1996, New Delhi.
8	Grad Wohl	Clinical Laboratory-methods and diagnosis,	Vol-I
9	Clinical Biochemistry - Sabitri Sanyal	Clinical Pathology	B.I.Churchill Livingstone (P) Ltd, New Delhi.2000.
10	Satyanarayanan U.	Essentials of Biochemistry, Books and allied (P) Ltd.	2002
11	Zubay G. L.	Biochemistry, W.M.C.	Brown Publishers, New York 1998.
12	Text book of Radiology and Imaging	David Sultan	Vol-1 7th Edition. 2003.
Research Methodology			
1	Alley Michael	The craft of scientific writing. Englewood Cliffs	N.N. Prentice 1987.
2	P. V. Sharma	Ayurvediya Anusandhan Paddhati	Latest Edition
3	Altick Fenstermaker (2007)	The Art of Literary Research.	4th ed. W. W. Norton. Castle, Gregory. Blackwell Guide to Literary Theory. Blackwells,
4	Bowling, A. (2002).	Research Methods in Health (2nd ed).	Buckingham: Open University Press.
5	Day R.A..	How to write a scientific paper	Cambridge University Press.
6	Cooray	P.G. Guide to scientific and technical writing.	

Sr. No.	Books	Author	Publication, Year of Publication and Edition
7	Deepika Chawla and Neena Sondhi. (2011)	Research Methods- Concepts and cases.	New Delhi: Vikas Publishing House
8	Greenhalgh, T. (2006)	How to Read a Paper: The Basics of Evidence-Based Medicine.	(3rd ed) Blackwell
9	Kothari- C. R. (2004).	Research Methodology- Methods and Techniques (Second Revised Edition).	New Age International Publishers- New Delhi.
10	Kumar, R. 2005.	Research Methodology: a Step-by-Step Guide for Beginners, 2nd ed.	Thousand Oaks, CA, London: Sage Publications
11	Petter Laake, Haakon Breien Benestad and Bjørn Reino Olsen. (2007,	Research Methodology in the Medical and Biological sciences. Academic Press is an imprint of Elsevier	84 Theobald's Road, London WC1X 8RR, UK. ISBN: 978-0-12-373874-5 Relevant portions of Ayurvedic Samhitas and other texts
Drug research and development			
1	RICK NG, (2009)	DRUGS- from discovery to approval	John Wiley & Sons, Inc., Hoboken, New Jersey
2		Research guidelines for evaluating the safety and efficacy of herbal medicines. (1993).	WHO- (Regional Office for the Western Pacific – Manila) ISBN 92 9061 110 3 (NLM Classification : WB 925).
3	Jagdeesh, Sreekant Murthy Gupta Y. K. Amitabh Prakash Eds.	Biomedical Research (From Ideation to Publication) (2010). Wolters Kluwer/ Lippincott Williams and Wilkins.	WHO Guidelines on Safety Monitoring of herbal medicines in pharmacovigilance systems. (2004). WHO- Geneva. ISBN 92 4 1592214.
4	Satyajit D. Sarker, Zahid Latif Alexander I. Gray. (Methods in biotechnology 20).	Natural products isolation.	(2006) 2nd ed. / edited Includes bibliographical references and index. Humana Press Inc. ISBN 1-58829-447-1 (acid-free paper) – ISBN 1-59259-955-9 (eISBN)

Sr. No.	Books	Author	Publication, Year of Publication and Edition
5		Gazette Extraordinary Part- II-Section 3 - Sub section (i) December 2008.	Govt of India. AYUSH Guidelines on safety studies- Rule 170 of Drugs and Cosmetics Act.
6	OECD	Guidance Document on Acute Oral Toxicity.	(2000) Environmental Health and Safety Monograph Series on Testing and Assessment No 24.
7	OECD	Series on Principles of Good Laboratory Practice (GLP) and Compliance Monitoring,	http://www.oecd.org (1998)
8		Maintenance of the ICH Guideline on Non-clinical Safety Studies for the conduct of Human Clinical Trials for Pharmaceuticals M3 (R1).	ICH Harmonised Tripartite Guideline (2000)
9	Ghosh M. N.	Fundamentals of Experimental Pharmacology,	Scientific Book Agency.
10	Jaju B. P.	Pharmacological Practical Exercise Book,	Jaypee Brothers, New Delhi.
11	Kulkarni S. K.	Hand Book of Experimental Pharmacology	Vallabh Prakashan, New Delhi
12	Ravindran R.	X-Pharm (Software),	Indian Journal of Pharmacology, JIPMER, Pondicherry.
Biotechnology and Bio-informatics			
1	Angela M. Meireles A.	Extracting Bioactive compounds for food products	(2009) Theory and applications. CRC- Press Taylor and Francis Group.
2	Bergeron B. P.	Bioinformatics Computing	2002 1st Edition, Prentice Hall

Sr. No.	Books	Author	Publication, Year of Publication and Edition
3	Chikhale, N. J. and Virendra Gomase,	Bioinformatics- Theory and Practice,	Publisher: Himalaya Publication House, India; 1 edition (July, 2007) ISBN-13: 978-81-8318-831-9
4	Lesk, A.M.	Introduction to Bioinformatics	Oxford 2002.
5	Satyanarayana U.	Biotechnology	Books and Allied (P) Ltd, Kolkata, 2005
6	Setubal J. C J. Meidanis	Introduction to Computational Molecular Biology	PWS Publishing Company, 1997.
7	<ol style="list-style-type: none"> 1. http://www.iitb.ac.in/~crnts. 2. http://www.zygogen.com. 3. http://www.dsir.nic.in/reports/tifp/database/metallo.pdf. 4. www.consort-statement.org 5. www.strobe-statement.org 6. www.icmr.nic.in 		
Clinical Evaluation			
1	CDSCO	Good Clinical Practices For Clinical Research in India, Schedule Y	http://cdsco.nic.in/html/GCP1.html
2		Ethical Guidelines for Biomedical Research on Human subjects.	Indian Council of Medical Research- New Delhi. (2000).
3	Gallo P. Chuang-Stein C. Dragalin V. Gaydos B. Krams M. Pinheiro J.	Adaptive Designs in Clinical Drug Development -An Executive Summary of the PHRMA Working Group.	Journal of Biopharmaceutical Statistics. 16: 275–283; 2006
4		Good Clinical Practices- (2001). Guidelines for Clinical Trial on Pharmaceutical Products in India. Central Drugs Standard Control Organization	Directorate General of Health Services. New Delhi. (http://WWW.cdsco.nic.in .ich.org)
5	Gupta, SK Ed.	Basic Principles of Clinical Research and Methodology	(2007). Jaypee Brothers- new Delhi

Sr. No.	Books	Author	Publication, Year of Publication and Edition
6		ICH Harmonised Tripartite Guidelines for Good Clinical Practices)	Brookwood Medical Publications. Richmond, Surrey. United Kingdom. (1997)
7	NCI.	Clinical Trials Education Series.	http://www.cancer.gov/clinicaltrials/ learning/clinical-trials-education-series , 2001.
8	Petter Laake Haakon Breien Benestad and Bjørn Reino Olsen	Research Methodology in the Medical and Biological sciences.	(2007). Academic Press is an imprint of Elsevier, 84 Theobald's Road, London WC1X 8RR, UK. ISBN: 978-0-12-373874-5
9	William C. Scheffer	Introduction to Clinical Researches	
Medical Statistics			
1	Armitage P. Berry G.	Statistical Methods in Medical Research.	(3rd ed). Blackwell Science (1994)
2	Armitage P. Berry G. Matthews	JNS: Statistical Methods in Medical Research	Fourth edition. Oxford, Blackwell Science Ltd; 2002
3	Bland, M. (2000)	An Introduction to Medical Statistics	1.(3rd ed). Oxford: Oxford University Press.
4	Bradford Hill –	Basic Medical Statistics	
5	Cambell M. J. and Machin D.	Medical Statistics: A Common Sense Approach (2nd ed).	(1993) Chester: Wiley.
6	Dwivedi S. N. Sundaram K. R V. Sreenivas	Medical Statistics - Principles & Methods- BI.	Publications Pvt. Ltd., New Delhi –1
7	Gupta S. P.	Fundamentals of statistics	Sultan Chand. Delhi.
8	Indrayan (2008)	Basic Methods of Medical Research.	AITBS Publishers- India
9	Mahajan B. K.	Methods in Bio statistics for medical students	5th Ed. New Delhi, Jaypee Brothers Medical Publishers

Sr. No.	Books	Author	Publication, Year of Publication and Edition
10	Mehdi B. Prakash A. (2010).	Biostatistics in Pharmacology. Practical Manual in experimental and clinical pharmacology.	1st Edition. New-Delhi: Jaypee brothers Medical Publishers
11	Rao, NSN Murthy N. S. (2008) 2nd Edition.	Applied statistics in health sciences.	Jaypee Brothers Medical Publishers (P) Ltd. Bengaluru, New Delhi.
12	Rick J. Turner Todd A. Durham (2008).	Introduction to Statistics in Pharmaceutical Clinical trails. Published by the Pharmaceutical	Press- An imprint of RPS Publishing, 1 Lambeth High Street, London SE1 7JN, UK
13	Symalan K. (2006).	Statistics in Medicine	2.(First Edition) Trivandrum: Global Education Bureau. Sundar Rao, Jesudian Richard - An Introduction to Biostatistics.
14	Symalan K. (2006). Statistics in Medicine	Statistics in Medicine	(First Edition) Trivandrum: Global Education Bureau.
15	Sundar Rao Jesudian Richard	An Introduction to Biostatistics	Latest Edition
16	Suhas Kumar Shetty	Medical statistics made easy	Latest Edition

DPU

Dr. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

**AYURVEDA
SAMHITA EVUM
SIDDHANT**

TITLE OF THE COURSE :- AYURVED SAMHITA & SIDDHANTA

COURSE CODE :- AV101

MARKS :-Theory -100 Practical –Viva Voce – 100 Total- 200

GOAL

- To explore the profound knowledge & basic principles in Ayurvedic Samhitas with the help of research.
- To propagate & to advocate the fundamental principles and techniques of Ayurveda for healthy & unhealthy conditions of human body in society.
- To develop research attitude in students.
- To achieve appreciated status for Ayurvedic Practice in medical field.
- To demonstrate Ayurvedic fundamentals through Research.
- To create opportunities for students in India & Abroad.

OBJECTIVES

- To generate self motivated quality teaching faculties.
- To generate visionary postgraduates who can serve as best teachers & practitioners for the benefit of mankind.
- To conduct researches on various topics in Ayurvedic compendia.
- Thorough Knowledge of Ayurvedic Compendia (Bruhatrayi ,Laghutrayi, Shad Darshanas & various Kosha Granthas.) with the help of Samskruta language.
- Health and lifestyle management through Dinacharya, Rutucharya, Sadvrutta etc.
- Demonstration of practical & clinical utility of Ayurvedic fundamentals.

LEARNING OUTCOME

P.G. Scholar will be able to gain specialized knowledge of samhitas.

Forming a good foundation to become a good teacher, practitioner and researcher.

- **COGNITIVE DOMAIN**
In-depth Knowledge of Ayurvedic Samhita like Bruhatrayi , Shad Darshanas & various Kosha Granthas.

- **PSYCHOMOTOR DOMAIN**
 - Assessment of prakruti, sarata & bala in healthy individuals.
 - Application of Ayurvedic principles like nidan panchak, pramana etc in - Examination of patient. Diagnosis. Prognosis.
 - Advocating chikitsa siddhantas for - Appropriate treatment of diseases. Panchakrma procedures in healthy and diseased conditions

- **AFFECTIVE DOMAIN**
PG Scholar can become a good teacher, practitioner and researcher.

COURSE DESCRIPTION

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight-age (Marks)
PART A - 50 MARKS				
1	Learning and Teaching methodology available in Samhita	Tantrayukti, Tantraguna, Tantradosha, Tachchilya, Vadamarga, Kalpana, Arthashraya, Trividha Gyanopaya, teaching of Pada, Paada, Shloka, Vakya, Vakyartha, meaning and scope of different Sthana and Chatushka of Brihatrayee.	21	20
2	Manuscriptology	Collection, conservation, cataloguing, Critical editing through collation, receion (A critical revision of a text incorporating the most plausible elements found in varying sources), emendation (changes for improvement) and textual criticism (critical analysis) of manuscripts. Publication of edited manuscripts.	4	15

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight-age (Marks)
3	Concept of Bija chatustaya	Purush, Vyadhi, Kriyakaal, Aushadha according to Sushrut Samhita	2	15
4	Introduction and Application of Nyaya (Maxims)	Like Shilaputak Nyaya, Kapinjaladhikaran Nyaya, Ghunakshara Nyaya, Gobalivarda Nyaya, Naprishtah Guravo Vadanti Nyaya, Shringagrahika Nyaya, Chhatrino Gacchhanti Nyaya, Shatapatrabhedana Nyaya, Suchikatah Nyaya.	5	10
5	Importance and utility of Samhita in present era	according to sthana of samhitas	4	15
6	Importance of ethics and principles	ideal living as mentioned in Samhita in the present era in relation to life style disorders. etc Dincharya, Rutucharya, Sadvritta	4	15
7	Basic principles with contemporary sciences.	Interpretation and co-relation of basic principles with contemporary sciences.	4	10
8	Charak vimansthan adhyaya	Charak Vimansthan 8 th adhyaya Chakrapani Commentry	8	15
PART B – 50 MARKS				
9	Siddhanta	Definition of Siddhanta, types and applied examples in Ayurveda	4	5
10	Ayu	Ayu and its components as described in Samhita.	2	15
11	Principles of Karana-Karyavada	Principles of Karana-Karyavada, its utility in advancement of research in Ayurveda.	10	15

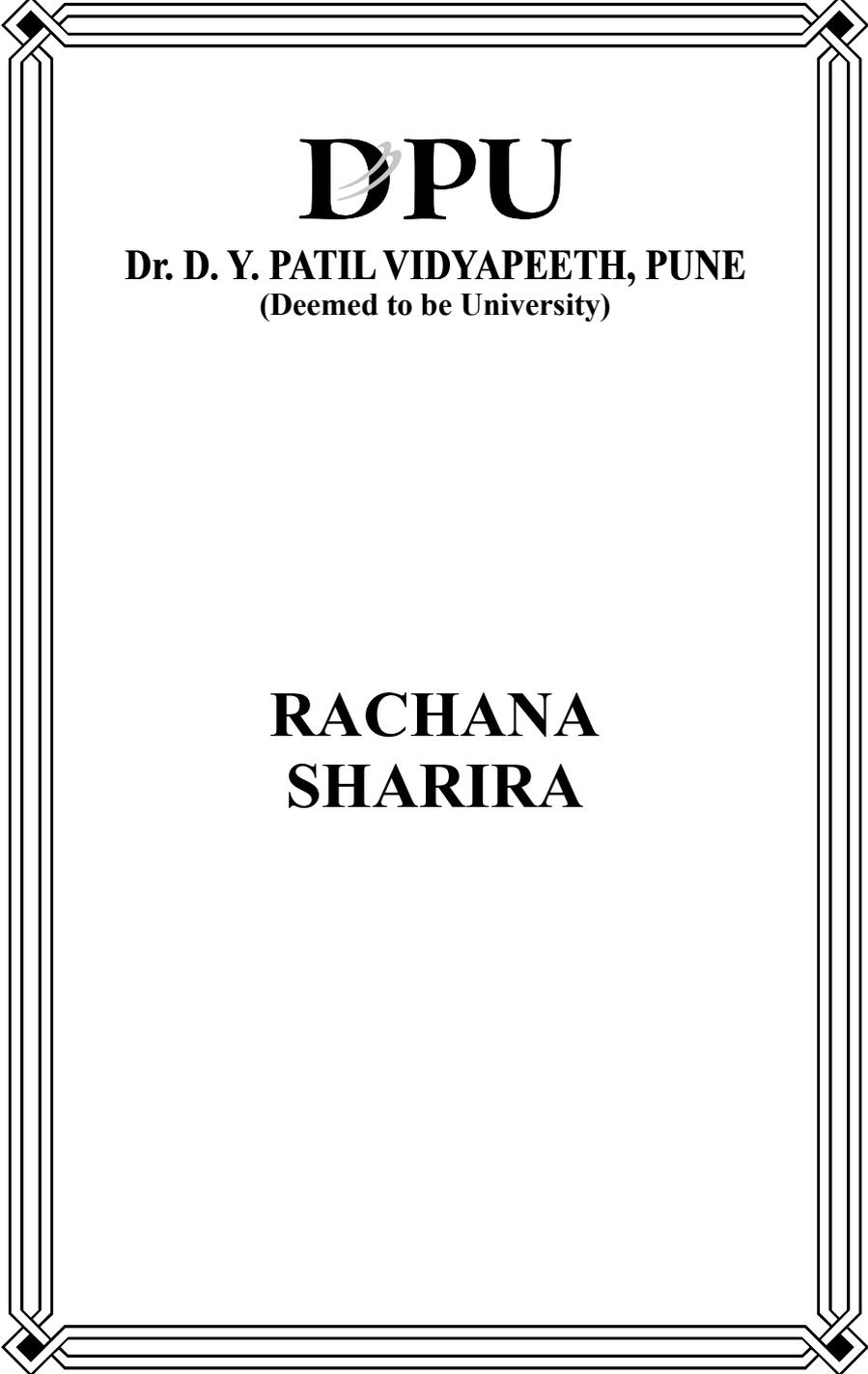
Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight-age (Marks)
12	Theory of Evolution of Universe	(Srishti Utpatti), its process according to Ayurveda and Darshana.	10	15
13	Triskandha	Importance and utility of Triskandha (Hetu, Linga, Aushadh) and their need in teaching, research and clinical practice.	6	15
14	Applied aspects of various fundamental principles	Tridosha, Triguna, Purusha and Atmanirupana, Shatpadartha, Ahara-Vihara. Scope and importance of Pariksha (Pramana)	20	20
15	Prakriti	Importance of knowledge of Sharir Prakriti and Manas Prakriti.	15	15
16	Basic knowledge of principles of shad-darshanas	Basic knowledge of principles of shad-darshanas and Comparative study of Principles of Ayurveda and Shad Darshanas.	15	15
17	Charak sutrasthana Commentry	Charak sutrasthana- 1 to 30 adhyaya related topics	30	15
18	Charak sharira Commentry	Charak sharira- 1, 5 adhyaya	10	10

Practical –Viva Voce examination : 100 Marks

Sr. No.	Compilation1 Samhita	Compilation 2 Siddhanta	Samhita based Casetaking + Bedside viva	Oral research topic + general viva	Total
1	10 Marks	10 Marks	20+10 Marks	25+25 Marks	100 Marks

REFERENCE BOOKS:

Sr. No.	Books	Author	Publication, Year of Publication and Edition
1	Charaka Samhita	Chakrapani commentary	Chaukhambha orientalia, Varanasi, Reprint 2015.
2	Sushruta Samhita	Dalhana Commentary	Chaukhambha Sanskrit sansthan, Varanasi, Reprint 2010.
3	Ashtanga Samgraha	Indu commentary	Chaukhambha Samskrit Sansthan, Varanasi, 2 nd Ed. 2008.
4	Ashtanga Hridaya	Arundutta and Hemadri commentary	Chaukhambha Orientalia, Varanasi, 10th ed. Reprint 2014.
5	Vaisheshika Darshana	Prashastapada Bhashya	Chaukhambha Samskrit Sansthan, 4 th Ed. 2002.
6	Nyaya Darshana	Vatsyayan Bhashya Patanjali	Chaukhambha Samskrit Sansthan, 5 th Ed. 2001.
7	Yoga Darshana	Vyas Bhashya	Rajaram Tukaram Taty, 1907.
8	Vedantsara		
9	Sarvadarshan Samgraha	Umashankar Sharma	Chaukhambha Vidya Bhavan, reprint 2001.
10	Bhartiya Darshan	Baldev Upadhyaya	Chaukhambha Orientalia, 3 rd Ed., 1984.
11	Ayurved Darshanam	Acharya Rajkumar Jain	Chaukhambha Orientalia, Delhi.
12	Ayurvediya Nyayaparijat	Dr.Joshi M. V. Dr.Joshi V. N	Prasad Prakashan, 1st ed., 28 th March 2017.



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**RACHANA
SHARIRA**

TITLE OF THE COURSE :- RACHANA SHARIR**COURSE CODE :- AV102****MARKS :- 200 (Theory – 100 , Practical – 100)****GOAL**

- To provide comprehensive, thorough, practical, knowledge of human anatomy and development of human body.

LEARNING OBJECTIVE

- Detailed study of the basic principles of Human Anatomy & Rachana Sharir & their practical application.

LEARNING OUTCOME**At the end of the course the student should be able to :**

- **COGNITIVE DOMAIN**
Establish correlation of Ayurvedic and Modern concepts of Anatomy from academic & Research point of view
- **PSYCHOMOTOR DOMAIN**
To identify, differentiate & dissect various structures in the human body practically
To identify & locate the points of Marma i.e. vital points of the body with its clinical importance
- **AFFECTIVE DOMAIN**
Should be able to integrate knowledge of Basic Principles of Modern Anatomy & Rachana Sharir for Research purpose.

COURSE DESCRIPTION

PAPER II	TOPICS	No of Lectures (Hrs)	Weightage of marks (Marks)
PART A (50 MARKS)	Basic principles of Sharira, Purushavichaya, Rashi Purusha, Karma Purusha (Shad Dhatuj Purusha), Chaturvimshati Purusha, Ek Dhatu Purusha. Relevant principles described in the Sharirasthan of Sushrut Samhita, Charak Samhita, Ashtang Sangrah and Ashtang Hridaya.	14	20

PAPER II	TOPICS	No of Lectures (Hrs)	Weightage of marks (Marks)
PART A (50 MARKS)	Basic principles of Garbha Sharira in Ayurveda: Definitions of Garbha, Shukra - Shonita Siddhanta, Dauhrida, Matrijadi Garbhotpattikar bhava.	15	20
	Types of tissues, histological study of liver, spleen, uterus, kidney, endocrine glands, mammary gland, skin, tongue, lungs, bronchi, bones, muscles, cartilages and nervous tissue.	12	10
PART B (50 MARKS)	Paribhasha Sharira (Anatomical terminology)	05	05
	Pramana Sharira – Anguli and Anjali Pramana, Sama pramana Sharira, Ayama – Vistara and their prognostic values.	05	10
	Fundamental aspects of Asthi, Sandhi, Peshi Sharir.	09	10
	Fundamental aspects of Sira, Dhamani, Srotas – Definitions, Siravedha, Avedhya Sira. Fundamental aspect of Srotomoola Sthana.	15	15
	Fundamental aspects of Kosktha and Koskthang: Hridaya, Yakrit, Vrikka, phuphusa, Aantra, Pleeha, Adhivrikkagranthi, Basti, Pourushagranthi, Amashaya, Agnyashaya Vrishana ovary, Breast (Stanyashaya)	25	25
	Fundamental aspects of Uttamangiya Sharir – Introduction to Nervous system - development, divisions, neuron-structure, types, functional anatomy.	12	10
	Mrita shodhan (as per Sushruta) and Mrita Samrakshana (modern preservation method of human cadaver).	08	10

**PRACTICAL IN RACHANA SHARIR
LIST OF EXPERIMENTS**

Sr. No.	Topics	Teaching Hours
1	Upper & Lower Limb Dissection	40
2	Dissection of Back	10
3	Dissection of Thorax	10
4	Dissection of Abdomen	15
5	Practical study of bones	20
6	Practical Study of Organs	15
7	Radio imaging Technique	5
8	Histology slides	5
TOTAL		120

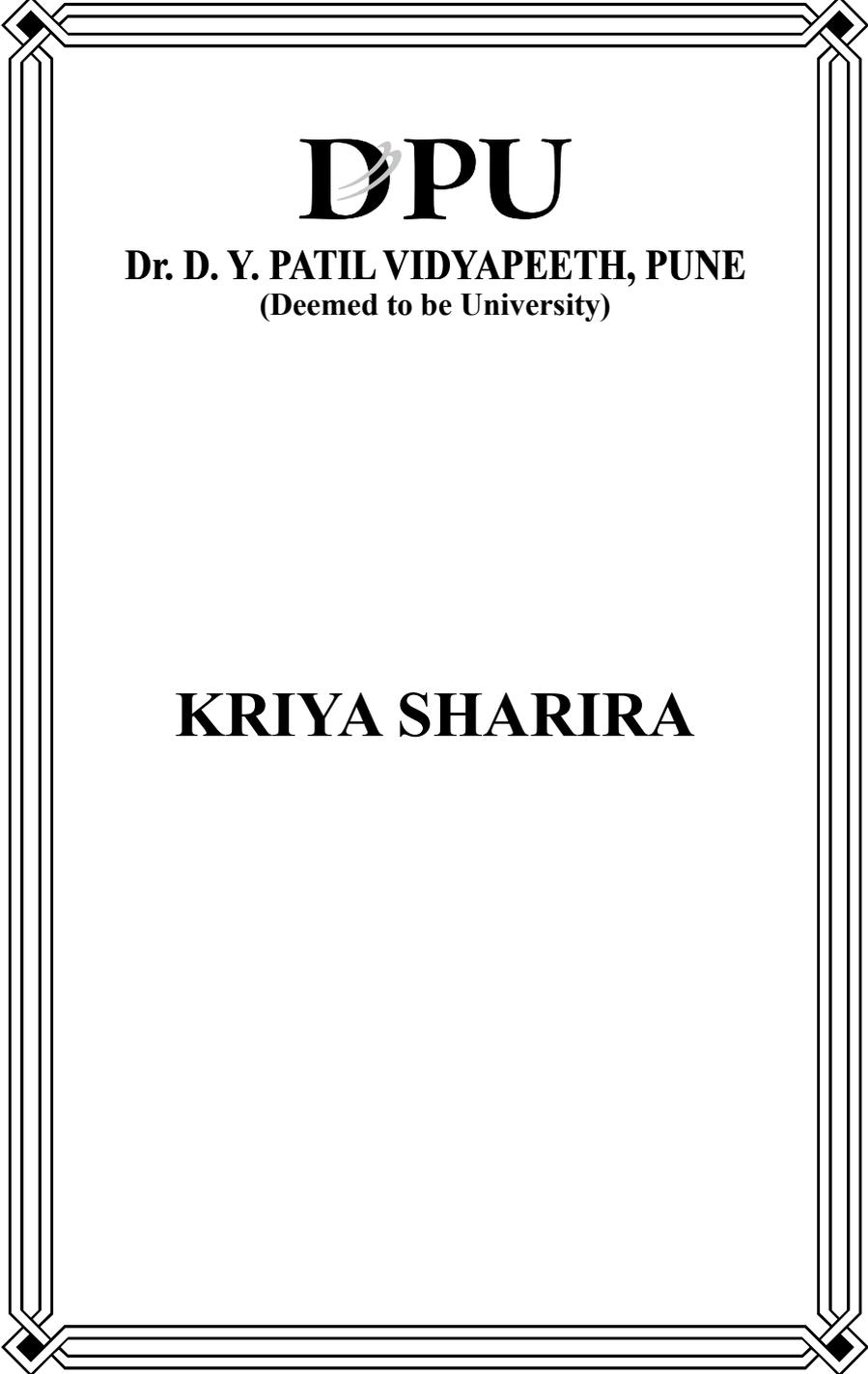
EVALUATION SCHEME (PRACTICAL)

Spotting	Surface Anatomy	Radiological Anatomy	Dissection	Clinical Anatomy	Viva Voce	Practical Record	Total
20 marks	10 marks	10 marks	20 marks	10 marks	20 marks	10 marks	100 marks

REFERENCE BOOKS:

Sr. No.	Name of Book	Name of Author	Edition
1	Charaksamhita	Bramhanand tripathi	First edition (2013) Chaukhamba Surbharati Prakashan
2	Sushrutsamhita	Atrideva	Latest edition
3	Ashtanghridayam	Bramhanand Tripathi	edition (2015), CSP
4	Ashtangasangrah	Shivprasad Sharma	Latest edition, Chaukhamba sanskrit series, Varanasi
5	Gray's Anatomy	Peter L. Williams	38 th edition, Elsevier publication
6	Textbook of Neuroanatomy	Inderbir Singh	10 th edition, Jaypee brothers publication
7	Human Embryology	Inderbir Singh	Jaypee Brothers Medical Publishers; 11th Revised edition edition (2017)

Sr. No.	Name of Book	Name of Author	Edition
8	Clinical Anatomy	Richard S. Snell	9 th edition, Lippincot Williams & wilkins publication
9	Fundamentals of Human Anatomy	Dr. Chakraborty	2 nd revised edition 2001, , New central book agency.
10	Human Anatomy Vol-I, II, III, IV	A.K. Datta	9 th edition, CBI publication
11	Textbook Of Anatomy- I, II, III	Vishram Singh	2 nd edition, Elsevier publication
12	Radiological Anatomy	A. K. Asthana	Reprint 2005, Peepee publication
13	Textbook of Human Anatomy with Color Atlas	Inderbir Singh	5 th edition , Jaypee brothers publication
14	Principles of Anatomy & Physiology	Gerard Tortota	15 th edition, John Wiley & sons publication
15	Clinical Anatomy problem solving approach	Neeta V. Kulkarni	3 rd edition, Jaypee brothers publication
16	Clinical oriented anatomy	Keith L. Moore	Seventh edition (2013) Wolters Kluwer publication
17	Ayurvediy Marmavidnyan	Ramraksha Pathak	Latest edition
18	Sushrut Samhita Sharirsthan Ghanekar Tika	Dr. Bhaskar Govind Ghanekar	Reprint 2004, Meharchand Lachhmandas publications, Delhi.
19	Garbhavkranti	DR. Dinkar Bhakare	1 st edition, Rambhau Bhakare charitable trust, pune
20	Cunningham's Manual of Practical Anatomy	G. J. Romanes	15 th edition, 2016, oxford
21	Grants Dissector	Alan J. Detton	16/E edition (2017), WOLTERS KLUWER
22	Surface & Radiological Anatomy	A.Halim	3 rd edition, 2011, CBS publication



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KRIYA SHARIRA

TITLE OF THE COURSE :- KRIYA-SHARIR

COURSE CODE :- AV103

MARKS :- Theory – 100, Practical - 100

GOAL

The aim of the course is to prepare P.G. student in the subject of kriya-Sharir who shall

1. Teach and train future undergraduate and postgraduate medical students in Kriya-Sharir in Ayurved Colleges and Research Institutions.
2. Carry out and guide research and contribute to advancement of the subject.

LEARNING OBJECTIVE

At the end of training course a P.G. student should have thorough knowledge of functions of the body and inter-relations between the systems according to ayurved and modern physiology.

LEARNING OUTCOME

• **COGNITIVE DOMAIN**

All the systems of the body should be studied with respect to:

- a) Historical aspect
- b) Basic Principles of sharir.
- b) Evolution and development
- c) Structure-gross and electron microscopic and functions at cellular level
- d) Quantitative and qualitative aspects
- e) Regulating mechanisms
- f) Variations in physiological and pathological conditions
- g) Applied physiology
- h) Recent advances

• **PSYCHOMOTOR DOMAIN**

P.G. students should be able –

- a) To perform human experiments in ayurvedic and modern perspective
- b) To perform Haematology experiments based on biophysical principles.
- c) To acquire history taking and clinical examination skills.

• **AFFECTIVE DOMAIN**

- a) The P.G. students should develop communication skills to interact with students, colleagues, superiors and other staff members.
- b) They should be able to work as a member of a team to carry out teaching as well as research activities.
- c) They should have right attitude (medical ethics) toward teaching profession.
- d) Accurately and professionally communicate results with others verbally and in writing.

COURSE DESCRIPTION

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
PART A				
1	Basic Principles	Theory of Loka-Purusha Samya	1	20
2	Basic Principles	Theory of Panchamahabhuta	2	
3	Basic Principles	Physiological aspects of Samanya – Vishesha siddhanta	3	
4	Basic Principles	Concepts of Tridosha and Triguna	4	
5	Dhatu	Concept of Dhatu & Upadhatu	10	15
6	Mala	Concept of Sthoola & Sukshma Mala	2	15
7	Oja	Description of Ojas, Bala & vyadhikshamatva	4	15
8	Aahara- Pachana	Process of Ahara Parinama including Aharaparinamakara Bhava and Asta Ahara Vidhi Visesayatana	5	10
9	Agni	Physiological importance of Agni, its classification and functions	3	10

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
10	Dhatuposhana theories	Kedarikulya Nyaya, Ksheeradadhi Nyaya & Khalekapota Nyaya & their applied aspect	2	10
11		Concepts of Atma, Manas and Indriya.	3	20
12	Prakriti & Dhatusarata	Concepts of Prakriti and Ashtavidha Sara.	10	20
13	Srotas	Concept of Srotas	2	10
Part B				
1	General Physiology	Description of essential and relevant understandings related to contemporary physiology, both general physiology and systemic physiology.	2	10
2	Cell physiology	Essentials of cell physiology – organization of cell.	1	15
3	Membrane physiology	Transport across cell membrane, action potentials and resting membrane potentials.	2	
4	Homeostasis	Negative and positive feedback mechanisms	2	
5	Genetics	Genetic code, its expression and regulation of gene expression	3	5
6	cardiovascular Physiology	Essentials of cardiovascular physiology - cardiac cycle, regulation of heart rate and blood pressure.	5	15
7	respiratory Physiology	Essentials of respiratory physiology- regulation	4	15

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
		of respiration-chemical and neural, gaseous exchange, transportation of gases.		
8	Gastrointestinal Physiology	Gastrointestinal physiology- various digestive juices and their actions, gastrointestinal hormones, enteric nervous system	5	15
9	Nervous system Physiology	Nervous system physiology- ANS, somatic nervous system, reflexes, general and special sensations, higher mental functions, functions of brain, brainstem and spinal cord	7	15
10	Blood	Blood: Blood cells- RBCs, WBCs, platelets, plasma proteins and immunity	7	15
11	Muscle physiology	Muscle physiology: properties and mechanisms of contraction of skeletal, cardiac and smooth muscles	2	5
12	Renal Physiology	Physiology of excretion- mechanism of urine formation, micturition	3	15
13	Endocrine Physiology	Endocrine physiology: Classification of hormones, hormones secreted by pituitary, thyroid, parathyroid,	4	20

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
		adrenal glands, pineal, pancreas and their functions.		
14	Reproductive Physiology	Study of male and female reproductive system: functions of reproductive hormones.	2	15

Syllabus Points		Teaching hours
I.	Ayurvedic practical	30
a)	Assessment of Prakriti	
b)	Assessment of Sara	
c)	Pramana Pariksha	
II.	Hematology	30
a)	Hemoglobin estimation	
b)	Total RBC count	
c)	Total WBC count	
d)	Differential leukocyte count	
e)	Packed cell volume (PCV)	
f)	ESR	
g)	Bleeding time	
h)	Clotting time	
i)	Blood grouping and Rh typing	
III.	Urine examination	20
a)	Physical examination Specific gravity and reaction of urine	
b)	Chemical examination Albumin test Sugar test Ketone bodies Bile salts and pigments	

PRACTICAL IN KRIYA SHARIR - MARKS : 100**LIST OF EXPERIMENT:-****EVALUATION SCHEME (PRACTICAL)**

Laboratory Practical	Human Experiment	Spotting	Prakriti Saradi pariksha	Practical Record	Viva-voce	Total
20	15	15	20	10	20	100

REFERENCE BOOKS:

Sr. No.	Books	Author	Publication	Year
1	Ayurvediya Kriyasharir	Ranjit Rai Desai	Baidyanath ayurved bhavan , Ilaahabad	2008
2	Kayachikitsa Parichaya	C. Dwarkanath	Chaukhambha orientalia	1996
3	Prakrit Agni Vigyan	C. Dwarkanath	Latest Edition	
4	Sharir Kriya Vigyan	Shiv Charan Dhyani	Chaukhambha orientalia	1 st edition 1986
5	Abhinava Sharir Kriya Vigyana	Acharya Priyavrata Sharma	Chaukhambha bharti akadmik	7 th edition 1996
6	Dosha Dhatu Mala Vigyana	Shankar GangadharVai dya	Latest Edition	
7	Prakrita Dosha Vigyana	Acharya Niranjana Dev	Ayurvedic tibbi akadami	1 st edition 1971
8	Tridosha Vigyana	Shri Upendranath Das	Latest Edition	
9	Sharira Tatva Darshana	Hirlekar Shastri	Maharashtra rajya sahitya & sankruti mandal	1 st edition 1987
10	Prakrita Agni Vigyana	Niranjana Dev	Ayurvedic tibbi akadami	1 st edition 1971
11	Deha Dhatvagni Vigyana	Vd. Pt. Haridatt Shastri	Latest Edition	
12	Sharir Kriya Vigyana	Acharya	Chaukhambha	1 st edition

Sr. No.	Books	Author	Publication	Year
	(Part 1-2)	Purnchandra Jain	sanskrit pratishthan	2000
13	Sharir Kriya Vigyana	Shri Moreshwar Dutta Vaidya	Chaukhambha sanskrit pratishthan	2008
14	Sharira Kriya Vijnana (Part 1-2)	Nandini Dhargalkar	Chaukhambha sanskrit series office	2 nd edition 2009
15	Dosha Dhatu Mala Vigyana	Basant Kumar Shrimal	Chaukhambha surbharti prakashan	2005
16	Abhinava Sharir Kriya Vigyana	Dr. Shiv Kumar Gaur	Nath pustak bhandar Rohatak	1973
17	Pragyogik Kriya Sharir	Acharya P.C. Jain	Latest Edition	
18	Concept of Agni	Vd. Bhagwan Das	VIDYAvilas press	1971
19	Purush Vichaya	Acharya V.J. Thakar	Gujarat ayurved university, Ayurved mudranalay	1984
20	Kriya Sharir	Prof. Yogesh Chandra Mishra	Chaukhambha publication	1 st edition 2008
21	Sharir Kriya Vigyana	Prof. Jayaram Yadav & Dr. Sunil Verma	Chaukhambha orientalia	2013
22	Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology)	Dr. Srikant Kumar Panda	Chaukhambha orientalia	2006
23	Sharir Kriya – Part I & II	Dr. Ranade, Dr. Deshpande Dr. Chobhe	Profishant publising house	2015
24	Human Physiology in Ayurveda	Dr Kishor Patwardhan	Latest Edition	
25	Sharirkriya Vignyan Practical Hand Book	Dr. Ranade, Dr. Chobhe,	Profishant publising house	2015
26	Sharir Kriya Part 1&2	Dr. R.R. Deshpande	Shantanu prakashan	2014
27	Textbook of	Gyton & Hall	Elsevier	13 th

Sr. No.	Books	Author	Publication	Year
	Physiology		publication	edition 2006
28	Review of medical physiology	William Ganong	Lange publisher	22 nd edition
29	Essentials of Medical Physiology	Sembulingam, K.	Jayapee brothers	6 th edition 2013
30	Concise Medical Physiology	Chaudhari, Sujit. K	New central book agency	6 th edition 2006
31	Fundamental of Anatomy & Physiology	Martini	Pearson	11 th edition
32	Principals of Anatomy & Physiology	Tortora & Grabowski	CBS publication/saunders	13 th edition 2011
33	Human Physiology	Richards, Pocock	Oxford publication	5 th edition 2015
34	Samson Wrights Applied Physiology, Keele, Neil, joels		OUP india	13 th edition 2015
35	Brainstem Control of Wakefulness And Sleep	Steriade, Mirce	PLENUM press newyork/Springer	2 nd edition
36	An Introduction to Human Physiology	Green, J.h	Oxford medical publication	1996
37	Ancient Indian Medicine	Kutumbiah P.	Orient black swan	1999
38	Biographical History of Indian Medicine	Srikanthamurthy KR	Latest Edition	
39	Ayurveda Kriya Sharira	Yogesh Chandra Mishra	Chaukhambha sanskrut sansthan	1 st edition 2008
40	Textbook of Medical Physiology	Indu Khurana	Elsevier publication	2013
41	Tridosha Theory	Subrahmanya Shastri	Arya vaidya shala ,Kottakal	April 2002
42	Statistics in Medicine	K. Syamalan	Global education beauro	

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RASA SHASTRA
EVUM
BHAISHAJYA
KALPANA

TITLE OF THE COURSE: - AYURVED RASASHASTRA & BHAISHJYA KALPNA
COURSE CODE: - AV104
MARKS: - Theory 100 Marks + Practical 100 Marks = Total 200 Marks

GOAL

- To make student competent in preparation of Herbo- mineral medicines Standardization & Therapeutic uses.

LEARNING OBJECTIVE

1. To acquire the theoretical knowledge & principles related to Rasashastra & Bhaishjya kalpna.
2. To identify the various raw drugs used in the preparation of Ayurvedic Medicine.
3. To collect the raw drugs used in the preparation of Ayurvedic Medicine.
4. To know the standard operating procedure for Ayurved dosage forms.
5. To know standardization parameter for raw drugs & Ayurved dosage forms theoretically & practically.
6. To develop and modify classical formulations adopting modern technology.
7. To know rules & acts related to manufacture Ayurved medicines.
8. To identify & knowledge of modern instruments related to preparation & standardization.

LEARNING OUTCOME

1. Identify & collect various raw drugs.
2. Acquire the theoretical knowledge & principles.
3. Know the standard operating procedure for Ayurved dosage forms.
4. Know standardization parameter for raw drugs & Ayurved dosage forms theoretically & practically.
5. Know the therapeutic uses of various formulations.
6. Identify & know Modern instruments for preparation & standardization.

- **COGNITIVE DOMAIN**

At the end of the training students should be able to-

1. Be a Competent theoretically on ayurvedic iatrochemistry
2. Be a competent knowledge of formulation, various dosage forms, therapeutic uses of formulations, standardization, modern instruments.

- **PSYCHOMOTOR DOMAIN**

At the end of the training students should be able to-

1. Identify various minerals & metals on Ayurved & modern parameter.
2. Identify various medicinal plants on Ayurved & modern parameter.
3. Demonstration & standardization of raw drugs as per Ayurvedic Pharmacopeia of India & WHO guidelines.
4. Demonstration & standardization of ayurvedic dosage forms as per Ayurved Pharmacopeia of India & WHO guidelines.
5. Preparation of different dosage forms as per Ayurved formulary of India.
6. Minimum 50 practical's to be performed.
7. Educational visits to minimum 5 (five) GMP approved Ayurvedic pharmacies.
8. Prepare & deliver lecture on various topics using Audio – visual aids.
9. Identify various e-learning resources related to Rasashastra & Bhaishjya Kalpna and inculcate them for self learning.
10. Identify research topics, carry out pilot study & prepare synopsis

- **AFFECTIVE DOMAIN**

At the end of the training students should be able to-

1. Utilize Rasashastra & Bhaishjya kalpna formulation & therapeutic uses in clinical practices.
2. To comprehend the acquaintance of identification, manufacturing & standardization of Ayurvedic formulations.
3. Teach and spread knowledge at institute level & worldwide.

4. Support the students in their learning & inspire them to reach the level of excellence.
5. Utilize scientific methods for new inventions in Rasashastra & Bhaishjya kalpna.
6. Be a competent Ayurvedic physician to treat patient.

COURSE DESCRIPTION

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
PART –A				
1	Fundamental principles of Rasa Shastra and Bhaishajya Kalpana	Fundamental principles of Rasa Shastra and Bhaishajya Kalpana, introduction to Rasachikitsa, Ashuddha and Apakwa Bhasma-sevan Dosh and its management, introduction to Aushadha Sevan Kaal and Prayoga Marga (routes of administration).	7	30
2	Introduction to basic principles of Aushadha Yoga (formulations).	Paribhasha, Mana, Panchavidhakashay kalpna, Panchbhautic sidhant, Dosh –datu-mal vichar, Rasa-gun –viry vipak, shodhan, maran, amritikaran, bhavana, samanya –vishesh, Anukt-visheshokta vichar	5	10
3	Classification of Rasa Dravya-	Classification of Rasa Dravya-Concept & Relevance	5	10
4	Introduction to principles of Aushadhi Nirman,	Concept of shodhan, Maran, Jarana, Murcchhana, Satvapatana & Amritikarana.	10	30

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
5	Concept of Kashay, Panchvidh Kashaya & Other Kapna.	Panchvidh kashay kalpna & Upkalpna as : Pramathya, manth, panak, sharkar, tandulodak, laksharas, mansarasa, Aushdhsidhpaniya, aushdi Yush, Mashi, Lavan, Kshar, Guggul kalpna, Churna, Guti-Vati, Avaleha, Ark kalpna, Ghan, Satva, Pathya kalpna, Sneha & Sandhan Kalpna	20	40
6	Concept of Rasashala	Concept of Rasashala with introduction to Pharmacy in accordance with the Good Manufacturing Practices(GMP), Rasa mandap	3	20
7	Critical study of Rasagrantha	Critical study of Rasa Ratnasamuchchya, Rasendra Chintamani, Rasa Tarangini, Sharangdhar Samhita, Chakradatta, Bharat Bhaishjya Ratnakar, Ayurved Prakash, Yogratnakar, Bhaishjya Ratnaval & Vangsen	20	20
PART B				
1	Introduction to New dosage forms.	Introduction to New dosage forms: Gel, Capsule, Creams, Ointments, Eye drops, Spray etc.	20	20

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
2	Introduction to methods of Analytical, Toxicity, Experimental & Clinical validation of Classical & Proprietary Ayurvedic Formulations.	Introduction to methods of Analytical, Toxicity, Experimental & Clinical validation of various Classical & Proprietary Ayurvedic Formulations.	30	40
3	Introduction to Advance Instruments of Analysis	Introduction to Advance Instruments of Analysis like Chromatography : TLC, Gas Chromatography, HPTLC, XRD, XRF, SEM-E-Dax, ICP Analysis Concept of Nanotechnology & its relevance to Aushadhi Nirman.	30	30
4	Concept of Pharmacopoeia and Formulary	Concept of Pharmacopoeia and Formulary with introduction of 'The Ayurvedic Pharmacopoeia of India' (API) and 'The Ayurvedic Formulary of India' (AFI).	07	10
5	Introduction to databases of medicinal plants	Introduction to databases of medicinal plants published by CCRAS, ICMR and others.	03	10

PRACTICAL IN RASASHASTRA & BHAISHJYA KALPANA

MARKS: 100

LIST OF EXPERIMENT:-

1. Shodhan, Marana, Amritikarana of Rasa Dravya (20 practicals)
 - a) Shodhan - 12 practicals
 - b) Maran - 06 practicals
 - c) Amritikaran - 02 practicals
2. Preparation of different dosage forms (10 forms)
3. Pharmacopoeial standards of raw and prepared drugs (20 practicals)
 - a) Raw Material -10
 1. Raw material Herbal – 05
 2. Raw material Mineral – 05

3.1 Raw Materials

3.1.1 Minerals and Metals

Mineralogical Identification

1. Physical form - Crystal and Amorphous
2. Hardness on Moh's Scale
3. Brittleness test
4. Fracture and Cleavage
5. Streak test

3.1.2 Plant Material

Macroscopic and Microscopic examination

- 1) Orgnaoleptic testing
- 2) Estimation of Foreign materials
- 3) Moisture content
- 4) Determination of ash value - total, water soluble and acid Insoluble ash
- 5) Specific gravity
- 6) Solubility- water and alcohol
- 7) Extract values- water and alcohol
- 8) TLC.
- 9) Refractive index
- 10) pH estimation
- 11) Microbial load
- 12) Determination of optical density
- 13) Aflatoxins
- 14) Limit tests for heavy metals

3.2 Prepared dosage forms:

3.2.1 Solid dosage forms : Rasaushadhi

1. Bhasma and Pishti Pariksha
2. Determination of Particle size
3. Determination of moisture content, specific gravity, pH and acid value.
4. Limit tests for heavy metals

3.2.2 Solid dosage forms: Kashtaushdhi

a. Powder(Churna)

1. Particle size
2. Bulk density
3. Solubility
4. Estimation of Foreign material
5. Moisture content
6. Determination of ash value - total, water soluble and acid insoluble ash
7. Solubility - water and alcohol
8. Extract values - water and alcohol
9. TLC
10. Refractive Index
11. pH Value estimation
12. Microbial load
13. Determination of Optical density
14. Aflatoxins
15. Limit tests for heavy metals

b. Tablets

1. Uniformity in weight and size
2. Tablet hardness
3. Tablet friability
4. Tablet disintegration
5. Tablet dissolution

3.2.3 Semisolid dosage forms

1. Moisture content
2. Sugar content
3. Microbial Load

3.2.4 Liquid dosage forms

1. pH value
2. Specific gravity
3. Acid value
4. Determination of Refractive Index
5. Viscosity
6. Saponification value
7. Iodine Value

Note:

1. All practicals should be performed in accordance with Authoritative Text Books of Schedule-I of D.C.Act-1940.
2. All practicals related to Pharmacopoeial Standards should be performed in accordance with Methods Published in Protocol for testing of ASU Medicines and Laboratory Guidelines for the Analysis of Ayurveda & Siddha Formulations published by Deptt. of AYUSH, Government of India.

EVALUATION SCHEME (PRACTICAL)

Practical Examination	Practical Record Book →	Practical's Related to Preparation of Drugs		Drug analysis		Spotting	Viva Voce
		Major Practical One	Minor Practical One	Major Practical One	Minor Practical One		
Duration	-	30 min	20 min	30 min	20 min	10 min	-
Marks	10	20	10	20	10	10	20
Total Marks							100

Reference Books:

Sr No.	Book Name	Author	Publication Edition
1	Rasahriday Tantra	Bhikshu Govindapadacharya	Chaukhamba, Varanasi 1 st Edition
2	Rasarnava	Indradev Tripathi	Chaukhamba, Varanasi 3 rd Edition, 1995
3	Rasaratna Samuccahaya	Dr. Indradev Tripathi	Chaukhamba, Varanasi reprint 2012

Sr No.	Book Name	Author	Publication Edition
4	Ayurved Prakasha	Shri Gulraj Sharma mishra	Varanasi, Chaukhamba Prakashan reprint 1999
5	Rasendrachudamani	Aacharya Somdev	Chaukhamba, Varanasi Reprint 2009
6	Rasendra Chintamani	Aacharya Dhundhuknath	Chaukhamba, Varanasi 1 st edition, 2000
7	Rasatarangini	Aacharya Sadanand Sharma	Motilal Banarasidas, Varanasi Reprint 2000
8	Rasprakash Sudhakar	Acharya Yashodhar	Chaukhamba, Varanasi 2 nd Edition 1998
9	Rasamrita	Dr. Damodar Joshi	Chaukhamba, Varanasi Reprint 2007
10	Rasa Chandanshu	Vd. Datta Ballal Borkar	Shree Gajanan Book Depo, Mumbai 3 rd Editionn, 1983
11	Sharangadhara Samhita	Murthy K. R. Shrikantha	Varanasi, Chaukhamba reprint edition 2012
12	Sharangadhara Darpan	Dr. B. P. Pandey	Chaukhamba, Varanasi Reprint 2012
13	Bhavaprakasha nighantu	Prof Chunekar	Chaukhamba, Varanasi 2013
14	Yoga Ratnakara	Vd Shri Laxmipati Shastri	Varanasi, Chaukhamba Prakashan Reprint 2012
15	Bhaishajya Ratnavali,	Prof. Siddhi Nanndann Mishra	Chaukhamba, Varanasi 1 st edition 2005
16	Siddha Bhaishajya Manimala	Kaladhar Bhatt	Chaukhamba, Varanasi 2 nd edition 1999
17	Bharat Bhaishajya Ratnakara	Vd. Nagindas Shaha	Jain publication New Delhi Reprint 1985
18	Rasayoga Sagara	Vd. Hariprappann Sharma	Krushnadas academy, Varanasi reprint 1999
19	Rasakamdhenu	Vd. Santoshkumar Sharma	Chaukhamba, Varanasi Reprint 2010
20	Sahasrayogam	Vd Mahenndrapal Arya	CCRAS, New Delhi. 1990
21	Siddha Yoga Sangraha	Yadavaji Trikamji Acharya	Baidyanath, Ayurved Bhavan 11 th edition 2000

Sr No.	Book Name	Author	Publication Edition
22	Vaidyaka Paribhasha Pradeepa	Dr. Indradev Tripathi	Chaukhamba, Varanasi 1 st edition, 1982
23	Vaidyaka Paribhasha Pradeepa	Dr. Indradev Tripathi	Chaukhamba, Varanasi 1 st edition, 1982
24	Ayurvediya Aushadhikarana Dravyaguna Vijnan Part - 1 and 2	Puranik and Dhamanakar	Shri Dhootpapeshwar Ayurved Vidyalaya, Mumbai 2 nd edition
25		Yadavji Trikamji	Baidhyanath Ayurved Bhavan, Nagpur 7 th edition, 1997
26	Chakradatta - Ratnaprabha, Relevant Parts from Charaka Samhita, Sushruta Samhita, Kashyapa Samhita, Ashtanga Sangraha, Ashtanga Hridaya	Pandit Jagnnath Sharma Bajpai	Khemraj Krishnadas Prkashan, 2 nd Edition.
27	Remington: Science and Practice of Pharmacy	Linda Felton	Pharmaceutical press, London, 2013
28	Theory and Practice of Industrial Pharmacy	Leon Lachman	
29	Clinical Pharmacology	KD Tripathi	Jaypee Brothers Medical Publication PVT LTD, Delhi, 7 th Edition
30	Clinical Pharmacology	Lawrence Benette	
31	Drug Discovery and Evaluation (Pharmacological assays)	HG Vogel	2 nd Edition, 2008
32	Pharmacological Basis of therapeutics	Goodman and Gilman	Laurennce L, Brunton, Lonndan, 13 th Edition
33	Data Base of Medicinal Plants	CCRAS, Ministry of Health & Family Welfare	New Delhi

Sr No.	Book Name	Author	Publication Edition
34	Quality and Standards of Medicinal Plants	Gupta A K	ICMR publication, Volume 1
35	Quality Control of Ayurvedic Drugs	Dr. Devendra Joshi Dr. Geeta Joshi	Chaukhamba Orientela, Varanasi
36	Ayurvedic Pharmacopeia of India	Govt. of India, Ministry of Health, & Family Welfare, Dept. of AYUSH, New Delhi 2008	1 st Edition
37	Ayurvedic Formulary of India	Govt. of India, Ministry of Health, & Family Welfare, Dept. of AYUSH, New Delhi	2 nd revised English Edition
38	Indian Pharmacopeia	Govt. of India, Ministry of Health, & Family Welfare, Dept. of AYUSH, New Delhi	2018
39	British Pharmacopeia	JAMA,	1949
40	United States Pharmacopeia	Salmeterol Resolution	UNSPSC Code 41116107
41	Pharmacopeia Codex	Pharmaceutical Society of Great Britan	1907
42	Current Good Manufacturing Practices	Jogindar Mittal	Premier validation, 1 st edition 2014
43	Drugs and Cosmetic Act 1940 and Rules 1945 with latest amendments	Vijay Malik	Estern Book Company, Lucknow
44	Drugs and Magic remedies (Objectionable advertisement) Act-1954	Legal Status of Ayurvedic Siddha & Unani Medicines	13 April, 1954

Sr No.	Book Name	Author	Publication Edition
45	Prevention of Food Adulteration (PFA) act.	Central Gov Official Gadget	1954
46	Laws pertaining to Narcotics	Govt. of India, Ministry of Health, & Family Welfare, Dept. of AYUSH, New Delhi	1985
47	Factory and Pharmacy Acts	Indian Pharmaceutica Association	1948
48	Consumer Protection Act -1986	Preliminary Consumer Protection Council & Consumer Disputes Redressal Agencies	24 Dec. 1986
49	Brief information on the peer reviewed journals, official websites and other official search engines along with their links (related with the subject)	Online	
50	Rutleys Elements of Mineralogy	C D Gribble, London T Murby & Co	27 th edition
51	Parad Samhita	Niranjan Prasad Gupt	Khemraj, Shrikrushnadas, Mumbai 1997
52	Parad Vigyaniya	Vd. Vasudev Dwivedi	Sharma Ayurved Mandir, Nagpur 3 rd edition 1997
53	Chakradatt	Dr. Indradev Tripathi,	Chaukhamba Prakashan, Varanasi Reprint 2014,
54	Bhasma Vigyaniyam		
55	Kupipakva Vigyaniyam		
56	Anupana Manjari		

DPU

Dr. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

DRAVYAGUNA
VIGYANA

TITLE OF THE COURSE: - DRAVYAGUN VIDNYAN
(Materia Medica & Pharmacology)
COURSE CODE:- AV105
MARKS :- Theory-100 Practical -100 Total -200

GOAL

- Teaching to post-graduate students is to provide comprehensive knowledge of the Medicinal Plants, their identifications, properties, action and therapeutic uses.
- To encourage to find drugs with promising results from herbal traditions practiced in remote areas with the help of Ethno botany
- To aware about skill of propagation, cultivation techniques & conservation of important medicinal plants along with phytochemical study & understanding concept of pharmacovigilance of Ayurvedic drugs & modern medicine, its application

LEARNING OBJECTIVE

- Be competent ayurvedic researcher in dravyaguna field.
- To perform the utmost possible ethical practice in the society.
- Support the education of forth- coming student in the subject and inspire them to achieve excellence.
- To identify scope of research in the subject & pursue research activity.

LEARNING OUTCOME-

- To create knowlegable and well trained students in dravyaguna field.
- The students will also be competent in the field of research.

COGNITIVE DOMAIN

Comprehend the knowledge of Dravyaguna vigyan- Basic Fundamentals principles,& various aspects of medicinal plants like their identifications, properties, action and their therapeutic uses .

- Development of quality standard drugs of plant origin for safe use and best efficacy with the help of advanced technology
- Identification of all such medicinal plants which have still controversy on their identity with the help of manuscripts.
- Conservation of all such medicinal herbs for expansion and transmission of knowledge to next generation.
- Knowledge of various types of cultivations techniques .
- Ascertainment of properties and action of all such unexplored drug substance not recorded in Ayurvedic classics i.e. ethano botany

- **PSYCHOMOTOR DOMAIN**

At the end of the training students should be able to-

1. Demonstrate and dissect various useful parts of medicinal plants by its macroscopic and microscopic examination
2. Analysis of synonyms related to external morphology of medicinal plants
3. Demonstration and standardization of crude drugs as per Ayurvedic Pharmacopoeia of India (API) and WHO guidelines
4. Identify adulteration and substitute of crude drugs and methods of detection of adulteration
5. Classification of crude drugs by its morphological, microscopically, chemical and taxonomical basis
6. Field identification of medicinal plants and preparation of herbarium sheets during field visit
7. Observation of animal experimentation models both in vitro and vivo study
8. Prepare and deliver lecture on various topics of Dravyaguna vidnyan using audio visual aids.
9. Identify various E-learning resources related to Dravyaguna vidnyan and inculcate them for self learning.
10. Identify research topics, carry out research and prepare a dissertation on topic.

- **AFFECTIVE DOMAIN**

At the end of the training students should be able to-

1. Be a competent Ayurvedic pharmacologist
2. Quality researcher & Teacher in the field of Ayurvedic drug research
3. Teach the undergraduate students about medicinal plants like its identification, qualities, features and therapeutics uses as well as botanical aspect of herbs

COURSE DESCRIPTION

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight age (Marks)
Part A				
1	Panchamahabhuta siddhanta Samanya vishesha siddhanta Tridosha siddhanta Extensive study on classifications of dravya as described in brihattayi	Describe Panchamahabhuta siddhanta Describe Samanya vishesha siddhanta Describe Tridosha siddhanta Describe Extensive study on classifications of dravya as described in brihattayi	15	25
2	Applied aspects of rasa,guna, ,veerya, vipak and prabhav	Describe Applied aspects of rasa,guna, ,veerya, vipak and prabhav	15	15
3	Applied aspects of aushadha karma with reference to Sharangadhara & Bhavaprakasha	Describe Applied aspects of aushadha karma with reference to Sharangadhara & Bhavaprakasha	10	15
4	Importance of Namrup vigyan & concept of Basonym & Synonym of Dravy	Describe Importance of Namrup vigyan & concept of Basonym & Synonym of Dravyas	1	10
5	Applied knowledge of bhaishajya prayoga (Marga, Kalpana, Matra, Anupan, Sevan Kal etc)	Describe importance of bhaishajya prayoga(Marga, Kalpana, Matra, Anupan, Sevan Kal etc.	4	10

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight age (Marks)
Part B				
1	Basic principles of desha pravichara Dravya sagrahan (collection) & Dravya Samrakshhan (Preservation)	Describe Basic principles of desha pravichara Describe Dravya samrakshana (preservation) Describe Dravya Samrakshhan (Preservation)	5	10
2	Evolution of dravyaguna vigyan with special emphasis on nighantus	Describe Evolution of dravyaguna vigyan with special emphasis on nighantus	10	15
3	Prashasta bshhaj lakshana	Describe Prashasta bshhaj lakshana	1	5
4	Profound knowledge on applied aspects of agrya aushadha	Describe applied aspects of agrya aushadha	2	5
5	Methodology of studying controversial dravyas Apamishran (adulteration of drugs, adulterant) dravyas Unidentified dravyas	Describe Methodology of studying controversial dravyas Describe Apamishrana (adulterant) dravyas Describe Unidentified dravyas	5	5
6	Pharmacognosy & its relevance in dravyaguna vigyan	Describe Pharmacognosy & its relevance in dravyaguna vigyan	4	10

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight age (Marks)
7	An integrated study of Charakokta bshhaj pariksha & scientific method of dravya evaluation with special reference to quality ,safety & efficacy	Describe an integrated study of charakokta bshhaj pariksha & scientific method of dravya evaluation with special reference to quality ,safety & efficacy	4	10
8	Brief knowledge & importance of clinical pharmacology	Describe Brief knowledge & importance of clinical pharmacology	15	15
9	General principles of various good cultivation practices ,collection practices ,storage practices &manufacture practices	Describe General principles of various good cultivation practices	2	10
10	Pharmacovigilance & ADR issues	Describe Pharmacovigilance & ADR issues	3	5

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight age (Marks)
11	Knowledge on the Ayurvedic pharmacopoeia of India Knowledge on The Ayurvedic formulary of India Knowledge on the International pharmacopoeias	Describe the Ayurvedic pharmacopoeia of India Describe The Ayurvedic formulary of India Describe the International pharmacopoeias TKDL	4	15

Practical Syllabus Marks - 100		
Sr. No.	Topic	Hours
1	Field Visit for the identification of important classical medicinal plants (minimum to field visit)	-
2	Macroscopic & microscopic identification of minimum two plants of each of prayojya anga(useful parts of plants)	34
	Root	4
	Stem	4
	Bark	4
	Leaf	4
	Flower/Bud	4
	Fruit	4
	Seed	4
	Rhizome	4
Niryas(resins)	2	
3	Preliminary study of Pharmacopeial standards (API)-5 plants	25
4	Minimum two experiments on animals	-

Theory- Total Marks 100

PRACTICAL/VIVA VOCE: Marks 100

Herbarium	Laboratory Experiment (Macroscopic & Microscopic)	Journals	Spotting Dry & Wet 20 spots Each of one Marks	Viva / Voce	Total
10	30	10	20	30	100

REFERENCE BOOKS:

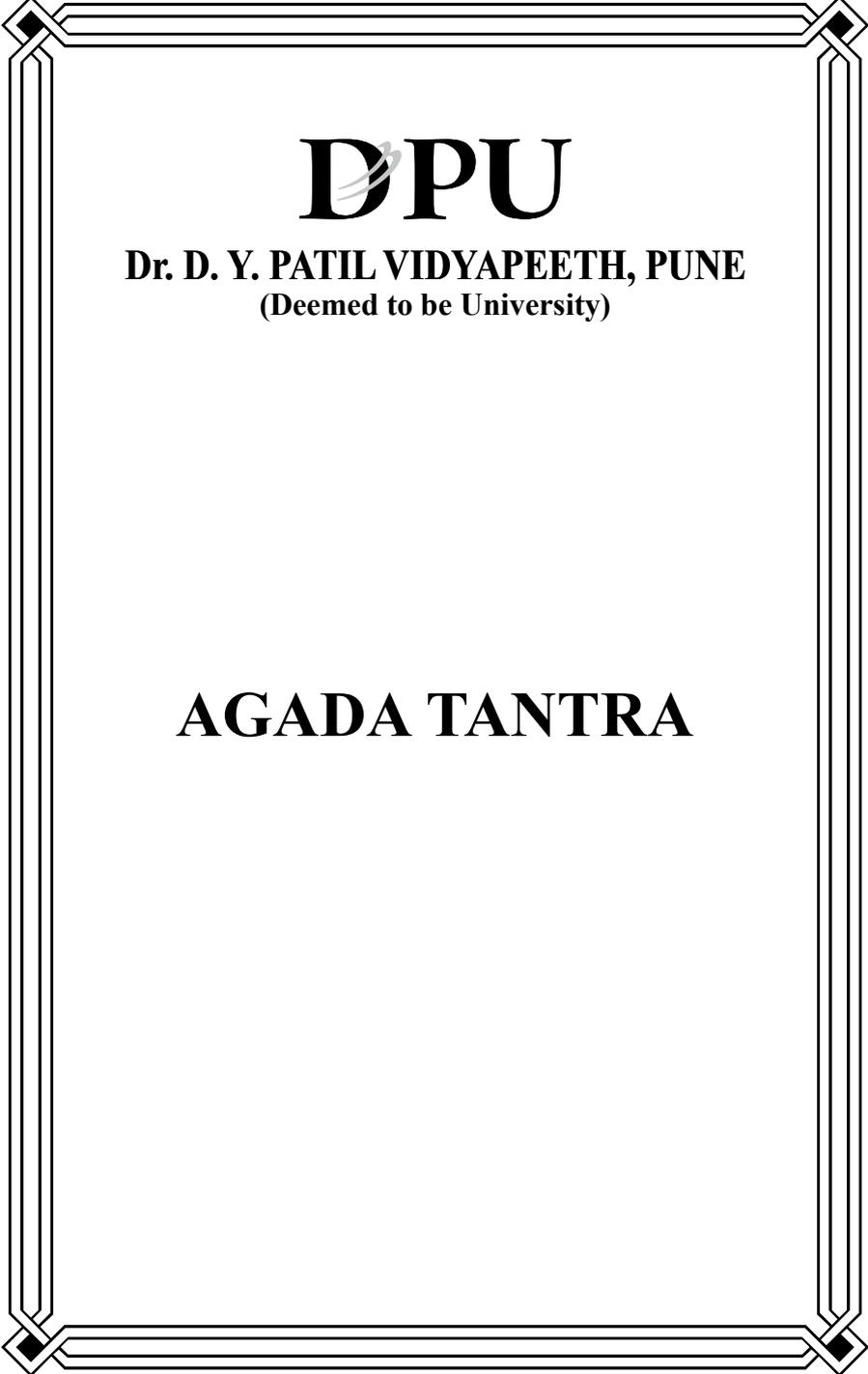
Sr. No.	Book Name	Author	Edition	Publication
1	Abhinav Buti Darpan (Vol.1-2)	Vd.. Roop Lal Vaishya, Kaviraj Ganpati Singh Verma	2	Choukhamba Bharati academy
2	Aushadha Vigyna Shastra	Acharya Pt. Vishvanatha Acharya Pt. Vishvanath	-	First Edition
3	Bedi Vanaspati Kosha Vol 1-6 Prof.:	Ramesh Bedi:i		Kitabghar Prakashan, 2006
4	Bhaishajyaguna Vigyana	Dr. Alakhnarayan Singh	First Edition	-
5	Bhav Prakash Nigantu (English) Shreekanthamurti	Shreekantha-murti	First Edition	-
6	Ayurvediya Aushadnkarma Vigyna	Bhav Prakash Nighantu Acharya V.J. Thakur	First Edition	-
7	Bhav Prakash Nighantu	Vd. Krishna Chandra Chuneekar commentary), Choukhamba Sanskrit pratishthan, 2013	2013	Chaukhambha Sanskrit pratishthan,

Sr. No.	Book Name	Author	Edition	Publication
8	Bhrinad dravyagunadarsha Yogaratnakara	Mahendra Ku.mar Shastri		First Edition
9	Classical Uses of Medicinal Plants	Acharya Priyavrata Sharma	1996	Chaukhambha Publication
10	Controversial Medicinal Plants i	Vd. G. Bapa Lal	2005	Choukhamba orientalia
11	Shastra Dalhana Ka Dravyaguna Ke Kshetra Me Yogadana	Vd. Shiv Kumar Vyas	-	First Edition
12	Dravyaguna Kosha	Acharya Priyavrata Sharma	2012	Choukhamba orientalia
13	Dravyaguna Sutram	Acharya Priyavrata Sharma	First Edition	
14	Dravyaguna Vigyana	Dr. Gyanendra Pandey	edition 3, 2005	Chaukhambha Publication
15	Dravyaguna Vigyana (Vol. 1-2)	Acharya Yadavji Tikramji	2015	Chaukhambha Publication
16	Dravyaguna Vigyana	Vd.V. M. Gogate	4 th edition, 2017	Vidyarthimitra prakshana
17	Dravyaguna Vigyana (Vol. 1-5)	Acharya Priyavrata Sharma	2014	Choukhamba Bharati academy
18	Dravyaguna Shastrum	Vaidya G.A. Phadake	-	First Edition
19	Dravyagunavijnana basic Principles	Prof.D. S. Lucas	2 nd edition 2012	Chaukhambha visvabharati
20	Dravyaguna Vijyana	Dr. A. P. Deshpande	2006	Proficient, Reprint
21	Forgotten Healers (Indian Medicinal Plants)	Dr. Prakash Pranjape	2012	Choukhamba Sanskrit Pratisthan

Sr. No.	Book Name	Author	Edition	Publication
22	Glossry of Vegetable Drugs in Bhrithrayis	Thakur Balwant Singh, Vd. Krishna Chandra Chunekar	1 st edition 2015	Chaukhamba Amarbharti Prakashan;
23	Introduction to Dravyaguna Acharya Priyavrata Sharma	Priyavrata Sharma	1 st edition, 1976	Chaukhamba
24	Materia Medica	Acharya Ghosh,	-	Popular prakashan
25	Kriyatamka Aushadi Parichaya Acharya Pt. Vishvanath	Acharya Pt. Vishvanath Dwivedi	-	First Edition
26	Nighantu Adarsh (Vol. 1-2) Vd.	Bapa Lal	edition 2016	Chaukhambha Bharati Academy
27	Pharmacological basis of Medical Practice	Goodman & Gillman	1 st Edition	-
28	Pharmacology and Pharmacotherapeutics	Satoskar Bhandarkar & Ainapure	24 th edition 20 July 2015	Elsevier Health INR
29	Prayogatamaka Dravyaguna Vigyana Dr. Maya Ram Uniyal	Dr.Maya Ram Uniyal	1 st edition 2009	Choukhamba orientalia Varanasi
30	Priya nighantu Acharya Priyavrata Sharma CHAUKHAMBA 2004	Acharya Priyavrata Sharma	2004	Chaukhamba
31	Raspanchaka / Dravyaguna Siddhanta	Prof. Shivcharan Dhyani	-	First Edition
32	System of Plant Nomenclature in Ayurveda	Dr. Gyanendra Panday	1 st edition 1997	Choukhamba Sanskrit Varanasi
33	Text Book of Pharmaconogy	Trees & Valis	2 nd edition, 2005	CBS publisher,

Sr. No.	Book Name	Author	Edition	Publication
34	Textbook of Dravyaguna;	Dr.K.Nishteswar	Edition 2015	Chaukhamba Surbharati Prakashan;
35	Unani Dravyaguna Vigyana	Vigyana Hakim Daljeet Singh,	12 th edition 2010	Baidyanath publication
36	Useful parts of Charaka, Sushurut, and Vagbhata		-	First Edition
37	Uttarakand Ki Vanaspatiya	Dr. Gyanendra Pandey	-	First Edition
38	Vanoaushadi Darshika Thakur Balwant Singh	Thakur Balwant Singh	-	First Edition
39	Vanoaushadi Nidarshika	Dr. Ram Sushil Singh	-	First Edition
40	Vedic Vanaspatiyan	Dr. Dinesh Chandra Sharma	-	First Edition
41	Indian Pharmacopeia, 4 volumes	-	8 th edition	The Indian pharmacopeia commission 2017
42	Database on medicinal plants all the volums	all the volums of CCRAS	2000	CCRAS publication
43	Aurveda formulary of India – all the volums		2003	Gov. Of India
44	. Shodhal Nighantu,	Gyanendra pandey	1 st edition 2009	Choukhamba Krushndas academy
45	Madanpal Nighantu, khemraj shrikrishna das, 2008	Rajvaidya Ramprasad Patiyala	2008	Khemraj Shrikrishna Das
46	Shaligram Nighantu, Das, Kshemraj Shrikrishan, 1923	<u>Das,kshemraj Shrikrishan</u>	1923	Latest Edition
47	Raj Nighantu,	Satish chandra,	2012	Chaukhambha
48	Kaideva Nighantu,		1 st edition, 1979	Choukhmba orientalia

Sr. No.	Book Name	Author	Edition	Publication
49	Dhanvantari Nighantu,	Dr Amrit Pal singh	2008	Chaukhamba Orientalia
50	Ayurvedic Pharmacopeia of India, Published by Pharmacopoeia		2016	Pharmacopoeia Commission For Indian Medicine & Homoeopathy Ghaziabad, Government of India Ministry of AYUSH



DPU

Dr. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

AGADA TANTRA

TITLE OF THE COURSE:- AGADTANTRA

COURSE CODE :- AV106

MARKS: - THEORY -100 PRACTICALS-100 TOTAL – 200

GOAL

- To Achieve Comprehensive Training (In All Three Domains) Of The Subject So As To Practice And Propagate Thorough & Correct Knowledge.

LEARNING OBJECTIVE

- Be Competant Ayurvedic Physician So As To Treat Various Types Of Poisoning Cases.
- To Perform The Utmost Possible Ethical Practice In The Society.
- Support The Education Of Forth-Coming Student In The Subject And Inspire Them To Achieve Excellence
- To Identify Scope Of Research In The Subject & Pursue Research Activity.

LEARNING OUTCOME

- To create knowlegable and well trained students in this field.
- The students will also be competent about medico-legal responsibility during his practices of medicine.

Program Out Coursees:

a) Cognitive Domain -

At the end of the course the student should be able to-

- Comprehend the knowledge of Agad Tantra- Vidhivaidyak about various aspects of poison.
- Understand the medico legal responsibility of general physician while rendering community service either in rural primary health center or an urban health center.
- Describe the medico legal aspects and findings of post mortem examination in case of death due to common unnatural conditions and poisoning.

b) Learning Objective (Psychomotor)

At the end of the training students should be able to-

- Perform Physical and Chemical analysis of plant origin poisons such as Datura, Karaveera, Vatsanabha, Jayapala, Arka Bhallataka etc. with methods such as Microscopy, powder microscopy, TLC, solvent extraction, detection of Phenol, tannins etc.
- Identify various relevant chemicals such as acids, alkalies, alcohols etc.
- Detect relevant minerals such as Copper, Mercury, Lead, Arsenic and their compounds.
- Detect human blood, hair, semen and other biological secretions of Forensic importance.
- Acquire Practical training in post-mortem examination
- Manage (Treat) the cases of poisoning and its Medico-legal aspect.
- Prepare and deliver lecture on various topics of Agadtantra- Vidhivaidyak using audio visual aids.
- Identify various E-learning resources related to Agadtantra- Vidhivaidyak and inculcate them for self learning.

c) Personality development (Affective domain)

At the end of the training students should be able to-

- Be a competent Ayurvedic physician to treat poisoning and medico-legal cases.
- Perform utmost ethical practice in the society.
- Educate the undergraduate students about various aspects of poisonous drugs & various medico legal cases.
- Support the students in their learning & inspire them to reach to the level of excellence.
- Stimulate inquiry in students.
- Identify research topics, carry out research and prepare a dissertation on topic.

COURSE DESCRIPTION

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight age (Marks)
1	Introduction to Agadatantra, its sequential development, traditional and contemporary toxicology.	Scope of Agadatantra	06	15
2	Examination of poisons as per contemporary and Ayurvedic methods.	Ayurveda – Panchbhautik Parikshan Contemporary - various technique for detection like Hptlc, Tlc, Mass-Photospectromerty Etc.	06	15
3	Ancient and contemporary classification of Visha.	Action of poison, source of poison, route of administration of poison.	06	15
4	Knowledge about Sthavara visha, Jangama visha and Kritrima visha, their clinical and pathological manifestations and management.	Cardinal signs and symptoms according to various physiological systems of the body.	12	15
5	Garavisha and Dushi visha, signs, symptoms and management with contemporary relevance.	Aspects of cumulative toxicity in human being.	06	15
6	Introduction to Forensic medicine.	Legal procedure in INDIA	02	05

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight age (Marks)
7	Techniques of pathology, pharmacology, pharmacognosy and microbiology used in toxicology.	Specific protocol in relation to collection, preservation and handling of different types of forensic samples like blood, urine and other body fluids and viscera.	06	15
8	Death and its medico-legal aspects (Medical Thanatology), Medico-legal autopsy, Legal procedures in clinical forensic medicine	Protocol for medico legal procedures. Cause of death, Time since death.	10	15
9	Forensic Science Laboratory:- Structure and functions	Different working departments in Forensic Science Laboratory	04	07
10	Introduction to Medical Jurisprudence.	Various Indian laws regarding to the medical practices.	02	05
11	Vishajanya Janapadodhvamsaniya Roga (community health problems due to poisons) - environmental pollution, water pollution, soil pollution, air pollution etc, their features and management according to ancient and contemporary concepts.	Various techniques in relation to purifications of water, environment, lands and air according to ancient science and currents era with their merits and demerits.	10	15

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight age (Marks)
12	Concept of Viruddhahara with contemporary views.	Basic rules how to prepare food and consumption of quality of foods	03	20
13	Introduction of Vyavahara Ayurveda.	Various Indian laws regarding to the medical practices in Ayurveda.	02	05
14	Fundamentals of Vyavahara Ayurveda. Courts of law in India and legal procedures.	Various Indian laws regarding to the medical practices.	06	20
15	Chaturvinshati upakrama (24 management procedures).	Application of ancient techniques of elimination of poisons in current situation.	08	15
16	Laws related to medical profession. Ancient practice of medical jurisprudence in India.	Study of different classical texts such as Rugveda, Manusmruti and different upanishada, Kautilya arthashastra etc.	06	07
17	Ancient and contemporary fundamentals of medical ethics.	Rights of patients. Rights of RMP Patient-doctor relationship Professional secret.	02	20
18	Madya visha (Alcoholism).	Bombay prohibition Acts	04	15
19	Diagnosis and Management of food poisoning.	Examination of contaminated foods and their Ayurvedic and contemporary treatment	04	15

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weight age (Marks)
20	General and Emergency medical management of poisoning including preparation, administration and complications of antidotes, antivenoms, antisera.	Route, dose, preparation, indication, contraindication, side effect and allergic reactions with their treatments.	07	15
21	Management of the toxic manifestations caused by the contact poisons (paduka, vastra, abhushana, mukhalepa-vishabadha etc).	Different method of administration of poison in ancient era with its classical treatment.	03	10
22	Diagnosis and management of dermatological manifestations of Visha.	Etiological factors in relation to skin problems through toxicological spectrum.	04	10
23	Death due to poisoning, duty of physician in poisoning and cases of suspected poisoning.	Act in relation to RMP with acute poisoning management.	05	10
24	Post mortem findings in poisoning.	Specific protocol in relation to collection, preservation and handling of different types of forensic samples like blood, urine and other body fluids and viscera.	08	20
	Total hours		131	

**PRACTICAL IN AGADTANTRA
EVALUATION SCHEME (PRACTICAL)**

MARKS : 100

Examination	Duration	Marks
Case Records (20 Cases)	-	20
Bedside Clinical Case Taking ➤ Long Case/Injuries/ X-Rays	45 Min	20
➤ Short Case/Weapon Reports/Bones Identification	30 Min	10
Identification Of Specimens, Models And Equipments Of Jurisprudence Importance.		15
Spotting Related To Visha, Upavisha And Other Poisonous Drugs	02 Min/Spot	15
Viva-Voce	-	20
Total		100

Reference Books:

Sr. No.	Book Name	Author	Edition	Publication
1	Useful Portion of Charak-Sushrutvagbhata		First Edition	-
2	Dravyaguna Vigyan	Acharya Yadavji	7th Edition 1997	Baidyanath Ayurved Bhavan
3	Aushadhigunadharm Shastra	Pt Visvanath Dvivedi	3 th Edition 1986	Swati Enterprise
4	Kriyatmat Aushada Parichaya Vigyan	Pt Visvanath Dvivedi	2nd Edition 1993	Chaukhambha Bharati
5	Ayurvedic Vyadhi Vigyan	Acharya Yadavji Trikamji	3rd Edition 1983	Baidyanath Ayurved Bhavan
6	Madhavanidan With Madhukosha Commentary	Madhukosha Commentary	First Edition	Chaukhambha
7	Sharangadhara	Gudharthade	Reprint 2012	Chaukhambha

Sr. No.	Book Name	Author	Edition	Publication
	Samhita	epika Commentary		Oriental
8	Yogaratanakara	Laxmipati Shastri	Reprint 2017	Chaukhambha
9	Aushadigunadhar ma Shastra	Pt Gangadhara Shastri Gune	1st Edition 2014	Chaukhambha Sanskrit
10	Rasendra Chintamani	Siddhi Nandan Mishra	Reprint 2011	Chaukhambha Orientalia
11	Rasaratna Samuchhaya	Indradev Tripathi	Reprint 2009	Chaukhambha Sanskrit
12	Vishavigyan	Dr. Krishna Kumar	First Edition	-
13	Related Matter of Kautilya Arthashastra	Shri Vachaspati Gairola	4 th Edition 2003	Chaukhamba Surbharati Pratishthan
14	Harmekhlatantra	Siddhi Nandan Mishra	Reprint2010	Chaukhambha Prakashan
15	Anupana Manjari	Yadavji Trikamji	Reprint 2010	Chaukhambha Prakashan
16	Ayurvedprakash	Shri Gulraj Sharma Mishra	Reprint 1999	Chaukhambha Bharati
17	System of Clinical Medicine	Savil	14 th Edition	Cbs Publishers
18	Forensic Pharmacy	B.M. Mhithai	First Edition	-
19	Hand Book of Forensic Medicine And Toxicology	Dr. P.V. Chadha	5th Edition 2009	Jaypee
20	Viva Forensic Medicine And Toxicology	L.C. Gupta	1998	Jaypee
21	Forensic Medicine And	J. P. Narena	First Edition	-

Sr. No.	Book Name	Author	Edition	Publication
	Ethics			
22	Modi's Medical Jurisprudence And Toxicology	Jaising P. Modi	24th edition, 2011	Lexis-Nexis India
23	The Essentials of Forensic Medicine And Toxicology	Dr.K.S. Narayan Reddy	Third Edition (2015)	Jaypee Brothers Medical Publishers
24	Medical Laws And Ethics	Dr. H.S. Mehta	First Edition	-
25	M.R.K. Krishnan's Handbook of Forensic Medicine		First Edition	-
26	Text Book of Medical Jurisprudence And Toxicology	Dr. C.K. Parikh	6 th Edition 1 December 2007	Cbs
27	Atlas of Forensic Medicine	Dr. Tomio Watenbe	First Edition	-
28	Medico Legal Post Mortems (Atlas)	Dr. Parikh And Others	First Edition	-
29	Textbook of Forensic Medicine And Toxicology	Dr.V.V. Pillay	18 th Edition- 2017	Paras
30	Textbook of Forensic Medicine And Toxicology	Dr. Karmakar	First Edition	-
31	Textbook of Forensic Medicine And Toxicology	Singhal	5 th Edition 2015	National

Sr. No.	Book Name	Author	Edition	Publication
32	Textbook of Forensic Medicine And Toxicology	Dr. Krishnan Vij	5 th Edition (February 10, 2014)	Elsevier India
33	Forensic Pathology	Dr. Bernard Knight	4 th Edition (December 18, 2015)	Crc Press
34	Textbook of Forensic Medicine And Toxicology	Lyon's	11 th Edition	Aiims
35	Pocket Picture Guide To Forensic Medicine	Gower's Medical Publication	First Edition	-
36	Forensic Medicine	Simpson Knight	11 th Edition (January 15, 1997)	Crc Press
37	Taylor's Principles and Practical of Medical Jurisprudence	J And A Churchis	19 th Reedition 2017	Churchill Livingstone
38	Doctor and Law	Singhal	Third Edition	National
39	Textbook Of Toxicology	Singhal	Ninth Edition- 2017	The National Book House
40	Medicine Harrison's Principal of Internal Medicine		Indian 19th Edition (12 July 2015)	Mc Graw Hill Education / Exclusively Distd . By Jaypee
41	Agad Tantra	Dr. Shekhar Namboodri	2007	Chaukhambha
42	Modern Medical Toxicology	Dr. V.V.Pillay	Fourth Edition (2013)	Jaypee Brothers Medical Publishers

Sr. No.	Book Name	Author	Edition	Publication
43	Critical Care Toxicology	Bruent Wallace	1 Edition December 31, 2004	Mosby
44	Diagnosis and Management of Common Poisoning	Agarwal Wal	First Edition	-
45	Colour Atlas of Forensic Medicine	Govindaiah	2nd Edition 2009	Jaypee Brothers Medical Publishers
46	Guidelines of Poisons	W.H.O.	-	W.H.O.
47	Doctors Patients Relationships	Dr.Lavekar	First Edition	-
48	Bhavaprakasha.	Vd Chunekar	1st Edition 2014	Chaukhambha Oriental Varanasi
49	Vishavaidya Jyotsnika English Translation	Vpsv Ayurveda College, Kottakkal.	Edition 2005	-
50	Lakshnamritham		First Edition	-
51	Toxicology, Ayurvedic Perspective	Vpsv Ayurveda College, Kottakkal.	First Edition	-
52	Text Book of Agadatantra	Dr Huparikar, Dr. Joglekar	First Edition	-
53	Agadatantra Ki Pathyapustaka	Dr Huparikar, Dr. Joglekar	Edition 2008	Rashtriya Shikshan Mandal
54	Vyavahar Ayurveda Vigyanam	Dr.Indramohan Jha (Sachchan)	Edition 2008	Rashtriya Shikshan Mandal
55	Forensic Medicine	Dr. B. Umadathan	First Edition	-

Sr. No.	Book Name	Author	Edition	Publication
56	Visha Chikitsa	Dr. M. Balakrishnan Nair	1st Edition 2010	Mbi
57	Park Text Book of Preventive and Social Medicine	K. Park	Twenty Third Edition 2015	Bhanot
58	Environmental Science And Biotechnology - Theory And Practice	A.G. Murukesan &C. Rajakumari	1st Edition September 22, 2005	Mjp Publishers
59	Veterinary Toxicology	Dr. Satish K. Garg	1st Edition 1 December 2010	Cbs
60	Guide To Drinking Water Quality (3 Volumes)	Who Publication	2008	Who Publication
61	A Short Text Book Of Medical Entomology	H.S. Bhatti, R. Sehgal, R.C. Mahajan.	First Edition	-

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**ROGA NIDANA
EVUM
VIKRITI VIGYANA**

TITLE OF THE COURSE:- ROGNIDAN AVUM VIKRUTI VIDNYAN

COURSE CODE: - AV107

MARKS:- Theory -100 & Practical-100 = TOTAL 200 MARKS

GOALS –

1. To provide PG students comprehensive Knowledge of principles of Ayurvedic diagnosis at clinical and laboratory.
2. To facilitate PG students with various Hematological, Biochemical, Serological and Microbiological diagnostic tests in their research.
3. Students should gain the knowledge and research in the subject like unique Ayurvedic Ashtavidha examinations such as Nadi pariksha, Tail bindu etc, in a period of three years.
4. To enhance the knowledge acquisition process for PG's in Ayurvedic diagnosis along with Modern scientific methods.

LEARNING OBJECTIVES:

Providing basic methodology of Roga Nidana and Vikruti Vidnyana with recent developments in clinical diagnostics & bestowing complete knowledge of bedside clinics and advanced investigations with clinical interpretation.

LEARNING OUTCOME

Students should be able to learn and perform in following domains.

• **COGNITIVE DOMAIN**

1. At the end of the course the candidate should acquire a high standard of theoretical knowledge in nidana panchak, rog and rogi pariksha, details of every vyadhi.
2. The candidate should also gain adequate and up-to-date knowledge of following topics
 - a. The importance of – Dosha Dooshyadi Vidnyanam,
 - b. Fundamentals of Vikruti Vidnyan
 - c. Rognidan, Pariksha Vidhana.
 - d. Shat Kriyakala (Vyadhi and Rutu),
 - e. Nidana Panchaka,
 - f. Vyadhi Vidnyanam and Vyadhikshamatva
 - g. Concept of Ashta Mahagada and importance of Rogamarga
3. The candidate should also be conversant with the recent developments in concepts and practice of above subject.
4. The candidate should become competent and proficient in imparting training and to various categories of ayurvedic medical professional including research in the subject.

5. At the end of the course the candidate should acquire a high standard of theoretical knowledge in basic pathology, immunology and infectious diseases and the knowledge of Classify microorganisms such as Virus, Bacteria, Fungi.

- **PSYCHOMOTOR DOMAIN**

1. Execute the practice of Pareeksha Vigyanam.
2. Interpret the Diseases of various Srotas.
3. Practice the tools of Avayavika Pariksha like -USG, X-ray, MRI, CT, ECG etc
4. Demonstrate Upasargajanya Vyadhi (Communicable diseases).
5. Integrate Krimi Vigyanam.
6. Perform bedside physical examination and history taking by regular observation and the demonstrations on the patients.
7. Calibrate various steps involved in performing various laboratory Investigations.
8. Adapt safety skills during the emergencies at student laboratory

- **AFFECTIVE DOMAIN**

1. Develop communication skills to take the patients into confidence.
2. Extrapolate to take the patient into confidence for briefing proper history.
3. Valuing high moral and ethical standards while carrying out clinical examination and history taking.

Integration-

1. Krimi Vidnyanam with Modern types of worm infestation in the CCL of medical College and Hospital.
2. Comparison of ayurvedic concept of Mala and Shukra Parikshan with Modern Physical, chemical and Microscopic examination of stool and semen analysis in Microbiology dept.of medical College and Hospital.
3. Avayavika Parikshan with USG and X-ray and ECG Examination in Radiology Dept. of our Hospital.

COURSE DESCRIPTION

PAPER-II THEORY- 100 marks			
PART–A 50 marks			
Sr. No.	Topic with description	No. of Lectures (Hrs)	Weightage (Marks)
1	Understanding of Samprapti of diseases in Charaka Nidana Sthana in contemporary context. Detail study of Nidan Panchaka – Hetu, Purva Rupa , Rupa, Samprapti, Upashaya Anupashaya	20	20
2	Clinical aspects of Dosha, Dhatu, Upadhatu, Mala, Agni, Ama, Srotas and Indriya Dosh Awastha- Dosha Vriddhi, Kshaya and Prakopa lakshana, Dosha Dhatu Ashraya Ashrayi Bhava. Vyadhi Ghatak Definitions and Samanya Lakshana of Ama. Sama and nirama Dosha , Dushya Lakshan Detailed study of Srotomoola and Srotodushti Samanya and Vishishta Hetu Lakshana of all Srotas	20	15
3	Understanding of the role of Trividha Avasthapaka in the vitiation of Dosha & Concept of Nanatmaja and Samanyaja Vikara	10	10
4	Clinical application of Avarana in diagnosis of various diseases	10	20
5	Clinical application of Shatkriyakala in diagnosis of diseases. Relationship between Nidana Panchaka and Shat Kriyakaala	15	20

6	Clinical and applied aspects of concept of Upadrava and Arista Sadhyasadhyatwa – Types, their parameters and importance	10	20
7	Anukta Vyadhi: Hetu Lakshan, Srotas Dushti, Upshay	10	10
PART-B 50 marks			
8	Ayurvedic interpretation of various laboratory investigations to derive treatment principles.	20	20
9	Interpretation of various Rogi Bala and Roga Bala technique to plan Chikitsa Sutra Importance and knowledge of Aptopadeshadi & Darshanadi Trividha, Chaturvidha, and Shadvidha Importance and Knowledge of Dashavidha Pariksha Importance and Knowledge of Ashtasthana Pariksha	20	30
10	Clinical examination of Deha Bala, Roga Bala, Agnibala And Chetas Bala Importance and Methods of History taking, clinical examination and knowledge of Ancillary investigations	15	20
11	Knowledge of current diagnostic tools like ECG, X-Ray, CT scan, MRI and USG	15	20

PRACTICAL/CLINIC IN - ROGNIDAN AVUM VIKRUTI VIDNYAN

1. Duty in hospital OPD and IPD
2. Duty in pathology laboratory
3. Case taking – 25 cases
4. Performance of pathology and biochemistry practical's -10 cases
5. Interpretation of ECG, EEG, X-Ray, CT scan, MRI and USG

LIST OF EXPERIMENT:-

Sr. No.	Topic	Teaching Hours
1	Method of Collection Blood	01
2	Estimation of HB	02
3	Estimation of RBC	02
4	Estimation of WBC	02
5	Estimation of DLC	01
6	ESR	02
7	Bleeding Time and Clotting Time	02
8	Staining Methods	02
9	Urine Analysis	02
10	Stool Analysis	02
11	Sputum Examination	02
12	Blood Group	02
13	Parasitology	02
14	Serology	02
15	Bacteriology	02
16	Virology	02
17	Biochemistry	02
18	Cytological Examination	02
19	Sterilization Methods	02
20	Interpretation of ECG, EEG, X-ray, CT-Scan, MRI and USG	02

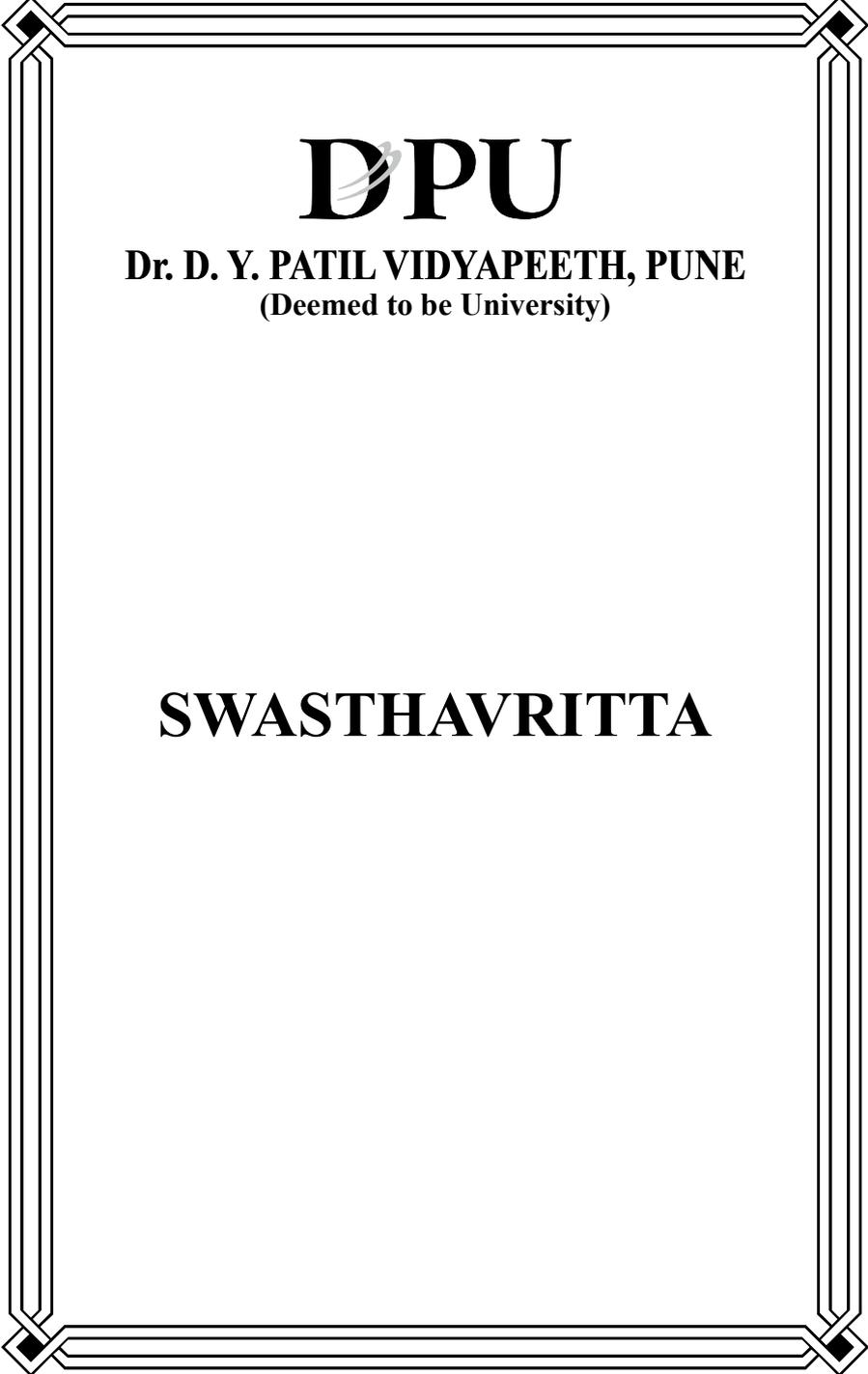
EVALUATION SCHEME (Practical)**(100 Marks)**

Sr. No.	Examination	Duration	Marks
1	Bed Side Clinical Case Taking		
	a) Long Case (One)	45 minutes	20
	b) Short Case(One)	30 minutes	10
2	Experiment (One)	45 minutes	20
3	Interpretation of ECG, EEG, X-ray, CT-Scan, MRI and USG	10 minutes	10
4	Laboratory Experiment Record	-	10
5	Clinical Case Taking Record	-	10
6	Viva-voce	-	20
Total			100

REFERENCE BOOKS

Sr. No.	Reference Books	Author	Publisher/ Edition
1	Madhav Nidan (Madhukosha Commentary)	Shri Krushnalal Data	Chaukhambha Prakashan, Varanasi 2013 Revised Edition
2	Relevant Portions of Charak Samhita	Bhagvan Das	Chaukhambha Prakashan, Varanasi (2017)
3	Relevant Portions of Charak Samhita	Ravidatta Tripathi	Csp Publisher (2015)
4	Relevant Portions of Charak Samhita	Bramha Nand Tripathi	Chaukhambha Prakashan, Varanasi (2013)
5	Sushrut Samhita	Ambika Datta	Chaukhambha Prakashan, Varanasi (2017)
6	Sushrutsamhita	Yadavji Trikam Ji	Chaukhambha Prakashan 2009
7	Sushrut Samhita	Kaviraj Kunjal	Chaukhambha Prakashan 2003
8	Sushrut Samhita	Anant Ram Sharm	Chaukhambha Prakashan 2013
9	Vagbhata	Ganesh Garde	Chaukhambha Prakashan 2016
10	Doshakaranatwa Mimamsa	Acharya P.V. Sharma	Chaukhambha Prakashan 2008
11	Nadi Pariksha	Gananath Dvivedi	Chaukhamba Publication 2014
12	Nadipariksha	Gp Upadhyay	Chaukhamba Publication, Varanasi (1980-1 st Edition 2009)
13	Rogiparikshavidhi	Acharya Priyavrata Sharma	Chaukhamba Publication (2013)
14	Nidanpanchak	Shivcharan Dhyani	Chaukhamba Publication, Varanasi (2 nd Edition 1995)
15	Vyadhivigyan I & II	Yadav Thrikamji	Baidyanath Publication (3 rd Edition 1983)

16	Ayurvediya Nidan Evum Chikitsa Ke Siddhanta	Prof. Ram Harsh Singh	Chaukhamba Publication (2000-3 rd Edition)
17	Clinical Methods In Ayurveda	K. R . S. Murthy	Chaukhamba Publication (2013)
18	Parameswarappa's Ayurvediya Vikriti Vigyan & Roga Vikriti Vigyan	Dr. P.S. Byadgi	Chaukhamba Publication 2013
19	Oxford Handbook Of Clinical Examination – And Practical Skills	Tim Raine & Kate Wiles	10 Th Edition-2017) Oxford University
20	Symptoms & Signs In Clinical Medicine - Chamberlains	Andrew Houghton & David Grey	Elsevier (13 th Edition 1 Jan. 2010)
21	Hutchison's Clinical Methods	Dr. Michell Glynn	Elsevier Health Science (24 th Edition - 2017)
22	Bedside Clinics In Medicine Part- I & Ii	Kundu	Academic Publisher (Edition 7 th ,2014)
23	Practicalpathology	Dr. K. Uma Chaturvedi	Pinewood Publications (1jan2017
24	Medical Laboratory Technology	R. Sood	Jaypee Publication 2009
25	Clinical Diagnosis And Management By Laboratory Methods	Todd, Sanford And Davidson	(14 December 2016)
26	Kayachikitsa Vidnyan	Dr.Shirke J.M.	Rushi Publication (2006 - 1 st Edition)



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SWASTHAVRITTA

TITLE OF THE COURSE: - SWASTHAVRITTA AND YOGA

COURSE CODE: - AV108

Marks: - 100 (Theory)+100 (Practical) = Total 200 marks

GOAL

- To make the students competent in knowledge and practices of prevention of diseases and achievement of complete and positive health through holistic approach of Ayurved, Yoga and Naturopathy.
- To achieve total health i.e. comprising of physical, mental, social and spiritual aspects of health of the society.
- To promote the concepts of yoga and naturopathy for health enhancement and disease prevention in students.
- To achieve harmony by uniting ayurvedic science of life and yogic science of self realization.
- To emphasize and to achieve positive health for the society.
- To protect the health of the community by guiding them in preventive health practices like daily regimen, seasonal regimen, diet regimen, social conduct, ethical conduct and attainment of self realization.

LEARNING OBJECTIVES:

- Provide community based Health Services.
- Provide Preventive services to the Society in respect to communicable and Non-communicable diseases.
- To Know and involve in national health Programs
- Understand and Practice preventive aspects of Ayurveda, Yoga and Naturopathy
- To make the students competent to prepare plan for research i.e. students synopsis.
- To make the students competent to do health counseling for prevention of diseases.

LEARNING OUTCOME

COGNITIVE DOMAIN

- Have a detail Knowledge of Personal, Social, Occupational, Maternal, Child and Environmental Health.
- Have a detail Knowledge of Dinachraya, Rutucharya, Rasayana, Vajikarana, Ahar, Yoga and Naturopathy.
- Have a detail Knowledge of Diet and Nutrition (Pathya-Apathya).
- Have a detail Knowledge of National Health Programs, National and International Health Agencies, Health Administration System in India, Primary Health care.
- Have a detail Knowledge of Communicable and Non communicable Diseases.
- Have a detail Knowledge of Family Welfare Program.
- Have a detail Knowledge of Medical Statistics.

PSYCHOMOTOR DOMAIN

- Be competent in the assessment of Health status of the Individual.
- Be competent in obtaining Medical, Social and Behavioral history from patient / relative and elicit about diet, hygiene and other health related behaviors.
- Be competent about all communicable and non-communicable diseases and its Incident rate, Prevalence rate, treatment, Prevention and Pathya, Apathya guidance.
- Be Competent about Life style disorders and their Prevention.
- Be competent about Yogic, Naturopathic, Panchakarma and Dinacharya Procedures.

AFFECTIVE DOMAIN

- Be able to consult the patients and society about personal hygiene, diet, yoga and Naturopathy for prevention and cure of the diseases.
- Be competent teacher in academics.
- Be competent in public health services.
- Be a competent researcher.

COURSE DESCRIPTION:

Sr. No.	Topics	Description	No.of Lectures (Hrs)	Weightage (Marks)
Part A				
1	Importance and relevance of Swasthavritta and Community Medicine. History of community medicine.	<ul style="list-style-type: none"> a. Importance and relevance of Swasthavritta b. Medicine in antiquity- Primitive medicine, Chinese medicine, Egyptian medicine, Greek medicine, Roman medicine c. Dawn of scientific medicine (History of community medicine) d. Modern - Curative, Preventive, Social e. Changing concepts in public health f. Medical revolution g. Health care revolution. 	07	10
2.	Concept of health and disease as per Ayurveda and Modern Medicine. Various definitions and dimensions of health as per Ayurveda and World Health Organization.	<ul style="list-style-type: none"> a. Concept of health. b. Definitions of health per WHO. c. Dimensions of health as pr WHO. d. Positive health and concept of wellbeing. e. Spectrum of health and determinants of health. f. Ecology of health, Right to health, Responsibility for health. g. Health & development. h. Indicators of health. i. Developed & developing regions. j. Health service philosophies. 	15	20

Sr. No.	Topics	Description	No.of Lectures (Hrs)	Weightage (Marks)
		k. Concept of disease as per modern science. l. Concept of causation. m. Natural history of disease. n. Concept of health & various definitions & dimensions of health as per Ayurveda. o. Concept of disease as per Ayurveda.		
3	Relevance of Dinacharya, Ratricharya and Rutucharya in Health Promotion.	a. Concept of Dinacharya as per Ayurveda. b. Dinacharyavidhis. c. Relevance of dinacharya in health promotion. d. Concept of Ratricharya. e. Relevance of Ratricharya in health promotion. f. Concept of Ritucharya. g. Relevance of Ritucharya in health promotion.	07	20
4	Basic concept of Vega. Concept of Adharaniya and Dharaniya Vega in health promotion and prevention of diseases with examples.	a. Concept of Adharniyavega b. Concept of dharaniyavega c. Concept of Adharniyavega in health promotion & prevention of diseases with example. d. Concept of dharniyavega in health promotion and prevention of diseases with example.	04	15
5	Concept of Trayopastambha in health promotion and	a. Concept of Ahar as per samhita -Nirukti, Swarupa, Pramukhatva, AharadravyaVargikaran	15	30

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
	prevention of diseases.	<p>am, Aharavidhividhana, Dwadashashanapravicharana, Ashtaharvidhivisheshayatanani, Pathyahara, Apathyahara, Samashana, Adhyashana, Vishamashana, Aharadushparinama&taj janyavyadhaya, SantarpanajanyaevamA patarpanajanyavyadhi, Viruddhahara and its effects, Shadrasabhojanasyamahatwam.</p> <p>b. Aharvarga.</p> <p>c. Concept of Nidra - Nirukti and Utpatti, Types , Nidra – Swasthyasambandha, Properties of YuktaNidra, Effects of RatriJagarana, Diwaswapna, Anidra, Atinidra, Ahara and Vihara causing disturbed sleep , Ahara and Vihara Causing sound sleep. Duration of sleep according to age, Sleep in healthy and diseased persons. &Brahmacharya as per samhita.</p> <p>d. Concept of Brahmacharya - Brahmacharya and</p>		

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
		<p>Abrahmacharya, Importance of Bharmacharya and Abrahmacharya, Vyavayasambandhiniyama, Effects of Ativyavaya. Methods of ViryaRaksha, Surataspriha(Libido) through Vajikarana, Viryanasaphala.</p> <p>e. Concept of Trayopastambha in health promotion and prevention of diseases.</p>		
6	Concept of nutrition as per Ayurveda and modern science.	<p>a. Changing concept of food. Classification of food – Macronutrients.</p> <p>b. Classification of food – Micronutrients.</p> <p>c. Nutritional profiles of principal foods.</p> <p>d. Nutritional requirements.</p> <p>e. Balanced diet & dietary goals, Nutritional problems in public health.</p> <p>f. Nutritional factors in selected diseases.</p> <p>g. Assessment of nutritional status.</p> <p>h. Nutritional surveillance, social aspect nutrition.</p> <p>i. Milk & meat hygiene.</p> <p>j. Food borne diseases.</p> <p>k. Community nutrition program.</p>	11	20

Sr. No.	Topics	Description	No.of Lectures (Hrs)	Weightage (Marks)
7	Concept of Vyadhikshamatva. Concept of Bala and Ojas in relation to health.	<ul style="list-style-type: none"> a. Host defenses. b. Immunizing agent. c. Adverse events following immunization. d. National immunization schedule. e. Concept of vyadhikshamatwa as per Ayurveda- Definition & types. f. Concept of Bala&Ojas in relation to health. 	06	15
8	Role of Panchakarma in preventive medicine.	<ul style="list-style-type: none"> a. Diseases formation due to various ritus. b. Prevention of diseases through seasonal Panchakarma. 	02	05
9	Role of Rasayana in promotion of health and prevention of diseases. Scope of Rasayana in Geriatrics and Reproductive & Child Health.	<ul style="list-style-type: none"> a. Nirukti, Paribhasha (definition), classification and examples Definition of rasayana. Role of Rasayana in promotion of health and prevention of diseases. b. Geriatric health. Scope of rasayana in geriatric health. c. Reproductive health & scope of rasayana in reproductive health. d. Child health & scope of rasayana in child health. 	04	10
10	The concept of Ashtanga Yoga and its relation to	<ul style="list-style-type: none"> a. Yoga shabdautpatti, definitions. b. Different schools of Yoga – Rajayoga, 	10	25

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
	health. Concept of Moksha.	<p>Hathayoga, Mantrayoga, Layayoga, Jnanayoga, Karmayoga, Bhaktiyoga.</p> <p>c. Yoga prajoyana, Ayurveda yoga sambandha, swasthyarakshaneyogas yamahatvam Yogabhyas apratibhandhaka&siddh i karabhavas as per Hathayoga. Mitahara and Pathyapathyani during Yogabhyasa.</p> <p>d. Panchakosha Theory.</p> <p>e. Astanga yoga Yama, Niyama Asana and its importance.</p> <p>f. Pranayama.</p> <p>g. Pratyahara, Dharana, Dhyana, Samadhi.</p> <p>h. Shatkarma Dhauti, Basti, Neti, Trataka, Nauli, Kapalabhati 10 UG-Syllabus 3rd year Bandhas and Mudras Shad chakras, Ida-pingala-sushumnanadis.</p> <p>i. Description of Yoga in Ayurveda Moksha and Mukatmalakshana and upaya, Naishthikichikitsa, Satyabuddhi, Tatvasmriti, AshtaAishwarya, Ashta siddhis.</p> <p>j. Ashtang yoga & health.</p>		

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
11	Basic concepts of Nisargopachara including PanchabhautikaChikitsa.	<p>a. Definition, history, aims and objectives Theories as per Western school of Naturopathy Indian school – Panchabhutopasana Relation of Ayurveda and Naturopathy Importance of Naturopathy in present era.</p> <p>b. Jalachikitsa(hydrotherapy) – Hot water treatment, Cold water treatment, foot and arm bath, Spinal bath, hip bath, abdominal wet pack, Steam bath, enema and whirl pool bath.</p> <p>c. Mrittikachikitsa (Mud therapy) Types of soil, doctrine of mud selection, mud bath.</p> <p>d. Suryakiranasevana (sun bath - heliotherapy).</p> <p>e. Mardana (Massage) – different methods and effects.</p> <p>f. Diet types – Soothing, Eliminative, Constructive, Positive and negative diet, Acidic and alkaline diet Upavasachikitsa(Fasting therapy) – Importance, types, therapeutic effects of fasting.</p> <p>g. Visramachikitsaupayog</p>	08	20

Sr. No.	Topics	Description	No.of Lectures (Hrs)	Weightage (Marks)
Part B				
1	Concept of Janapadodhwamsa and tools of its prevention.	a. Janapadodhwamsa – Definition & Types b. Tools of its prevention	02	5
2	Principles of Epidemiology. Definitions in infectious disease epidemiology.	a. History, definition & Aims of epidemiology. b. Basic measurement in epidemiology, Rates, Ratios & proportions. c. Measurement of mortality. d. Measurement of morbidity. e. Epidemiologic methods. f. Descriptive epidemiology. g. Analytical Epidemiology. h. Experimental Epidemiology. i. Definitions in infectious disease epidemiology.	10	20
3	Concept of disease control and intervention strategies.	a. Concept of control. b. Disease elimination, Disease eradication, Monitoring & surveillance. c. Sentinel surveillance, evaluation of control. d. Modes of intervention. Health promotion. Specific protection. Early diagnosis & treatment e. Modes of intervention. f. Disability limitation & rehabilitation.	09	10

Sr. No.	Topics	Description	No.of Lectures (Hrs)	Weightage (Marks)
		g. Iceberg phenomenon. h. Disease control measures. i. Controlling the reservoir. j. Interruption of transmission Susceptible host.		
4	Levels of disease prevention	a. Concept of prevention b. Levels of prevention - Primordial, primary c. Levels of prevention - secondary & tertiary	03	10
5	Basic principles of Samkramak Vikara-causes, modes of disease transmission, epidemiological triad.	a. Causes of SamkramakVikara b. Dynamics of disease transmission c. Modes of disease transmission. d. Epidemiological triad.	06	10
6	Principles of Health Education	a. Definition, health education & behavior, aims & objectives b. Role of health care providers, Approach to health education c. Models of health education, contents of health education d. Principals of health education e. Practice of health education f. Planning & management. g. Administration & organization.	07	10

Sr. No.	Topics	Description	No.of Lectures (Hrs)	Weightage (Marks)
7	Environmental Health- concept of water, soil and air purification as per Ayurveda and modern science.	<ul style="list-style-type: none"> a. concept of water as per Ayurveda b. concept of water as per modern science c. concept of soil as per Ayurveda d. concept of soil as per modern science e. concept of air as per Ayurveda f. concept of air as per modern science g. concept of solid waste disposal & cremation methods h. concept of sewage disposal i. Concept of light, noise, radiation 	10	15
8	Introduction to Meteorology	<ul style="list-style-type: none"> a. Definition of weather and climate b. Factors influencing weather and climate 	02	05
9	Role of Swasthavritta in maternal and child health care.	<ul style="list-style-type: none"> a. maternal health care b. child health care c. Role of Swasthavritta in maternal and child health care. 	03	10
10	National Population Policy, National Health Policy as per Alma Ata Declaration and Role of Ayurveda therein	<ul style="list-style-type: none"> a. National population policy b. Contraceptive methods c. National health planning in India as per Alma Ata Declaration d. Planning commission, Health sector planning, five year plans e. Health system in India- At the centre 	10	25

Sr. No.	Topics	Description	No.of Lectures (Hrs)	Weightage (Marks)
		f. Health system in India- At the state & at the district level g. Panchayatraj & rural development h. Role of Ayurveda in national health policy.		
11	Role of Swasthavritta in communicable and non-communicable diseases and life style disorders.	a. Communicable diseases b. Communicable diseases c. Non-Communicable diseases d. Life style disorders e. Role of Swasthavritta in communicable and non-communicable diseases and life style disorders.	15	30
12	Biomedical waste management.	a. Definition, classification of health care waste, sources of health care waste, health hazards of health care waste b. Treatment & disposal technologies for health care waste. Biomedical waste management in India.	02	10
13	National health programs.	Programs for communicable diseases a. National Vector Borne Diseases Control Program (NVBDCP) b. Revised National Tuberculosis Control Program c. National Leprosy Eradication Program d. National AIDS Control Program	25	20

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
		<ul style="list-style-type: none"> e. Universal Immunization Program f. National Guinea worm Eradication Program g. Yaws Control Program h. Integrated Disease Surveillance Program. <p>Programs for Non-communicable diseases</p> <ul style="list-style-type: none"> a. National Cancer Control Program b. National Mental Health Program c. National Diabetes Control Program d. National Program for Control and treatment of Occupational Diseases e. National Program for Control of Blindness f. National program for control of diabetes, cardiovascular disease and stroke g. National program for prevention and control of deafness. <p>National nutritional programs</p> <ul style="list-style-type: none"> a. Integrated Child Development Services Scheme b. Midday Meal Program c. Special Nutrition Program (SNP) d. National Nutritional Anemia Prophylaxis Program 		

Sr. No.	Topics	Description	No.of Lectures (Hrs)	Weightage (Marks)
		e. National Iodine Deficiency Disorders Control Program. Programs related to System Strengthening /Welfare a. National Rural Health Mission b. Reproductive and Child Health Program c. National Water supply & Sanitation Program d. 20 Points Program.		

EVALUATION SCHEME (PRACTICAL)

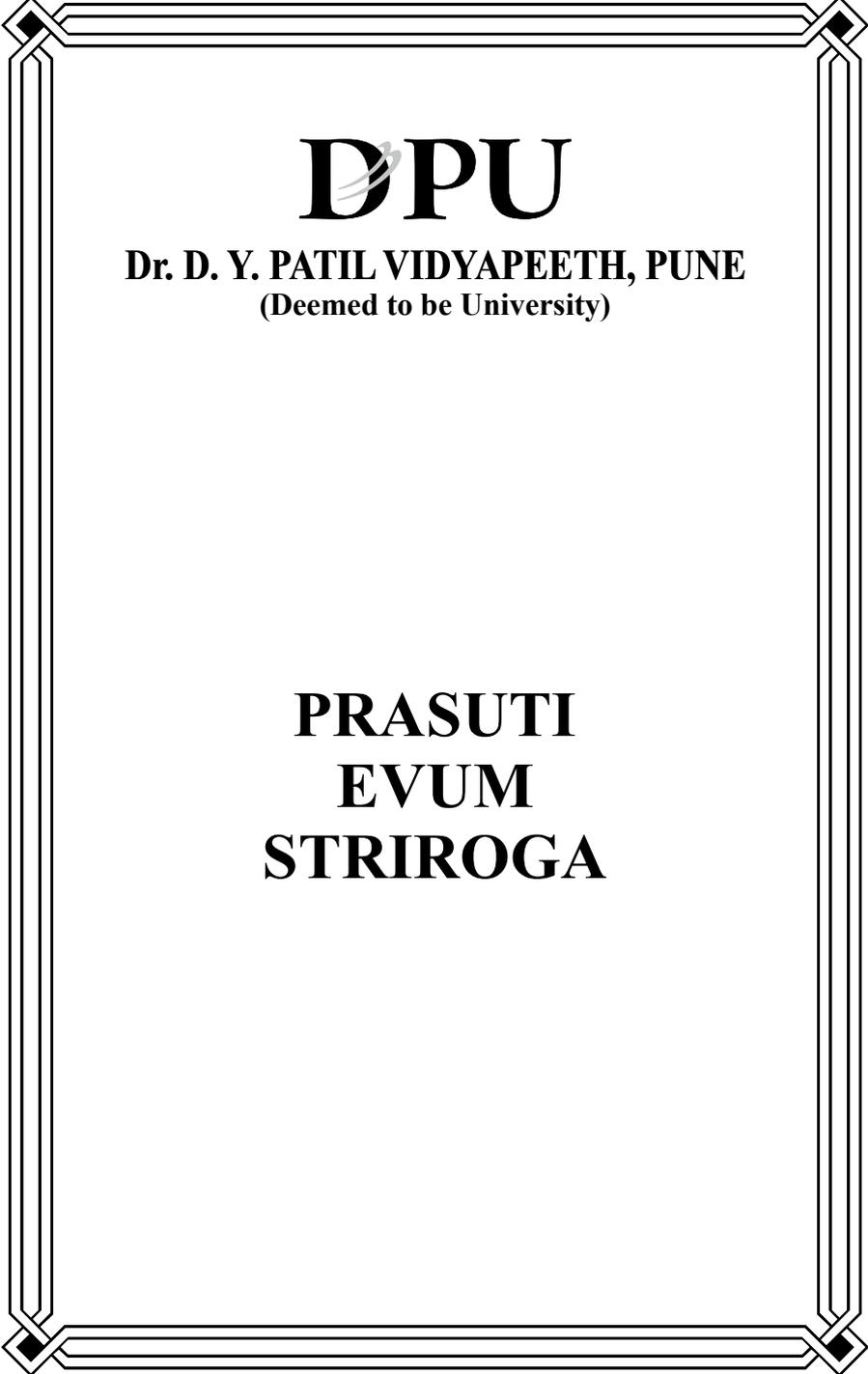
LIST OF EXPERIMENT	Marks
Record	20 Marks
Long Procedure (PathyaKalpanaPreperation- KritannaKalpana)	20 Marks
Short Procedure (DincharyaProceduresNasya, Kavala, Gandush etc.)	10 Marks
Spotting-Ahara Dravyas, Family Planning Devices, Vaccine/Serum and Models /Specimens, Naturopathic And Yogic Specimens Etc.	10 Marks
Yogasana	20 Marks
Viva-Voce	20 Marks
Total	100 Marks

REFERENCE BOOKS:

Sr. No.	Book Name	Author Name	Edition
1	SwasthavrittaSamuchaya	Vaidya Pt Rajesvar Dutta Shastri	1985
2	SwasthyaVignyana	Dr. B. G. Ghanekarshastri	1994
3	PrakritikaChikitsa	Kedarnath Gupta	-
4	Reddy's Comprehensive Guide to Swasthavritta	Dr. P. Sudhakar Reddy	-

Sr. No.	Book Name	Author Name	Edition
5	SwasthaVigyan	Dr. Mukundswaroop Verma	1997
6	Ayurvediya Hitopdesh	Vd. Ranjit Rai Desai	-
7	Yoga and Ayurveda	Dr. Rajkumar Jain	1997
8	SwasthvrittaVigyan	Dr. Ramharsha Singh	2009
9	Swasthvrittam	Dr. Bramhanand Tripathi	-
10	Ayurvediya Swasthvrittam	Vd. Jalukar	1981
11	Hathayog Pradipika	J. L. Gupta	2003
12	Yogik Yog Paddhati	Bharatiyaprakrutik Chikitsa Padhat	-
13	Yoga and Yogikchikitsa	Ramharsha Singh	1994
14	The Foundation of Contempary Yoga	R. H. Singh	
15	Yogasidhantaevum Sadhna	H.S.Datar	
16	Patanjal Yoga Sutra	MaharshiPatanjali, Karambelkar	2012
17	Prakrutik Chikitsa Vidhi	Sharan Prasad	
18	Text book of Swasthavritta	Dr. Ranade, Dr. Bobade, Dr. Deshpande	2000
19	Gherand Samhita		-
20	Bio-Statistics	B. K. Mahajan	2010
21	Swasthavritta Vidnya	Dr. MangalaGauri	-
22	Community Medicine	Baride and Kulkarni.	-
23	Light on Yoga	Shri. B. K. S. Iyengar	2004
24	Light on Pranayama	Shri. B. K. S. Iyengar	2004
25	Light on Patanjala Yogasutra	Shri. B. K. S. Iyengar	-
26	Shiva Samhita	Kaivalyadhama	-
27	Gheranda Samhita	Kaivalyadhama	-
28	Swasthavritta Vigyan	Vd. Patrikar Vijay	2006
29	Swasthavritta	Vd. YashwantPatil Vd. Vhawal	-
30	Yogik Chikitsa	Shri Kedarnath Gupta	-
31	Prakrutik Chikitsa Vigyan	Verma	-
32	Janasankhyashikshasidhantae vam Upadesa	S. C. Seel	-
33	Swasthvritta	Dr. Shivkumar Gaud	-
34	Health and Family Welfare	T. L. Devra	-
35	SachitraYogasanDarshika	Dr. IndramohanJha	-

Sr. No.	Book Name	Author Name	Edition
36	Preventive and Social medicine	J. K. Park	2013
37	Yogadeepika	Shri. B. K. S. Iyengar	-
38	Swasthavritta	Vd. Sakad	-
39	Positive Health	Dr. L. P. Gupta	-
40	Biogenic Secretes of Food In Ayurveda	Dr. L. P. Gupta	-
41	Food and Nutrition	Swaminathan	2005
42	Preventive and Social Medicine	Mahajan	2003
43	Preventive and Social Medicine	B. N. Ghosh	
44	Preventive and Social Medicine	Gupta	2003
45	Yoga and Nisargopachar	Vd. Prama Joshi	
46	Doctor Mi Kay Khau	Dr. M. S. Kulkarni	2016
47	Kaya Mano chikitsa Vidnyan	Dr. Shirke J.M. Dr. Shirke U.J.	2006
48	Swayampak Gharatil Davakhana	Dr. Yogesh B. Shinde	2017



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(Deemed to be University)

**PRASUTI
EVUM
STIROGA**

TITLE OF THE COURSE:- PRASUTITANTRA EVUM STREEROG

COURSE CODE:- AV109

MARKS:-100 Theory + 100 practical = 200 marks

GOAL

1. To impart the knowledge of basic ayurvedic principles in streerog-prasuti.
2. To impart the knowledge of modern Obstetrics and Gynecology to learn integrated approach towards the subject.
3. The student will be able to learn, innovate and perform research in subject.

To teach specialized ayurveda care in Streerog-prasuti

LEARNING OBJECTIVE

1. In day to day practice treat the patients successfully by applying the knowledge of basic principles of Stree-prasuti
2. Ability to prepare plan for clinical research or synopsis.
3. Ability to do health counseling for prevention of diseases.

LEARNING OUTCOME

• **COGNITIVE DOMAIN**

At the end of course the students will have,

1. Applied knowledge of Stri-Vishishta Sharir Rachana, Kriya, & Vikruti (anatomy physiology and patho- physiology of female genital system.)
2. Detect Prakrut Sagarbhavastha, Prasav, Sutika and to manage the problems(Learn management of pregnancy, labour, puerperium.)
3. To learn the common diseases of Artavvaha Strotas and Management (gynecological Diseases and basic treatments of Gynecological disorders)
4. To plan Research program

- **PSYCHOMOTOR DOMAIN**

At the end of course the students will develop the skill,

1. Handling the cases of labor, Assess the progress of labor.
2. Pre-operative and post-operative care of patients,
3. Learn to observe puerperal changes, disorders and complications
4. To diagnose emergencies at proper time and referral.
5. To practice local treatments of Streerog
6. To diagnose the case with ayurvedic concepts and integrated approach with help of investigations.

- **AFFECTIVE DOMAIN**

1. Develop good communication skills with patients.
2. Develop high moral and ethical standards to behave with patient and their examination.

COURSE DESCRIPTION

Sr. No.	Topics PART 1	Description	No. of Lectures (hrs)	Weightage (Marks)
PART-A				
1	Fundamental Concepts of Prasutitantra evum streerog	Concept of Tridosha, Dhatu, Updhatu, Agni, panchmahabhut in relation to Prasutitantra evum streerog Concept of artava and shukra. Rutuchakra streebeej, punsbeej	10	15
2	Fundamentals of reproduction	Gametogenesis fertilization ,implantation and early development of human embryo	10	15
3	Concept of Garbhadhan	Garbh sambhav samagri, garbha dhan, preconceptional counseling and care garbhasya shaddhatvatmakta matruyadi bhav.	10	15

Sr. No.	Topics PART 1	Description	No. of Lectures (hrs)	Weightage (Marks)
4	Garbhavidnyanam	Garbhavkranti garbhposhan ,garbhasya masanumasic vriddhi, apara ,jarayu,nabhi nadi. Foetal circulation, foetal growth and development placenta membranes, umbilical cord.	10	15
5	Concept of Pathya-Apathya	Concept of Pathya- Apathya in Prasuti, garbhini paricharya, masanumasic pathya apathya kalpana.	5	10
6	Garbhinividnyan	Prenatal Ayurvedic concepts	5	15
7	Garbhvyapad	Garbhastrav,pat, Upvishtak, Nagodar Abortion – types, clinical features, management. APH, IUD, IUGR	15	30
8	Garbhini vyadhi	Chardi,pandu kamla makkal udavarta Causes, clinical features, management of pregnancy vomiting, anemia, toxemia, Diabetes in pregnancy.	15	30
9	Prasav-vidnyan	Prasav-vidnyan avastha, paricharya Normal labor definition, clinical features management, Episiotomy	10	30

Sr. No.	Topics PART 1	Description	No. of Lectures (hrs)	Weightage (Marks)
10	Prasav vyapad	Mudhagarbha, aparasang Abnormal labor Prematurity, postmaturity, caesarian section, forceps delivery	10	30
11	Sutika	Sutika paribhasha, paricharya, sutikavyadhi, Stanya. Normal and abnormal puerperium	10	15
12	Therapies	Concept of special therapies of ayurveda used in prasuti Concept of ashtvidha shastra karma, yantra and shastra used in prasuti	10	20
13	Aushdhi	Concept of rasa, virya, vipak, karma of dravya used in Prasuti pharmacological study of drugs used in obstetrics Action and adverse drug reaction related to commonly used plants and Rasa Aushadhi in Prasuti	15	20
14	Operative	Pre-operative and post-operative Care in Obstetrics	5	20

Sr. No.	Topics PART 1	Description	No. of Lectures (hrs)	Weightage (Marks)
PART B				
1	Sharir & Sharirkriya	Applied anatomy and physiology of genito - urinary system, abdomen, pelvis, pelvic floor, anterior abdominal wall, inguinal ligament, inguinal canal, vulva, rectum and anal canal Abnormal development, structure and function of female and male urogenital system. Physiological and neuro-endocrinal changes during puberty, adolescence and menstruation Introduction of hormones related with gynecology and obstetrics. Ovulation fertilization, climacteric and menopause.	10	15
2.	Artav-vyapad	Kshaya, vruddhi, dushti, Raktapradar	10	15
3.	Yonivyapad	Detail study of yonivyapad and possible correlations with modern gynecological diseases. Endometriosis, fibroid, prolapse, leucorrhoea, menstrual disorders Infertility, Vandhyatva	10	20

Sr. No.	Topics PART 1	Description	No. of Lectures (hrs)	Weightage (Marks)
4	Therapies & diagnostic techniques	Concept of special therapies of ayurveda used in Stree-rog Concept of ashtvidha shastra karma, yantra and shastra used in Stree-rog Knowledge of diagnostic techniques used in gynecology and obstetrics Laparoscopy, HSG, USG, X-ray, Colposcopy, Biopsy	10	15
5	Aushdhi	Knowledge of rasa, virya, vipak, karma of dravya used in Stree-rog Pharmacological study of drugs used in Stree-rog Action and adverse drug reaction related to commonly used plants and Rasa Aushadhi in Stree-rog	10	20
6	Ethics,law	Ethics, law and acts related to gynecology and obstetrics – law of abortion MTP, PNDD and adoption	5	10
7	Contraception	Knowledge of Contraception and sterilization,	10	20
8	Operative	Pre-operative and post-operative Care in Gynaecology	5	20

Practicals

1. Hospital duties in OPD, IPD, labor room, OT and casualty
2. Case taking and counseling - 30 cases
3. Labor cases - observation/performing - 10 cases
4. Knowledge of instruments required in gynaecology and obstetrics practices.
5. Ayurvedic diagnostic and therapeutic procedures
6. Fluid therapy and blood transfusion
7. Contraception and sterilizations
8. Pre-operative, operative and post-operative procedures

Practical Exam – 100 Marks**Distribution of marks (Practical):**

Sr. No.	CONTENTS	MARKS
1	Long case	30
2	Short case	20
3	Journal	10
4	Instruments and spotting	20
5	Viva voce	20
	Total	100

REFERENCE BOOKS:

Sr. No.	Name of the book	Author	Publication name, year, edition
1	Charak samhita	Brahmanand tripathi	Chaukhamba surbharti – 2015 revised
2	Shushrut samhita – part i/ ii/ iii	Murti	Chaukhamba orientalia -2014 revised
3	Ashtang hrudaya	Moreshwar kunte	Hemadri arundatta tika - chaukhamba orientalia - 2014 – 10 th edition
4	Kashyap samhita sanskrit -	Hemraj sharma	Chaukhamba 2010 reprint
5	Prasuti tantra evum stree roga.	Prof tewari p v -	Chaukhamba orientalia – 2014 revised
6	Concepts of gynecology	Dr nirmala g joshi.	Chaukhamba sanskrit – 2000 revised

Sr. No.	Name of the book	Author	Publication name, year, edition
7	Prasuti tantra	Prof. M. Dwivedi	Chaukhamba bharti varanasi – 2011 revised
8	Text book of gynaecology	Berek and novak.	Wolter & kluver – 2012 15 th edition
9	Text book of obstetrics	Williums	mc graw hill publication – 2014 – 24 th edition
10	Text book of obstetrics-	D. C. Dautta	Dutta – jaypee publication 2013 – 7 th edition
11	Text book of gynaecology	D. C. Dautta	Jaypee publication – 2013 7 th edition
12	Gabbe's normal and problem pregnancies.	Steven g gabbe	Elesuier publication – 2016 7 th edition
13	Human embryology	saddler	Langman's publication 12 th edition
14	Jeffcoat's principles of gynaecology	Jeffcoat	Jaypee publications – 2018 9 th edition
15	Te linde's gynecological surgery.-.	Te linde	Wolter & kluver 2015 11 th edition
16	Prasutitantra	Dr. jayashree patil	Jayraj Publications 2014 1 st edition

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KAUMARBHRITYA
(Bala Roga)

TITLE OF THE COURSE: KAUMARBHRITYA

COURSE CODE: AV110

MARKS: Theory – 100 + Practical – 100 = Total 200

GOAL

- The goal of Ayurvedic Pediatrics is to see that every child grows and develops into a healthy, happy and useful citizen.
- To promote the simple herbal medicines for the healthy growth and development of children.
- To promote the preventive measures like suvarnaprashana for improvement of child immunity and prevent malnutrition.
- The main objective is to impart the innovations in Teaching, Learning & Evaluation method to make this institute centre of excellence in the field of Ayurveda.

LEARNING OUTCOMES

- Assist in performing various techniques & develop skills of NICU procedures, vaccination and other national health programmes.
- Carry out both Ayurvedic and modern clinical methods of examination of healthy and diseased newborn and children.
- Prepare and deliver the lectures on various topics of Kaumarbhritya (Ayurvedic& modern concepts) with guidance.
- Identify various research topics, prepare to carryout research and prepare a outlineof the dissertation on a topic.

LEARNING OBJECTIVES

a. Cognitive domain:

1. Explain the general principles of Ayurveda and its application for promotion of health and cure of the diseases of children.
2. Identify various diseases as per disease classifications and acquire the knowledge of fundamental principles related to Kaumarbhritya.
4. Gain the concept of Pediatric diseases with respect to their prevention and cure.

b. Psychomotor domain:

1. Manage Pediatric patients according to the principles of Ayurvedic and modern treatment.
2. Promote child health of the society according to these principles.
3. Perform various Bal-Panchkarma procedures under supervision.

c. Affective domain

1. Guide and communicate with the patients empathetically.
2. Co-operate, react and respond in a cordial manner in his /her interaction with peers, superiors and subordinates.
3. Support the students in their learning.
4. Comprehend the diagnosis of a disease in Ayurveda and its management.

COURSE DESCRIPTION-

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
Part- A				
1	Vayobheda	Classification of age according to different classics.	1	5
2	Prakruti of child	Anatomical and physiological differences in child compared to adult. Ayurvedic consideration of physiology and pathology of Dosha, Dhatu, Mala, Oja, Agni, Prakriti (sharirika-manasika), Kaya and Dhatuposhana in children	2	5
3	Growth and development	Basic Concepts of growth and development, and its assessment.	2	5
4	Examination of Newborn and Child	Ayurvedic and modern clinical methods of examination of healthy and diseased newborn and children.	2	10

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
5	Diagnostic Methods	Knowledge of modern diagnostic tools like clinical and laboratory investigations, X-ray, USG, MRI etc.	2	10
6	Fundamentals of Ayurveda	Fundamentals of Ayurvedic treatment for childhood disorders.	1	5
7	Applied pharmacological considerations	Ayurvedic and modern concepts of drug doses, administration, distribution, metabolism, excretion, and other important factors of consideration.	2	5
8	National programs	Various National programs related to pediatrics.	2	5
9	Childhood Sanskara	Detail description of all childhood sanskaras like Jat karma, Namkaran, Annaprashan, Chudakarm, Karn-vedhan, Nishkraman, Upveshan, Upnayan, Vedarambhsanskaras.	2	10
10	Child Psychology	Principles of Child Psychology (Ayurvedic & modern concept).	2	5
Part - B				
1	Concept of BalaRasayana	Concept of BalaRasayana and its application in physical and mental health of children.	2	5
2	Concept of Vyadhi-Kshamatva; avamVardhanopaya	Concept of Vyadhi-KshamatvaavamVardhanopaya. Concept of immunity and immune enhancing measures including immunization.	2	5
3	Concept of Raksha karma	Concept of Dhupana and Raksha karma and their clinical application in Pediatric practice.	2	5

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
4	Basic concepts of single drugs commonly used in Pediatric practice	Basic concepts of single drugs commonly used in pediatric practice with special reference to their karma like- Guduchi, Yastimadhu, Mandukaparni, Shankhapushpi, Ativisha, Pippali, Maricha, Shunti, Haritaki, Amalaki, Tulasi, Bhumyamalaki, Daruharidra, Haridra, Vidanga, Katuki, Dadima, Brahmi, Ashvagandha, Shatavari, Bala, Kampillaka, Trivrita, Jyotishmati, Vacha, Jeevanti, Rasna, Shatavari, Anantamula (Krishna Sariva), Durva, Khadir, Tankana, Tambula, Jatamansi, Sphatika.	4	10
5	Ayurvedic formulations in pediatric practice	Knowledge of their ingredients, indications, precautions and specific considerations including adverse drug reactions (ADR) of commonly used Ayurvedic formulations in pediatric practice e.g. Aravindasava, Balachaturbhadrachurna, Kumarakalyana Rasa, Saraswatarista, Swarna-prashana (Kashyapa Samhita), Kumaryasava, KushmandaRasayana (Sharangdhar), AshvagandhaRasayana (AshtangaHridaya), Brahmi Ghrita, KalyanakaGhrita, TalishadiChurna, SitopaladiChurna, HaridraKhanda, Krimikuthara Rasa, Mugdha Rasa, Dantodbheda-	4	

Sr. No.	Topics	Description	No. of Lectures (Hrs)	Weightage (Marks)
		Gadantaka Rasa, RajanyadiChurna (AshtangaHridaya), SamvardhanaGhrita, AshtaMangalGhrita		
6	Fundamentals of Ayurveda	Fundamentals of Ayurvedic treatment for childhood disorders.	1	5
7	Applied pharmacological considerations	Ayurvedic and modern concepts of drug doses, administration, distribution, metabolism, excretion, and other important factors of consideration.	2	10
8	Methods of preparation of various specific Kalpana	Methods of preparation of various specific Kalpana (e.g. Lehya, Syrup, drops etc.) according to needs of children.	2	5
9	Instruments and their applications	Common instruments and their application in new born care and general pediatric practice.	2	5
10	Research methods	Specific considerations in research methods related to Pediatrics.	2	5
11.	Regulatory laws	Regulatory laws related to child health management.	1	5

PRACTICAL - KAUMARBHRITYAMARKS: 100

1. a) In-patient case history record -(25 Patient)
b) Child Health record - (50 Case)
2. Involvement in Outreach and National programs:
3. School Child health checkup
4. Adolescent education
5. Adolescent counseling etc
6. Pediatric ward/nursery management

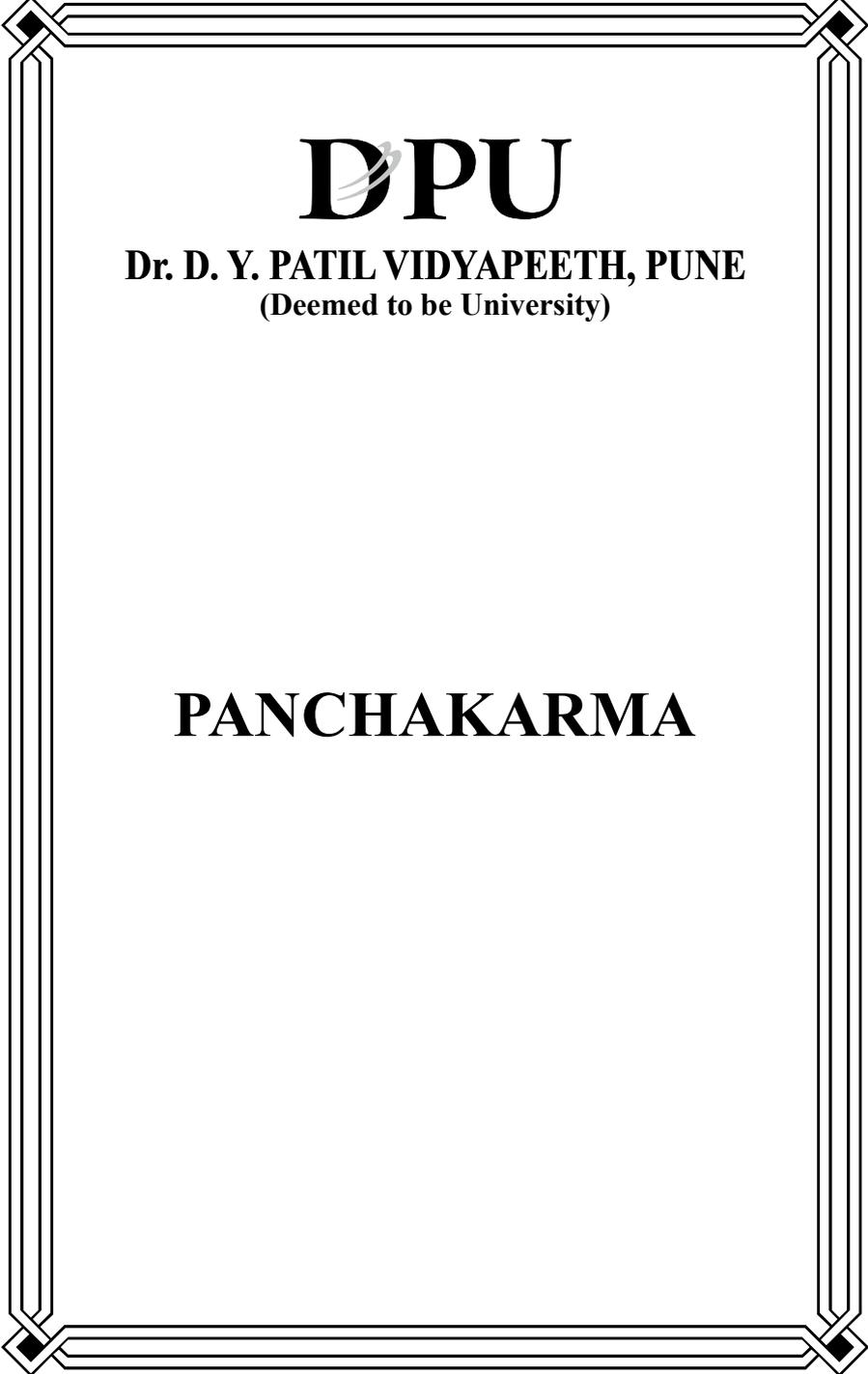
EVALUATION SCHEME (PRACTICAL)

Sr. No.	Particular	Marks
1	a) Case History Record - (25 Patients)	20
	b) Child Health record - (50 Cases)	10
3	Bed side clinical case taking	
	a) Long Case	20
	b) Short Case (OSCE)	10
	Procedures/ KriyaKalpa	15
4	Identification of Instruments & Spotting	10
6	Viva-Voice	15
	Total	100

REFERENCE BOOKS:

Sr. No.	Book Name	Author Name	Edition
1	Kashyapa Samhita Complete Hindi translation and English translations	Satyapal Vidhyalankara Prof. Premvati Tiwari	2013
2	Principles & practice of Pediatrics in Ayurveda	CHS Shastry	Latest Edition
3	Child Health Care in Ayurveda	Abhimanyu Kumar	1999
4	Ayurvedic Concepts of Human Embryology	Abhimanyu Kumar	2000
5	Kaumarbhritya	Prof. D.N. Mishra	2016
6	Kaumarbhritya Ke Antargata Balgraho kramika Evam Vaigyanika	Prof. Chanchal Sharma	Latest Edition
7	Notes on Kaumarbhritya	Dr. Dinesh K S	2017
8	Pran - Pratyagamanam	Dr. B.M. Singh	Latest Edition
9	Ayurveda Dwara Matra Evam Shishu Paricharya	Dr. K. S Patel, V.K. Kori & Rajgopal S.	
10	Kaumarbhritya related references from Charaka Samhita, Sushruta		Latest Edition

Sr. No.	Book Name	Author Name	Edition
	Samhita Vagbhata etc.		
11	Clinical Methods in Paediatrics	Meharban Singh	2016.
12	Pediatrics Emergencies	Meharban Singh	2016.
13	Essential Pediatrics	O.P. Ghai	8 TH edition.
14	Text Book of Pediatrics	Nelson	20 TH edition
15	Care of New Born	Meharban Singh	8 th edition.



DPU

Dr. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

PANCHAKARMA

TITLE OF THE COURSE :- PANCHAKARMA

COURSE CODE :- AV111

MARKS :-THEORY (100)+PRACTICAL(100) =TOTAL 200 MARKS

GOAL

1. Acquire knowledge regarding the fundamentals of Ayurveda
2. Acquire knowledge regarding the fundamentals of Panchakarma
3. Learning the clinical skills for diagnosis and treatment modalities as per principles of Ayurveda
4. Students should be able to perform All Panchakarma procedures
5. Acquire the knowledge about the methods and techniques of Research methodology and Biostatistics
6. Learn different teaching technologies.

LEARNING OBJECTIVE-

1. Treating the patient successfully with the application of Panchakarma.
2. Ability to prepare plan for clinical research or synopsis.
3. Ability to do counselling for prevention of diseases through health maintenance.
- 4.

LEARNING OUTCOME-

Student should be able to learn or perform in following domains.

• **COGNITIVE DOMAIN**

After the completion of 3 year PG course, the student should be able to:

1. Gain and enhance competent knowledge of Panchakarma.
2. Explain general principles of Ayurveda and its application for promotion of health and cure diseases.
3. Prepare and conduct a Research protocol for Panchakarma

• **PSYCHOMOTOR DOMAIN**

At the end of the training, the student should be able to:

- 1) Identify various research topics, carry out research and prepare dissertation on topic.
- 2) Promote and uphold the health of society according to principles.
- 3) Prepare and deliver lectures on various topics of Panchakarma.

- **AFFECTIVE DOMAIN**

At the end of the training, the student should be able to:

- 1) Communicate with patients empathetically and co-operate with peers and subordinates
- 2) PG scholar should be able to treat the patients through an interactive and healthy counselling.

COURSE DESCRIPTION

Paper II

Theory- 100 marks

Sr. No.	Topics	Description	No. of Lectures in (Hrs)	Weightage (Marks)
Part A				
1	Fundamental concept of Ayurved with reference to Panchakarma	i) Vriddhi and Kshaya of Dosha, Dushya, Mal with Anshanshkalpana ii) Khavaigunya, Srotodushti iii) Saam and Niram – Dosha, Dushya, Mal iv) Aavarana, Rogamarg, Aashayapakarsha, Doshagati	12	15
2	Applied aspects of Pariksha	i) Applied aspects of Trividha Pariksha ii) Applied aspects of Shadavidha Pariksha iii) Applied aspects of Ashtavidha Pariksha iv) Applied aspects of Dashavidha Pariksha	08	15
3	Chikitsa and its classification	Antahaparimarjana and Bahirparimarjana Chikitsa	06	10
4	Principles of Chikitsa, Kriyakal, Shadavidha and Dashavidha	Shodhana, Shamana	08	15

Sr. No.	Topics	Description	No. of Lectures in (Hrs)	Weightage (Marks)
	Upakrama and role of Panchakarma therein			
5	Applied anatomy and physiology of cortex, cranial and peripheral nerves	i) Muscle power and tone ii) Superficial and deep reflexes iii) difference of upper and lower motor neuron lesions iv) Tremors and co-ordination v) Differential diagnosis of Vatavyadhi	12	10
6	Functions of various single muscle & groups of muscles, Applied anatomy and physiology of joints, Method of examination of locomotor system, Differential Diagnosis of Amavata (RA), Vatarakta(Gout) and Sandhigata Vata (OA)	Diagnosis and Differential diagnosis aspects of Vatavyadhi Examination of lumbar and cervical disorders	08	10
7	Applied anatomy and physiology of cardiovascular and respiratory systems, Methods of examination of respiratory and cardiovascular system	Functions of capillaries and its permeability Interpretation of spirometry and ECG findings Differential diagnosis of different	12	10

Sr. No.	Topics	Description	No. of Lectures in (Hrs)	Weightage (Marks)
		cardiovascular diseases like Asthama, COPD, Angina, MI etc.		
8	Knowledge of various skin lesions	Conditions causing various types of skin lesions – Acne, Herpes Simplex, Allergic Eczema, Psoriasis, Warts Types of skin lesions Primary skin lesions- Moles, Rashes, Acne, Blisters, Macule, Nodule, Papule, Pustule, Wheals Secondary Skin Lesions- Crust, Ulcer, Scale, Scar, Skin atrophy Skin Biopsy Skin swabs Blood test Urine test	12	20
	Method of examination of various skin lesions			10
9	Applied anatomy of stomach, small intestine and large intestine Detailed examination of gastro-intestinal system	Applied anatomy of GI Tract in relation to Panchakarma Detailed bed side examination and investigations techniques to be done in GI Tract diseases.	06	10
Part – B				
1	Karma Trividh karma for Shodhana	Definition of karma History of Shodhana word Panchashodhana Panchakarma –Word, History, Definition	08	15

Sr. No.	Topics	Description	No. of Lectures in (Hrs)	Weightage (Marks)
2	Importance of Panchakarma in health and disease	i)SamshodhanaGunas ii)Usefulness of Panchakarma in newer diseases viz. Swine flu etc. iii)Usefulness of Panchakarma in Lifestyle disorders / occupational hazards iv)Usefulness of Panchakarma in increasing immunity	10	10
3	Indication for Shodhana Contraindications for Shodhana Applied aspects of koshta and Agni	Indication of Vamana, Indication of Virechana, Indication of Basti, Indication of Nasya, Indication of Raktamokshana Contra Indication of Vamana, Contra Indication of Virechana, Contra Indication of Basti, Contra Indication of Nasya, Contra Indication of Raktamokshana Concept of Koshta and Agni and their usefulness in Shodhana	12	15
4	Importance of poorva and pashchat karma in Shodhana,	Definition, Description, Dos &Donts and Importance of	10	15

Sr. No.	Topics	Description	No. of Lectures in (Hrs)	Weightage (Marks)
	Pariharyavishaya for Panchakarma	Pachana, Rukshana, Snehana and Swedana in Shodhana; Importance of SamsarjanKrama		
5	SamsarjanaKrama General knowledge of various aharakalpana used for Panchakarma General knowledge of Aushadhi used for Panchakarma	Diet regimen according Uttam / Madhyam / HinaShuddhi, Indication of SamsarjanaKrama, TarpanaKrama- Indication and importance, Use of now days food items in SamsarjanaKrama Types of AharaKalpana- Manda, Peya, Vilepi, Yusha Their definition, method of preparation and importance Aushadhi according to Karma's , general information, Role and importance in Panchakarma e.g. Mdanaphala / Trivrutta / Aragwadha	18	15 10 15
6	Areas of research in Panchakarma	Newer techniques, Newer instruments, Standardization of process, Measures for increasing efficacy of	14	10

Sr. No.	Topics	Description	No. of Lectures in (Hrs)	Weightage (Marks)
		process		
7	Knowledge of equipment's and instruments used in Panchakarma in ancient times and possible modification therein now	Definition of Yantra and their principle, Dimensions of Panchakarma instruments and their importance, Lacking's of instruments Possible modifications in instruments / equipment's, Available modified Panchakarma equipment's and instruments like Automated Shirodhara Unit	16	15
8	Knowledge of quality standards of NABH (National Accreditation Board of Hospitals) for establishment and management of eco-friendly Panchakarma theatre including management of biomedical waste	Concept of NABH, Concept of BMW, Patient Rights and Care, Documentation and Digitalization	12	10

PRACTICAL

1. Duty in Panchakarmaward and theatre.
2. Performance of 5 Cases each of Snehana, Svedana, Vamana, Virechana, Basti and Nasya with maintaining of detailed record.
3. Record of detailed examination of 25 patients treated with Panchakarma and effects observed thereon.

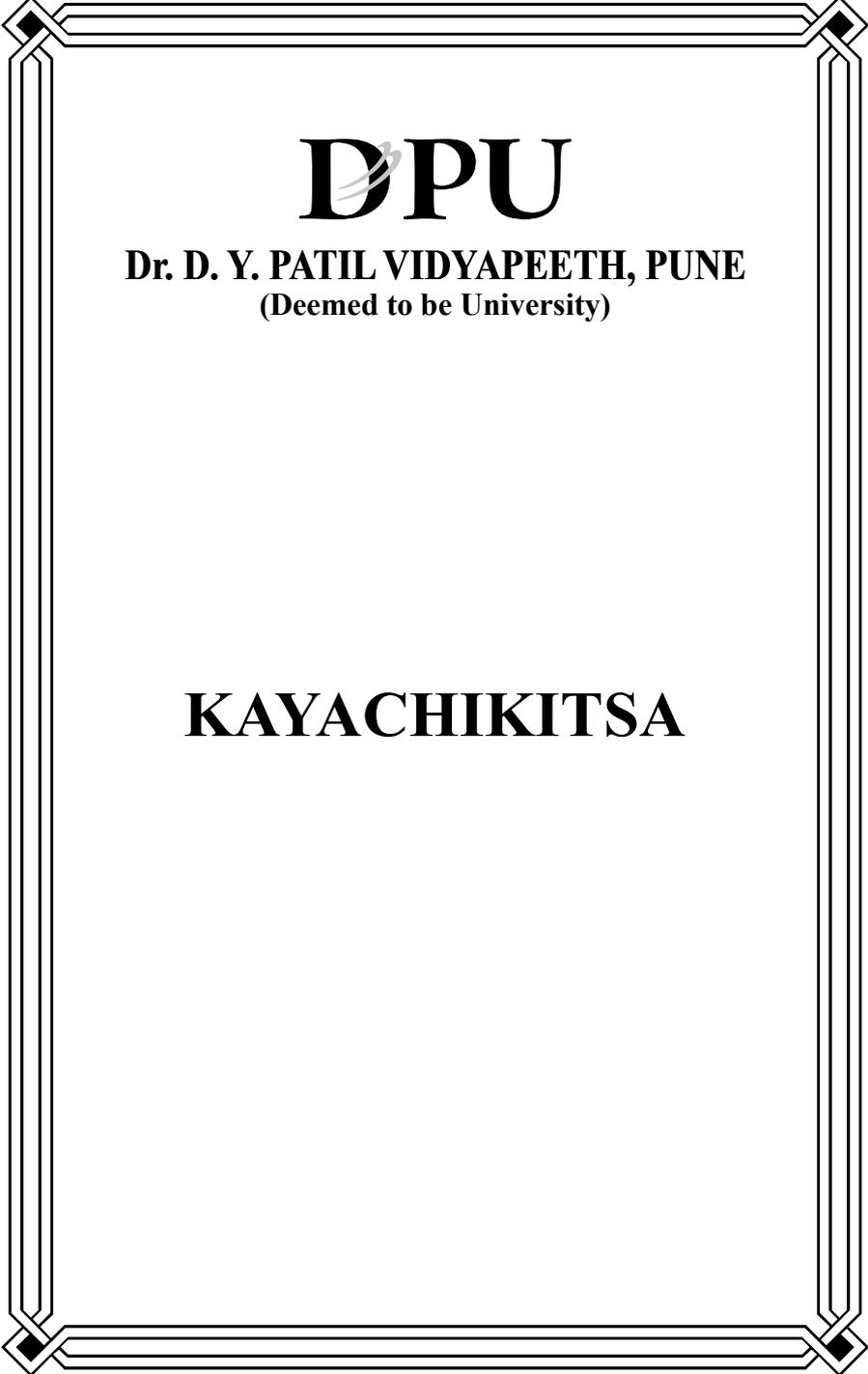
EVALUATION SCHEME (PRACTICAL)

Examination	Duration	Marks
Case Records of 25 Patients/Journal	-	20
Long Case	45 min.	20
Short Case	30 min.	10
Instruments / Spotting	10 min.	10
General Viva Voce	-	20
Panchakarma procedures	-	20
TOTAL		100

REFERENCE BOOKS :

Sr. No.	Reference Book Name	Edition
1	Charak Samhita with commentary of Ayurved Dipika by Chakrapanidatta and Jalpakalpataru by Gangadhara by Agnivesha	Reprint 2009
2	Sushruta Samhita with the NibhandhaSangraha commentary of Dalhana and Nyayachandrikapanjika of Gayadasa on nidansthana by Sushruta	Reprint 2010
3	Ashtang Hridaya with Sarvangasundara and Ayurvedrasayana commentaries by Vagbhata	Reprint 2014
4	Ayurvediya Panchkarma Chikitsa by Dr. Mukundilal Dwivedi	Edition 1
5	PanchkarmaVigyan by Dr. Haridas Shreedhar Kasture	First Edition Reprint 2014
6	Illustrated Panchkarma by Dr. GSrinivasa Acharya	2 nd Edition 2015
7	Ayurveda-Principles and Practice of Panchakarma by Dr. Mandip and Dr. Gurdip Singh	First Edition
8	The Panchkarma Treatment of Ayurved with Kerala Specialties by Dr. T. L. Devaraj	2 nd Edition 2006
9	Panchkarma Therapy by Dr. R.H Singh	2 nd Edition
10	Principles and practice of vasti by Dr. VasudevanNampoothiri and Dr. L.Mahadevan	Edition 2014
11	Clayton's Physiotherapy	10 th Edition 1995
12	Tidy's Physiotherapy	15 th Edition 2013

Sr. No.	Reference Book Name	Edition
13	Harrison's Principles of Internal Medicines	19 th Edition 2015
14	Guyton's Physiology	13 th edition 2016
15	Occupational therapy by Lorraire Williams Pedretti	4 th Edition 1996
16	Short notes on Panchakarma: Vd. Prasad N. Kulkarni	First Edition



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KAYACHIKITSA

TITLE OF THE COURSE:- KAYACHIKITSA

COURSE CODE: - AV112

MARKS: -100 (Theory)+100 (Practical) = Total 200 marks

GOAL

1. Acquire knowledge in the applied aspect of fundamental of Ayurveda
2. Learning the clinical skill for diagnosis and treatment modalities as per principles of Ayurveda
3. Students should able to perform important procedures
4. Acquire the knowledge about the methods and techniques of Research and making use of information & technology
5. Learn different teaching technologies.
6. Acquire the knowledge of independent work as a specialist of Kayachikitsa.

LEARNING OBJECTIVE-

1. In day to day practice treat the patients successfully by applying the knowledge of basic **principles of Chikitsa**.
2. Ability to prepare plan for clinical research or synopsis.
3. Ability to do health counseling for prevention of diseases.

LEARNING OUTCOME-

Student should be able to learn or perform in following domains.

• **COGNITIVE DOMAIN**

After the completion of 3 year PG course, the student should be able to:

1. Explain the general principles of Ayurveda and its application for preservation, promotion of health and to cure the diseases.
2. Plan clinical research Programs.

• **PSYCHOMOTOR DOMAIN**

At the end of the training, the student should be able to:

1. Treat the patients according to the principles of treatment.
2. Promote the health of the society according to the principles.
3. Prepare and deliver lectures on various topics of Kayachikitsa
4. Identify various research topics, carryout research and prepare adissertation on a topic.

- **AFFECTIVE DOMAIN**

At the end of the training, the student should be able to:

1. Communicate with patients empathetically Co-operate, react and respond in a cordial manner in his /her interaction with peers, superiors and subordinates

COURSE DESCRIPTION

Sr. No.	Topics	Description	No of Lectures (Hrs)	Weightage (Marks)
PART-A				
1	Fundamental Concepts of Kayachikitsa	Understanding of fundamental concepts of Kayachikitsa like Vriddhi and Kshaya of Dosha, Dushya, Mala with AmshaamshaKalpana. Srotodushti, Khavaigunya, Agni, Ama (Saama and NiramaDosha, Dhatu& Mala). Aavarana, Rogamarga, Ashayapakarsha, Doshagati, Kriyakala. AushadhaSevana Kala, Anupana, Pathya-Apathya and their scientific relevance during health and disease.	15	30
2	Rogi-RogaPariksha	Detailed knowledge of RogiRogaPariksha including detailed history taking and systemic examination of patient. Clinical	15	25

Sr. No.	Topics	Description	No of Lectures (Hrs)	Weightage (Marks)
		implementation of DwividhaPariksha, TrividhaPariksha, ChaturvidhaPariksha, PanchavidhaPariksha, ShadvidhaPariksha, AshtavidhaPariksha, DashvidhaParikshyaBha vas and PrakriyadiDashvidhaPa riksha.		
3	Principles of Kayachikitsa	Principles of Kayachikitsa in disease management including Shodhana, Shamana and NaimittikaRasayana.	18	20
4	Basic principles of all pathies	Introduction of the basic principles of Modern medicine, Homeopathy, Unani, Siddha, Tibetan Medicine, Yoga and Naturopathy and their relevance in light of the basic principles of Ayurvedic medicine.	12	25
5	Marmachiki-tsa	Types,Numbers , its importance, Treatment Diseases related to vidhya karma, kshar karma, Marmaabhyang.	9	15
6	Introduction of newer therapies	Introduction of newer therapies like gene therapy, stem cell therapy, genetic modeling & chromosomal disorders in different disease condition.	10	05

Sr. No.	Topics	Description	No of Lectures (Hrs)	Weightage (Marks)
7	AnuktaVyadhi	Nidanpanchak and chikitsa of Anukta Vyadhi	5	10
PART-B				
1	ChikitsaSiddhanta of all srotas	ChikitsaSiddhanta of Pranavaha, Annavaha, Udakavaha, RasadiDhatuvaha, Malavaha&ManovahaSrotovikara.	44	35
2	Emergency medicine	Emergency medicine: Acute Severe Asthma, pulmonary oedema, myocardial infarction, cerebro-vascular accidents, water and electrolyte imbalance, hemorrhage, syncope, seizure, coma, hyperpyrexia, hypertensive encephalopathy. COPD Exacerbation, shock, respiratory failure, cardiac arrest, diabetic ketoacidosis, hypoglycemia	28	35
3	Medical procedures	Knowledge of conducting various medical procedures like infusions, tapping, lumbar puncture, Ryle's tube insertion, catheterization, tractions, water seal drainage, Cardio Pulmonary Resuscitation	10	20

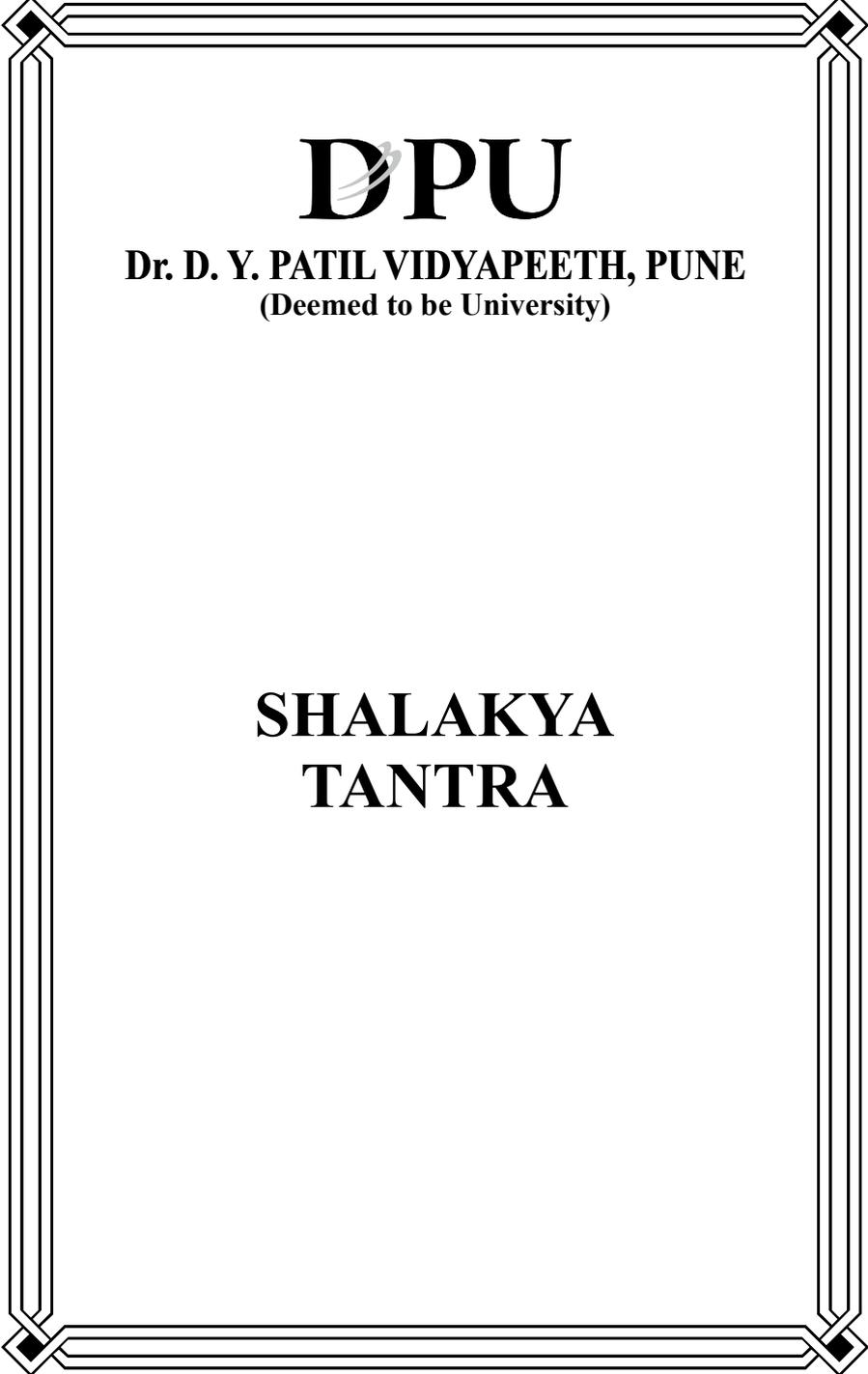
Sr. No.	Topics	Description	No of Lectures (Hrs)	Weightage (Marks)
4	Basic knowledge of radiological principles	Basic knowledge of underlying principles of ECG, TMT, echo cardiography, vascular Doppler studies, EEG, EMG, X-Ray, USG, CT scan, MRI, PET and their interpretation.	23	15
5	Knowledge of common Ayurvedic formulations and preparations used in treatment	Churna- Triphala, Sitopaladi, Lavanbhaskara, Hingvashtaka, Avipattikara, Gangadhara, Shaddharana, Sudarshana, Panchasakara, Ajmodadi Kashaya- Dashamula, Rasnasaptaka, Asanadi, Pathyadi, Phalatrikadi Asavas-Arista- Amritarishta, Kanakasava, Chitrakasava, Saraswatarishta, Ashwagandharishta, Chandanasava Vati- Sanjivani, Chandraprabha, Agnitundi, Chitrakadi, Khadiradi, Vyoshadi, Shankha Vati, Shiva Gutika. Guggula- Kalpana- Triphalaguggula, Kaishoraguggula, Trayodashangaguggula, Simhanadaguggula, Yogarajaguggula, Gokshuradiguggula, Kanchanaraguggula Rasaushadhi- Tribhuvanakirti Rasa, Arogyavardhini Rasa,	6	10

Sr. No.	Topics	Description	No of Lectures (Hrs)	Weightage (Marks)
		<p>ShwasakutharaRasa,Ras amanikya Rasa, Smritisagara Rasa, Lakshmivilasa Rasa, Sutshekhara Rasa, PravalaPanchamritaParpati, Hemagarbhapottali Rasa.</p> <p>Taila- MahanarayanaTaila, Pindataila, PrasarinyadiTaila, KsheerabalaTaila,Brihat SaindhavadiTaila, PanchagunaTaila, AmritadiTaila, MarichyadiTaila, MahamashaTaila</p> <p>Ghrita- MahatriphaladiGhrita, Brahmi Ghrita, PanchtiktaGugguluGhrita, Sukumara</p> <p>Ghrita, DadimadyaGhrita, KantakariGhrita, KalyanakaGhrita.</p> <p>Lehya- ChyavanaprashaAvaleha, KushmandaAvaleha, AshwagandhaAvaleha, Agastya HareetakiRasayana, Drakshavaleha, Vasavaleha, Amrita-BhallatakaRasayana.</p>		

PRACTICAL IN –KAYACHIKITSA**MARKS: 100****EVALUATION SCHEME (PRACTICAL)**

Examination	Duration	Marks
Journals	-	10
Bedside clinical case taking-Long case	45 minutes	30
Bedside clinical case taking-Short case	30 minutes	20
Instruments and spotting	10 minutes	20
Viva voce	-	20
Total		100

Sr. No.	Books	Year	Publications
1	Charak Samhita	2009	Cakrapanidutta commentary
2	Sushrut Samhita	2014	with all available Commentaries
3	Ashtang Samgraha	2014	Indu commentary
4	Ashtang Hridaya	2014	Arundutta and Hemadri Commentary
5	Cikitsadarsha	-	Pandit Rajesvardutta Shastri
6	Kayachikitsa	2009	Ramaraksha Pathak
7	Rog ParikshaVidhi	-	Priyavrat Sharma
8	PanchakarmaVigyan	2016	Haridas Sridhar Kasture
9	Ayurved Nidan Chikitsa Siddhanta	2009	Prof. R. H. Singh
10	Kayachikitsa Vol. I-IV.	2014	Prof. Ajay Kumar
11	Kayachikitsa Paper 1 and 2	2017	Subhash Ranade, Sunanda Ranade, Gunvant Yeola
12	Davidson's Principles and Practice of	2014	Latest Edition
13	Medicine.	2014	Latest Edition
14	API Text Book of Medicine.	2015	Latest Edition
15	Harrison's Text Bok of Medicine.	2015	Latest Edition
16	Harrison's Text Bok of Medicine.	2015	Latest Edition
17	Cecil Text Book of Medicine.	2015	Latest Edition
18	Relevant texts of concerned subjects.	-	Latest Edition



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SHALAKYA
TANTRA

TITLE OF THE COURSE:-SHALAKYA TANTRA

COURSE CODE: AV113

MARKS: 100 (Theory) + 100 (Practical) = Total 200 marks

GOAL

1. Acquire knowledge in the applied aspect of fundamental of Ayurveda
2. Learning the clinical skill for diagnosis and treatment modalities as per principles of Ayurveda.
3. Students should able to perform important procedures
4. Acquire the knowledge about the methods and techniques of Research.
5. Learn different teaching techniques.
6. Acquire the knowledge of independent work as a specialist of Shalakyas.

EDUCATIONAL OBJECTIVES

a. Cognitive domain:

After the completion of 3 year PG course, the student should be able to:

1. Explain the general principles of Ayurveda and its application for preservation, promotion of health and to cure the diseases of ENT and Ophthalmology.
2. Plan clinical research Programmes.

b. Psychomotor domain:

At the end of the training, the student should be able to:

1. Treat the patients according to the principles guidelines of treatment.
2. Promote the health of the society according to the principles.
3. Prepare and deliver lectures on various topics of Shalakyatantra.
4. Identify various research topics, carryout research and prepare a dissertation on a topic.

c. Affective domain

At the end of the training, the student should be able to:

1. Communicate with patients empathetically
2. Co-operate, react and respond in a cordial manner in with peers, superiors and subordinates.

COURSE DESCRIPTION

Sr. No.	Topics	Description	No. of lectures	Weightage
Part A				
1	Fundamental concepts of Shalakyatantra	<ul style="list-style-type: none"> • History and chronological development of Shalakyatantra. • Establishment and importance of Shirsouttamangatwam Nasa hi Shirasodwaram, sarvendriyanam nayanam pradhanam. • Swasthavritta related to shalakyatantra. • Pathya apathya in shalakyatantra. • Knowledge of Agropaharaniya in shalakyatanta. • Description of Yantra, Shastra, Anushastra related to shalakyatantra. 	30	20
2	Applied Anatomy and Physiology.	<ul style="list-style-type: none"> • Applied anatomy and Physiology of Netra, Karna, Nasa , Mukha with related Marmas and disease classification as per ayurved classics. 	20	30
3.	Sterlization and Anaesthesia.	<ul style="list-style-type: none"> • Fundamental knowledge of Sterlization and Anaesthesia in shalakyatantra. • Knowledge of Vranabandhana (Bandaging of wounds) in shalakyatantra. • Basic applied knowledge of Ashtavidha shashtra karma, Agni, Kshar, Raktamokshana in shalakyata. 	15	15

Sr. No.	Topics	Description	No. of lectures	Weightage
4.	Therapeutic Procedures	<ul style="list-style-type: none"> • Applied knowledge of various therapeutic procedures used in Netra rogas, Karna, Nasa, Mukha danta and shirorogas like Kriyakalpas, Karnaprakshalan, karnadhoopana, karna pichu, karnapurana, nasa prakshalan, nasapichu, Kawal , gandusha, Pratisaran, Dhoompana, Shiro abhyanga, Shiropichu, Shirodhara, Shirobasti etc. • Common classical Yogas and Single drug therapy in shalakyatantra. • Application of Panchakarma chikitsa in Urdhwajatrugat vikaras. 	40	30
Part B				
1	Nidana	<ul style="list-style-type: none"> • Critical analysis of Nidan of Urdhwajatrugata vikaras. 	30	15
2.	Fundamental concepts of Refraction and Audiology.	<ul style="list-style-type: none"> • Fundamentals of Optics and refraction. • Fundamental of Acoustics and Audiology. 	25	20
3.	Pharmacology	<ul style="list-style-type: none"> • Basic Pharmacology of common drugs required in diagnostic and therapeutic procedures in Eye, ENT and Orodentistry. 	20	15
4.	Eye donation	<ul style="list-style-type: none"> • Introduction to Eye bank, Eye donation , Corneal transplantation. 	10	10
5.	Biomedical waste	<ul style="list-style-type: none"> • Knowledge of handling of biomedical waste. 	10	10

Sr. No.	Topics	Description	No. of lectures	Weightage
6.	Clinical methods of Examinations.	<ul style="list-style-type: none"> • Clinical methods of Eye examination and application of various aids and techniques with their respective interpretation viz. Retinoscopy , refraction, Tonometry, Slit lamp examination, Pachymetry, Ophthalmoscopy, Gonioscopy, Perimetry, A Scan, B scan , FFA, OCT etc. • Clinical methods of Ear examination w.s.r to hearing and balance. • Clinical methods of examination of Nose an Paranasal sinuses with various aids and techniques. • Clinical methods of Oro dental examination with various instruments and techniques. 	40	30

PRACTICAL IN SHALAKYA TANTRA

MARKS :100

Pattern of practical / Clinical training

1. Clinical postings in OPD, IPD, Kriyakalpa and OT.
2. Clinical bedside case presentation
3. Case record- 20 cases (Eye, ENT, Shiro and Oro dental 5 cases each)
4. Hands on training in ayurvedic treatment procedures in Netra, karna, Nasa, Shiro, Mukha danta rogas.
5. Participation in seminar, workshops, CMEs.

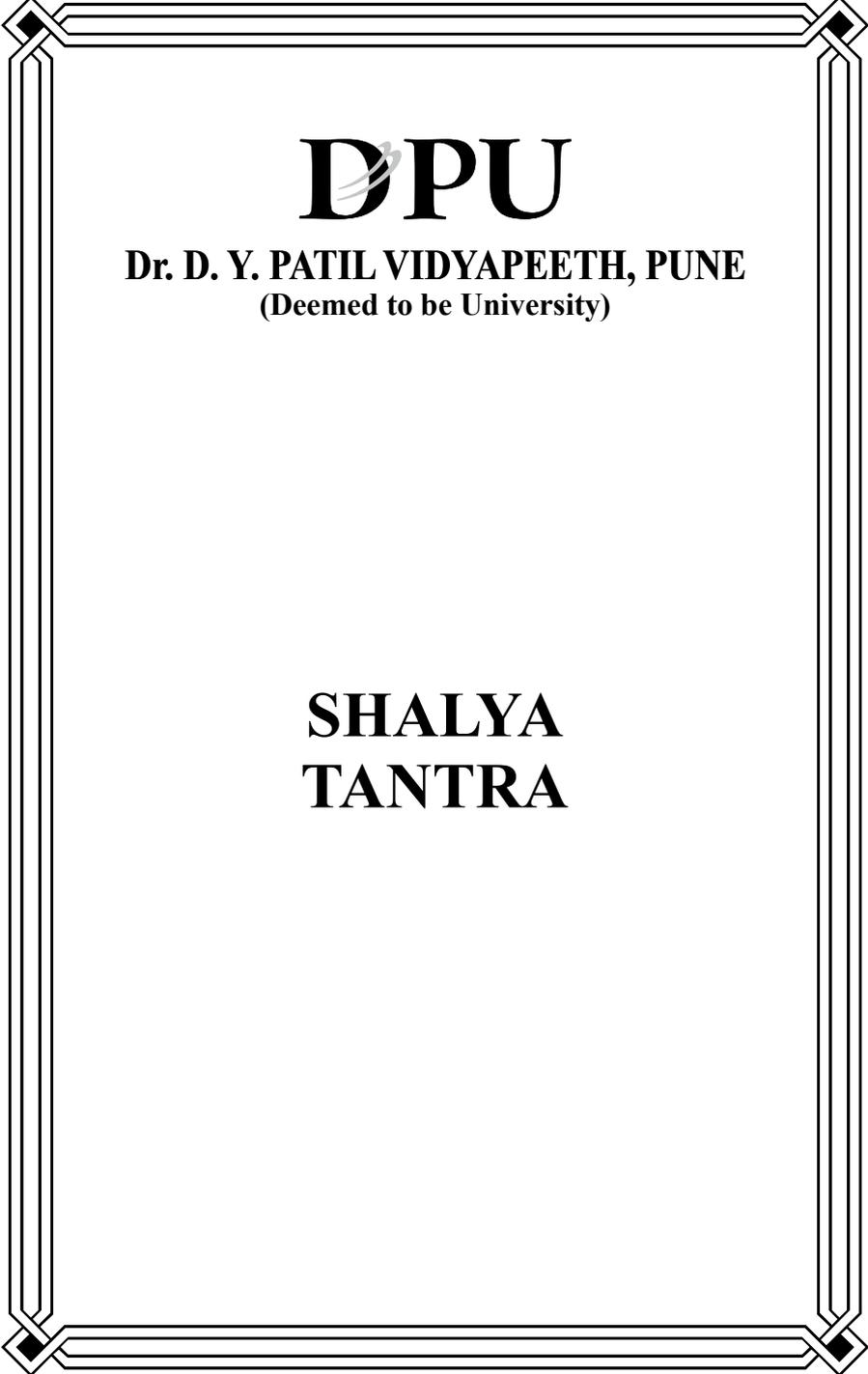
Distribution of marks (practical)	100 marks
1. Case record	20 marks
2. Bed side examination	
a) Long case	20 marks
b) Short case	10 marks
c) Procedure demonstration	15 marks
3. Identification specimens, radiographs, instruments	15 marks
4. Viva voce	20 marks

REFERENCE BOOKS:

Sr. No.	Books	Year	Author Name
1	Charka Samhita with commentaries	2009	Y. G. Joshi. commentry
2	Sushrut Samhita	2014	Acharya Priyavat Sharma Commentry.
3	AshtangSamgraha	2014	Prof K R Murti Indu commentary
4	AshtangHridaya	2014	Arundutta and Hemadri Commentary
5	Madhava nidan	Reprint 2003	Dr. Bramhanand Tripathi
6	Bhavaprakasha with commentaries	2003	Pandit Shri Bramha Shankar Mishra 8 th edition.
7	Sarangadhara Samhita with commentaries	Reprint 1999	Dr. Bramhanand Tripathi
8	Sahstrayoga Sangraha	2016	Prabhakar rao
9	Shalakya Tantra	2009	Ramanath Dwivedi
10	Shalakya Tantra	2008	R.C. Chaudhary
11	The Actions and uses of Indigenous Ophthalmic Drugs	1 jan. 2000	Chaukhambha
12	Clinical Examination of Ophthalmic Cases	Dec. 2012	Agarwal and Gupta
13	Alder's Physiology of the Eye & Clinical Applications	10 th edn	Cotlier, St. Louis
14	Disease of the Lens and Vitrous, Glaucoma and Hypotony	nd edn	Duke Elder

Sr. No.	Books	Year	Author Name
15	A Text Book of Ophthalmology	3 rd edn 2013	Ahmed E.
16	A Text book of clinical ophthalmology	2014	Dhanda
17	Manual of the Diseases of the Eye	2009	May, C.and Worth, C.
18	Ophthalmology – Principles and Concepts	8 th edition	Newell, F.W., C.V.
19	Ocular Differential Diagnosis	9 th edition 2012	Roy Fedrick Hamptn
20	Clinical Ophthalmology	10 th edition	Smith, R.Vergheese
21	Comprehensive Ophthalmology	7 th edition 2016	A K Khurana
22	Manual of Refraction	2015	P K Mukharji
23	Hand Book of ophthalmology	6 th edition 2011	L P agarwal
24	Clinical Ophthalmology	9 th edition 2013	Kanski
25	Parsons Diseases of Eye	22 th edition 2012	Radhika tondan
26	Stallard's Eye Surgery	April 1989	Rooper Hall
27	Dental Anatomy Histology	2010 2 nd edition	Dr. S. I. Bhalajhi
28	Text book of Pediatric Dentistry	2014	Nikhil Marwah
29	Orthodontics the Art and Science	2015	Dr. S. I. Bhalajhi
30	Essentials of Preventive and Community Dentistry	2012	Dr. Soben Peter
31	Complete Denture Prosthodontics	2012	Dr. J. J. Manappallil
32	Text book of Oral and Maxillofacial surgery	2014	G E Ghai
33	Diseases of Nose Throat and Ear	2010	Bhargav Shah
34	A Textbook of otorhinololaryngology	2008 7 th ed	Scott Browns editions.

Sr. No.	Books	Year	Author Name
35	Text book of Ear Nose Throat seases	6 th edition	L. P. Dhingra
36	Textbook on ENT – Mohd. Maqbool	2013	Mohammad Maqbool
37	Audiology Anirwan Biswas	5 th edn 2016	Anirban Biswas
38	Kurt's Audiology	2003	Kurt
39.	Logan Turner's book on ENT	11 th edn 2016	Logan
40.	Ballengers text book of ENT	2009	Ballenger



DPU

Dr. D. Y. PATIL VIDYAPEETH, PUNE
(Deemed to be University)

**SHALYA
TANTRA**

TITLE OF THE COURSE: SHALYATANTRA
COURSE CODE: - AV114
MARKS: 100 theory + 100 practical = 200 marks

GOAL

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

LEARNING OBJECTIVE

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

LEARNING OUTCOME

- a. Learning objectives (Cognitive domain):**
 1. Having an experienced knowledge of Shalyatantra.
 2. Explain the universal principles of Shalyatantra and its application for endorsement of health and to treat the surgical diseases.
 3. Sketch research Programs

- b. Learning objectives (Psychomotor domain):**

At the end of the training the student should be able to:

 1. Treat the patients according to the principles of surgery.
 2. Uphold the health of the society.
 3. Plan and issue lectures on various topics of Shalyatantra.
 4. Identify various research topics, achieve research and prepare a thesis on a topic.

- c. Personality development (Affective domain)**

At the end of the preparation, the student should be able to:

 1. Co-operate and react to take action in a cordial manner in his / her interaction with peers, superiors and subordinates.
 2. Create an element of interest and hypothesize the minds of the students.
 3. Project a cheerful personality to the students.

COURSE DESCRIPTION

Sr. No.	Topics	Description	No. of hours	Weightage
Part A				
1	Etymology and definition of Shalya Tantra. Shalyatantra in present era.	<ol style="list-style-type: none"> 1. Ayurvedavtaran, ayurveda (shalya) progress, reasons for declination and measures to improve of surgical practices, definition 2. Historical background and progress made 3. Study of dhanvantari and Sushruta, samakalingranthkara and commentary 	3	10
2	Scope of Shalya Tantra-	<ol style="list-style-type: none"> 1. Research on ayurvedic Samhita based parallel treatment on modern surgical diseases. 2. Retrospective studies of surgical skills of Sushruta. 3. To eliminate demerits of modern surgical treatment with the help of ayurveda procedures and medicines. 4. To elaborate Sushruta's surgical ethics or principles. 5. To overcome limitations of modern surgical treatment through Ayurveda science. 6. To develop new surgical instruments or surgical methods 	4	10

Sr. No.	Topics	Description	No. of hours	Weightage
		<p>by using Sushruta's principles.</p> <p>7. Scientific outlook of Sushruta.</p> <p>8. Applications of treatment modalities of Sushruta in current era.</p> <p>9. Anesthesia development.</p>		
3	Importance of shalyatantra-	<p>1. Emergency treatments of Diseases having only surgical cure.</p> <p>2. Unique treatment / science than other branches.</p> <p>3. Immediate relief by surgical procedures.</p> <p>4. Apunarbhavchikitsa (radical treatment)</p>	2	15
4	Study of Sushruta Samhita Sutra Sthana	<p>1. Adhyaya name, contents and its applications.</p> <p>2. Its importance in basic surgical practice.</p>	6	15
5	Vrana	<p>1. Vrana- types, (wound healing)Vranashotha– Inflammation</p> <p>2. Vidhradi – Abscess</p> <p>3. Pidika – Boils</p> <p>4. NadiVrana - Sinus / Fistulae</p> <p>5. VranaGranthi - Keloid / Hypertrophic scar</p> <p>6. Kotha – Gangrene and Principles of Amputation.</p> <p>7. Granthi - Cyst</p> <p>8. Arbuda – Tumour</p> <p>9. NijaVrana – Nidana, Samprapti, Vrana</p>	12	15

Sr. No.	Topics	Description	No. of hours	Weightage
		<p>Vasthu, Prakara, Lakshana, Vrana Pariksha – Sthana, Vrana Akrti, Srava, Gandha, Vedana. Vrana Avastha- Dustavrana, Shuddha Vrana, Ruhyamana Vrana, Samyak Roodha Vrana, Vrana Sadhya- asadhyatha and Vrana Upadrava.</p> <p>10. Vrana Chikitsa – Pathya- apathya and Shashti Upakrama, Vranitagara and Rakshakarma.</p> <p>11. Agantuja Vrana : a. Sadyo Vrana - Traumatic wounds – Nidana, Prakara, Lakshana, Upadrava and Chikitsa. b. Management of bites and stings.</p> <p>12. Dagdha Vrana – Burns and scalds</p> <p>13. Ulcer - Types and their management.</p> <p>14. Wound healing stages and their management.</p> <p>15. Pramehapidaka - Diabetic carbuncle and wounds.</p>		
6	Study of modern surgical clinical methodology	<p>1. Clinical examination , clinical tests and clinical diagnosis.</p> <p>2. Case taking (data collection)</p>	16	15

Sr. No.	Topics	Description	No. of hours	Weightage
		3. Ayurvedic point of clinical examination and specific disease wise		
7	Applied anatomy, physiology and surgical pathology of common surgical conditions including relevant Ayurvedic aspect.	1. Cadaveric dissection 2. Marmasharir study on cadaver - Study of relevance of marma in the light of current anatomical and surgical knowledge. 3. Applied anatomy of all surgical diseases	12	10
8	Applicability of Shat - Kriyakala in the pathogenesis of surgical diseases	1. Pathophysiology of surgical diseases according to ayurveda and modern science 2. Treatment accordingly	6	10
9	Applicability of Prakriti	1. understanding the causes and role of treatment in surgical diseases	2	10
10	Applicability of basic principles of Ayurveda in Rogi Pariksha (Trividha, Shadvidha, Ashtavidha and Dashavidha Pariksha) and latest investigations	1. Clinical tests 2. Lab. Investigations 3. Advanced invasive and non invasive test 4. Various types of biopsies	8	10
11	Concept of Rakta according to Sushruta	1. Rakta as chaturthadosha 2. Shock 3. Hemorrhage, hemostasis, rakta-stambhanaupaya 4. Blood transfusion, 5. blood donation, 6. Importance of rakta according to Sushruta	6	15

Sr. No.	Topics	Description	No. of hours	Weightage
		7. Raktajvikara- blood born diseases, special infections (surgical importance) 8. Tetanus.		
12	Radiological diagnosis	1. Introduction of clinical and diagnostic methods in Shalya Tantra 2. X-rays, U.S.G., Endoscopies (for diagnostic and treatment purposes), MRI, CT scanning 3. Recent diagnostic tools	8	15
13	Concept and applicability of Sadhya-Asadhya (Prognosis) - Arishthalakshana	1. Complication of – surgical pathologies, treatment and procedures 2. Diabetes, tuberculosis, certain specific diseases associated with surgical disease	6	10
14	Knowledge of life saving drugs	1. Drugs used in ICU- Indication and contraindication, group/ categories, dosage, adverse reaction 2. Antibiotics and analgesics and medicines used in surgery , their pharmacolgy	6	15
15	Emergency conditions and its management	1. Emergency conditions in OT, ICU/Ward, OPD 2. Pre operative, intra operative and post operative complications and its managemenet 3. Life saving procedures- intubation, RT insertion,	12	20

Sr. No.	Topics	Description	No. of hours	Weightage
		central line, tracheotomy, ICD, pleural and ascities tapping, suprapubic catheterization, venae section		
16	Diagnosis and management of PranashthaShalya	1. Foreign body & its management	3	15
Part B				
17	Yantra and Shastra – Surgical Instruments - Ancient and recent advances	<ol style="list-style-type: none"> 1. Yantrashastra according to Sushruta 2. Correlation with recent instruments 3. Uses, Basic understanding of the concepts of Yantra and Shastra. Acquaintance with commonly used surgical instruments. Knowledge of textual descriptions. 4. Storage and maintainance according to ayurveda (Shastra kosha, payna, dhara- praman and samsthapana) and modern science 5. Laparoscopic instruments introduction and their handling, hands on training And maintenance 	16	20
18	Sterilization – methods and types	<ol style="list-style-type: none"> 1. Ancient methods 2. Recent methods and their practical's 3. Defination, physical methods, chemical methods, surgical drapes, scrubbing- solution and techniques 4. Antiseptic solutions 	12	15

Sr. No.	Topics	Description	No. of hours	Weightage
19	Basic knowledge of Sangyahan – Anaesthesia	<ol style="list-style-type: none"> 1. Types, methods, indications, contraindications, complications and its management 2. Local anaesthesia – Drugs, Techniques, Indications, Contraindications, Complications and their Management. 3. Regional and General anaesthesia- Drugs, Techniques, Indications, Contraindications, Complications and their Management. 4. Basic knowledge of the drugs and instruments of anaesthesia. To observe the process of induction, monitoring and recovery. 	12	20
20	Concept of Trividha Karma – Purva, Pradhana and Pashchat	<ol style="list-style-type: none"> 1. Purva, Pradhana, Paschat karma 2. Pre operative evaluation of patient, preparation OT and instruments 3. Intra operative procedures and manners, assistance rules 4. Post operative- patient care and management 	10	15
21	Ashtavidhashastra karma	<ol style="list-style-type: none"> 1. Sushrutas Ashtavidha shastra karma and their indication 2. Yogya- Appreciation and comprehension of concepts of Yogya. Idea of patient's safety in experimental training. 	8	15

Sr. No.	Topics	Description	No. of hours	Weightage
		3. Suturing material and techniques (types of suture etc), mesh, newer prosthetic materials		
22	Bandhana Karma – Ancient and recent advances	1. Bandaging technique according to Ayurved and modern science 2. Dressing 3. Traction techniques, tourniquets 4. Drains	6	15
23	Kshara Karma	1. Introduction, types, method of various preparations like Kshara, KsharaVarti, KsharaPichu and applications 2. Nirukti, Pradhanyata, Guna, Dosha, Karma, Prakara, Yogya, Ayogya, Procedure, Upadrava and Chikitsa. 3. Chemical cauteries	8	15
24	Kshara Sutra –	1. Method of preparation, standardization and applications	8	15
25	Agnikarma –	1. Introduction, types and applications 2. Pramad dagdha 3. Modern views – Heat shock protein 4. Radiotherapy basic principles 5. Cauterization methods and instruments	6	15
26	Raktamokshana	1. Introduction, types and applications 2. Recent advanceseg. Cupping etc	6	15
27	Application of Panchakarma therapy in surgical practice	1. Asthisandhivikara and panchakarma 2. Raktajavikara and panchkarma	6	10

Sr. No.	Topics	Description	No. of hours	Weightage
		3. Conservative aspect in surgical diseases 4. Description of panchakarma by Sushruta in various diseases		
28	Scope of Pathya-Apathya in the management of surgical diseases	1. Pathya - Apathya in surgical disease 2. Fluid, Electrolyte, Acid Base Balance and Nutrition: 3. Introduction of physiology of fluids and electrolytes. 4. Dehydration and over hydration. 5. Specific electrolyte loss, Acidosis, Alkalosis, Symptomatology and Management. 6. Electrolyte changes in specific diseases like pyloric stenosis, intestinal obstruction and anuria. 7. Various replacement fluids in surgery, mode of administration and complications.	12	15
29	Ward and minor procedures	1. Catheterization 2. Gastric aspiration tubes 3. Enemas and suppositories 4. Injection techniques 5. Lumbar puncture technique 6. Peritoneal lavage and dialysis	14	25
30	Medico legal aspects of surgical practice		4	15

PRACTICAL IN – Shalya Tantra MARKS: 100

1. Daily hospital duties in OPD, IPD, Operation theatre
2. Bed side case taking – 25 patients
3. Surgical cases - observation/performing- 10 cases
4. Knowledge of instruments required in surgical practices
5. Ayurvedic diagnostic and therapeutic procedures.
6. Fluid therapy and blood transfusion.
7. Pre-operative, operative and post-operative procedures

EVALUATION SCHEME (PRACTICAL)

Examination	Duration	Marks
Journals	-	10
Bedside clinical case taking-Long case	45 minutes	30
Bedside clinical case taking-Short case	30 minutes	20
Instruments and spotting	10 minutes	20
Viva voce	-	20

REFERENCE BOOKS

Sr. No.	Name of Books	Author	Publication & Year Edition
1	Sushruta Samhita	-	Chaukhaba Prakashan (1 st Edition)
2	AshtangaSangraha	-	Chaukhaba Prakashan (1 st Edition)
3	AshtangaHridaya	-	Chaukhaba Prakashan (1 st Edition)
4	Charaka Samhita	-	Chaukhaba Prakashan (1 st Edition)
5	Shalyatantravidnyan	Vd. Shi. Go. Joshi	1 st Edition
6	The Surgical instruments of the Hindus	Girindranath Mukhopadhyaya	1 st Edition
7	ShalyaTantraSamuchhaya	PanditRamadesh Sharma	1 st Edition
8	ShalyaVigyan (Part 1-2)	Dr. Surendra Kumar Sharma	1 st Edition
9	ShalyaSamanvaya (Part 1-2)	Vd. Anantaram Sharma	1 st Edition

Sr. No.	Name of Books	Author	Publication & Year Edition
10	Shalya Pradeepika	Dr. Mukund SwaroopVerma	1 st Edition
11	Soushruti	Dr. Ram NathDwivedi	1 st Edition
12	Clinical Shalya Vigyan	Dr. Akhilanand Sharma	1 st Edition
13	BhagnaChikitsa	Dr. Prabhakar Janardhan Deshpande	1 st Edition
14	Kshara sutra management in anorectal ailments	Dr. S.K. Sharma Dr. K.R.Sharma and Dr. Kulwant Singh.	1 st Edition
15	Anorectal diseases in Ayurveda	Dr. Sizoria and Dr. Praveen Kumar Chowdary	Chaukhaba Prakashan
16	Adhunika Shalya Chikitsa Siddanta	Dr. Katil Narshingham Udupa	1 st Edition
17	Agnikarma Technology Innovation	Dr. P. D. Gupta	Chaukhaba Prakashan
18	Shalya Tantra Ke Siddhant	Dr. K. K. Takral	Chaukhaba Prakashan
19	Recent advances in the management of Arshas / Haemorrhoids	Dr. P. Hemantha Kumar	Chaukhaba Prakashan
20	Arsha Evum Bhagander Mein sutra Avacharan	Vd. Kanak Prasad Vyas	
21	Recent advances in Kshara Sutra	Dr. M. Bhaskar Rao	Chaukhaba Prakashan
22	Leech application in Ayurveda	Dr. M. Bhaskar Rao	Chaukhaba Prakashan
23	Kshara Sutra	Dr. S.N.Pathak	Chaukhaba Prakashan
24	ShalyaShalakyTantra	Vd. S.G. Joshi	
25	Surgical ethics of Ayurveda	Dr. D.N. Pande	Chaukhaba Prakashan

Sr. No.	Name of Books	Author	Publication & Year Edition
26	Text book of Surgery	Sabistan	Modern Books 1/ E edition
27	Operative Surgery	Rob and Smith	Modern Books 4 th edition
28	Ward procedure	Dr. Mansukh Patel	Modern Books 6 th edition
29	A Manual of Clinical surgery	Dr. S. Das	Modern Books 12 th edition
30	A concise Textbook of surgery	Dr. S. Das	Modern Books 8 th edition
31	Bedside clinic in surgery	Dr. Makhanlal Saha	Modern Books 2 nd
32	Farquharson's textbook of operative general surgery	Dr. Farquharson	Modern Books 10 th
33	Maingot's abdominal operation	Dr. Michael zinner, Stanley Ashley	Modern Books 12 th

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**Curriculum of
Ayurveda
Degree Course - PG
MD / MS final
(2nd & 3rd year)
Programme**

**Academic Year
2019 - 20 and onwards**

NOTIFICATION

In pursuance of the MHRD Notification No. F.10-12/ 2016-U.3 (A) dated 23rd February, 2018 the Dr. D. Y. Patil College of Ayurved and Research Centre, Pimpri, Pune have been included under the ambit of Dr. D. Y. Patil Vidyapeeth, Pune (Deemed to be University).

And whereas in pursuance of the resolution passed by the Board of Management at its meeting held on 30th July, 2019 vide Resolution No.BM-23(iii)-19 the Curriculum of Ayurveda Degree Course-PG (MD Final (2nd&3rd Year)) Programme for the Academic Year 2019-20 & onwards is hereby published.

The curriculum of MD Final (2nd&3rd Year) Programme consists syllabus for following courses:

Pre Clinical Subjects	Ayurveda Samhita Siddhant
	Rachana Sharir
	Kriya Sharir
Para Clinical Subjects	Rasa Shastra & Bhaishajya Kalpana
	Dravyaguna Vidyan
	Roganidan Evum Vikriti Vigyan
Clinical Subjects	Agadtantra
	Swasthavritta
	Prasutitantra Evum Striroga
	Kaumarbhritya
	Panchkarma
	Kayachikitsa
	Shalakya Tantra
	Shalya Tantra

This syllabus will be useful to all the concerned. This will come into force with immediate effect.



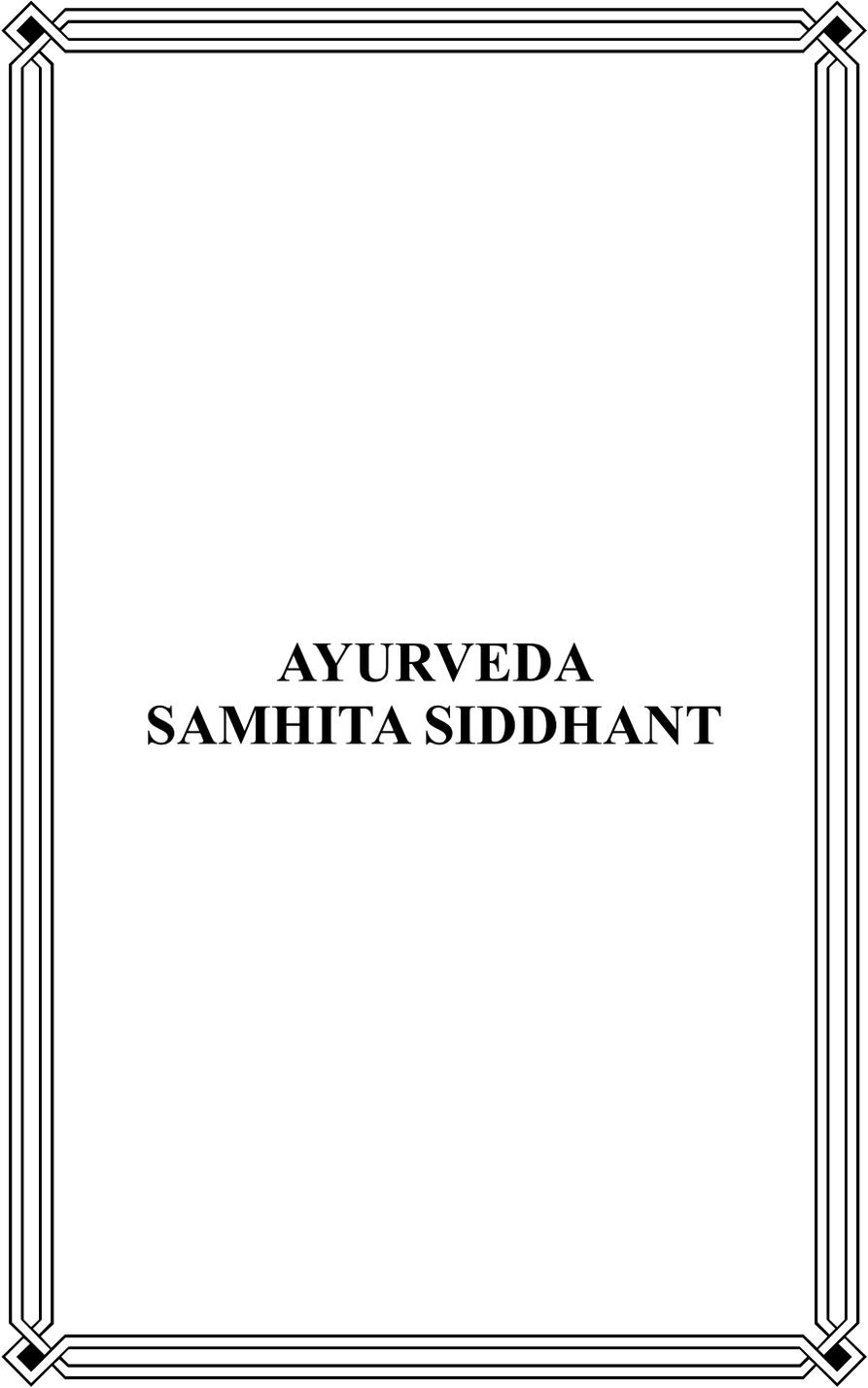

(Dr. A. N. Suryakar)
Registrar

Copy to:

1. PS to Chancellor for kind information of Hon'ble Chancellor, Dr.D.Y.Patil Vidyapeeth, Pune.
2. PS to Vice Chancellor for kind information of Hon'ble Vice Chancellor, Dr. D. Y. Patil Vidyapeeth, Pune.
3. The Principal, Dr. D. Y. Patil College of Avurved & Research Centre, Pimpri, Pune
4. The Controller of Examinations, Dr. D. Y. Patil Vidyapeeth, Pune.
5. Director (IQAC), Dr. D. Y. Patil Vidyapeeth, Pune.
6. Web Master for uploading on Website.

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**AYURVEDA
SAMHITA SIDDHANT**

TITLE OF THE PROGRAM : AYURVED SAMHITA & SIDDHANTA
PROGRAM CODE : AVF301
MARKS :- THEORY - 400 PRACTICAL – 100 TOTAL - 500

GOALS

- To explore the profound knowledge and basic principles in Ayurvedic Samhitas through research.
- To propagate and to advocate the fundamental principles and techniques of Ayurveda for healthy and unhealthy conditions of human body in society.
- To achieve appreciated status for Ayurvedic Practice in medical field.

OBJECTIVES

- At the end of the Program students are expected to acquire thorough Knowledge of Ayurvedic Compendia (Bruhatrayi, Laghutrayi, Shad Darshanas and various Kosha Granthas.) with the help of Samskruta language.
- Students are expected to conduct researches on various topics like manuscripts, newer diseases, Health and lifestyle management through Dinacharya, Rutucharya, Sadvrutta with the help of Ayurvedic compendia.

LEARNING OUTCOME

- Students will be able to demonstrate practical and clinical utility of Ayurvedic principles like dincharya, rutucharya etc.
- P.G. Scholar will have specialized knowledge of samhitas with clinical skills
- Forming a good foundation to become a good teacher, practitioner and researcher.
- To generate self motivated quality teaching faculties.
- Students will be visionary postgraduates who encorporates quality teaching & become competent and ethical practitioner for the benefit of mankind.

COGNITIVE DOMAIN

- In-depth Knowledge of Ayurvedic Samhita like Bruhatrayi, Shad Darshanas and various Kosha Granthas.

PSYCHOMOTOR DOMAIN

- Assessment of prakruti, sarata and bala in healthy individuals.
- Application of Ayurvedic principles like nidan panchak, pramana etc. in - Examination of patient, Diagnosis, Prognosis.
- Advocating chikitsa siddhantas for - Appropriate treatment of diseases.
- Panchakrma procedures in healthy and diseased conditions.

AFFECTIVE DOMAIN

PG Scholar can become a good teacher, practitioner and researcher.

PROGRAM DESCRIPTION :

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weightage (Marks)
PAPER - I (CODE NO. - AVF3011)			100
CHARAK SAMHITA WITH CHAKRAPANI TEEKA			Marks
Part A			
1	Sutra sthan	30	25
2	Nidan sthan	16	10
3	Viman sthan	20	15
4	Shashir sthan	16	10
Part B			
5	Chikitsa sthan	28	20
6	Kalpa sthan	6	5
7	Siddhi sthan	6	5
INTRODUCTION OF OTHER COMMENTARIES			
1	Chakrapani	3	10
2	Yogindranath sen	2	
3	Jyotishchandra saraswati	2	
4	Gangadhara	2	
PAPER - II (CODE NO. - AVF3012)			100
SUSHRUTA SAMHITA AND VAGBHATA SAMHITA			Marks
Part A			
1	Sushruta sutra sthan	25	30
2	Sushruta shareer sthana -1	5	5
Part B			
3	Astanga Sangraha	22	20
4	Astanga Hrudaya	27	35
5	Commentaries	07	10

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weightage (Marks)
PAPER - III (CODE NO. - AVF3013) DARSHANIK SIDDHANTA			100 Marks
Part A			
1	Analysis of principles chaturvidha sidhhanta	3	20
2	Loka purusha samya	3	
3	Shadpadartha	5	
4	Pramanas	8	20
5	Srishti utpatti	3	
6	Panchmahabhuta	3	
7	Pilupaka	2	
8	Pithar paka	2	
9	Karana- karya vada	4	
Part B			
10	Tantrayukti	5	20
11	Nyayas	3	
12	Atmatatva sidhhanta	3	
13	Satkaryavada and it's clinical importance	4	
14	Arambhavada and it's clinical importance	4	
15	Parmanuvada and it's clinical importance	3	
16	Swabhavoparamavada and it's clinical importance	3	
17	Swabhava vada and it's clinical importance	3	
18	Yadricha vada and it's clinical importance	3	
19	Karmavada and it's clinical importance	1	
20	Practical applicability principles of Sankhya- Yoga	4	15
21	Practical applicability principles of Nyaya- Vaisheshika	4	15
22	Practical applicability principles of Vedanta	5	5
23	Practical applicability principles of Mimansa	5	5
PAPER – IV (CODE NO. – AVF3014) PRAYOGIK SIDDHANTA			100 Marks
Part A			
1	Panchamahabhuta	5	10
2	Prakruti samasamavet	3	
3	Triguna	3	

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weightage (Marks)
4	Tridosh	5	
5	Nidanarthak rog	3	15
6	Shad upakram	5	
7	Shatkriya kala	5	
8	Sharir prakruti	6	10
9	Manasa prakruti	6	
10	Agni	3	
11	Oja	3	
12	Vyadhikshamatva	3	10
13	Vikar vighat bhav	3	
14	Sama iram	3	
Part B			
15	Kala- akala mrityu	2	5
16	Daiva drushta	2	
17	Punarjanma	2	
18	Aahar vihara	5	15
19	Pathyapathya	5	
20	Ashta trik	3	
21	Anubandha Chatushtay	3	5
22	Comparative study of the Samprapti and Chikitsa Sootra mentioned by Brihatrayee of following disises- Jvara, Raktpitta, Gulma, Prameha, Kushta, Shosha, Unmada, Apasmar, Atisara, Grahni, Vatrakta, Aamvata, Shwasa-Kasa, Pandu-Kamla, Urustambha, Vatavyadhi, Shotha, Udararoga, Yakshma	15	20
23	Intoduction to Laghuttaryee with available Sanskrit commentaries	7	10

Sr. No.	Practical
1.	Clinical case study- Long case- in O.P.D. and I.P.D. of institute Hospital-Minimum 10 Case Proforma according to Ayurvedic samhita and siddhanta
2.	Compilations - 2 in number- (Based on Samhita and Siddhanta -one each)
3.	Research papers publication -2 in recognized journal
4.	Paper / Poster presentation in seminars-2
5.	Lectures- for undergraduate students – minimum 10
6.	Departmental Seminars, presentations, discussions
7.	Dissertation submission

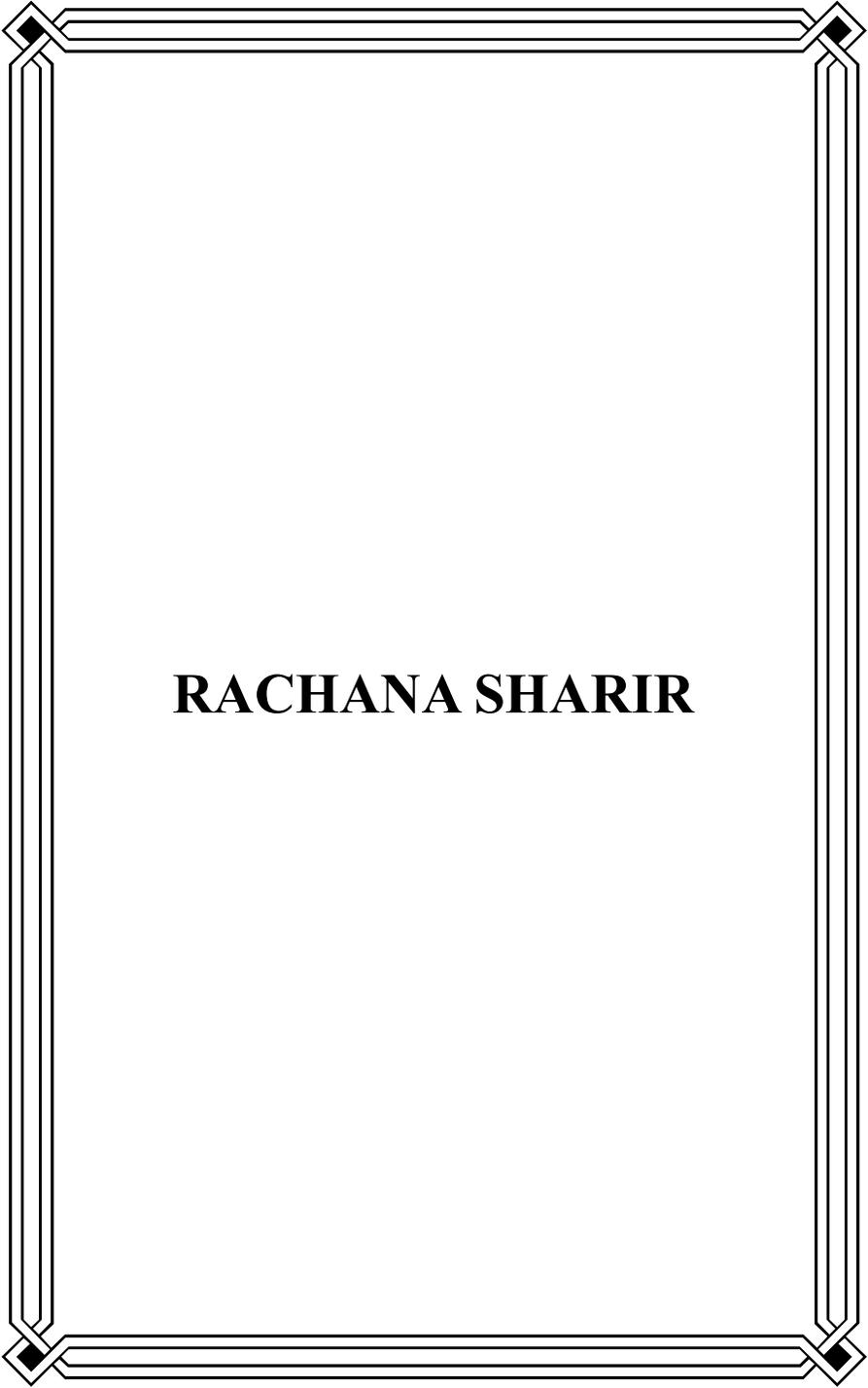
PRACTICAL – VIVA VOCE EXAMINATION : MARKS – 100

Sr. No.	Compilation - 1, Samhita	Compilation - 2, Siddhanta	Samhita based Casetaking + Bedside viva	Oral research topic + General Viva	Total
1	10 Marks	10 Marks	20+10 Marks	25+25 Marks	100 Marks

REFERENCE BOOKS:

Sr. No.	Books	Author	Publication, Year Of Publication And Edition
1.	Charaka Samhita	Chakrapani commentary	Chaukhambha orientalia, Varanasi, Reprint 2015
2.	Sushruta Samhita	Dalhana Commentary	Chaukhambha Sanskrit sansthan, Varanasi, Reprint 2010.
3.	Ashtanga Samgraha	Indu commentary	Chaukhambha Samskrit Sansthan, Varanasi, 2 nd Ed. 2008.
4.	Ashtanga Hridaya	Arundutta and Hemadri commentary	Chaukhambha Orientalia , Varanasi, 10 th ed. Reprint 2014.
5.	Vaisheshika Darshana	Prashastapada Bhashya	Chaukhambha Samskrit Sansthan , 4 th Ed. 2002.
6.	Nyaya Darshana	Vatsyayan Bhashya Patanjali	Chaukhambha Samskrit Sansthan, 5 th Ed. 2001.

Sr. No.	Books	Author	Publication, Year Of Publication And Edition
7.	Yoga Darshana	Vyas Bhashya	Rajaram Tukaram Tatya, 1907
8.	Vedantsara	-	-
9.	Sarvadarshan Samgraha	Umashankar Sharma	Chaukhambha Vidya Bhavan , reprint 2001.
10.	Bhartiya Darshan	Baldev Upadhyaya	Chaukhambha Orientalia , 3 rd Ed., 1984.
11.	Ayurved Darshanam	Acharya Rajkumar Jain	Chaukhambha Orientalia, Delhi.
12.	Ayurvediya Nyayaparijat	Dr. Joshi M.V., Dr. Joshi V.N	Prasad Prakashan , 1st ed., 28 th March 2017.
13.	Madhav Nidan	Prof. Srikanth Murthy	Chaukhambha Orientalia, Delhi
14.	Sharangdhar Samhita	Prof. Srikanth Murthy	Chaukhambha Orientalia, Delhi
15.	Bhavprakash Samhita	Prof. Srikanth Murthy	Chaukhambha Krushnadas Academy
16.	Charak Samhita with Gangadhar Teeka	Kv. Gangadhar Ray	Chaukhambha Orientalia, Delhi



RACHANA SHARIR

TITLE OF THE PROGRAM – RACHANA SHARIR
PROGRAM CODE – AVF302
MARKS - THEORY - 400 PRACTICAL – 200 TOTAL - 600

GOAL :

To provide the comprehensive, thorough and practical knowledge of the structure of the human body and its embryological development as told in Ayurved as well as Modern Medical Sciences.

LEARNING OBJECTIVE :

To thoroughly understand the structure of the Human Body through its normal, pathological and therapeutic variants via Theoretical and Practical sources.

LEARNING OUTCOMES :

1. **COGNITIVE DOMAIN –**
Should have detailed and thorough knowledge of the structure of Human body, its embryological development and its Clinical Application from Ayurved as well as Modern point of view.
2. **PSYCHOMOTOR DOMAIN :**
 - Should identify, differentiate and dissect various structures in the human body practically
 - Should be able to identify and locate the points of Marma i.e. vital points of the body with its clinical importance
 - Should be able teach / demonstrate various structures / systems at academic level via Lectures, Practical's and other Teaching Methods.
3. **AFFECTIVE DOMAIN –**
Should keep a practical and applied attitude towards the subject and use the same in Academics, Research and Clinical Practice.

PROGRAM DESCRIPTION :

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weightage (Marks)
PAPER - I (CODE NO. : AVF3021) GARBHA SHAARIRA			100 Marks
Part A			
1	Etymology of Garbhavakranti Shaarira, features of Shukra and Shonita, description of Beeja, Beejbhaga, Beejbhagavyava and Garbhotpadakabhava, Garbha Poshana Krama, Garbhavridhdhikar Bhaav, Masanumashiki Garbhavriddhi, Explanation of lakshana occurring in Ritumati, Sadhyah Grihita Garbha. Yamal garbha, Anasthi garbha.	40	40
2	Knowledge of basic facts in advancement in Anuvanshiki and Garbhajavikara		
Part B			
1	Explanation of Basic Embryology, Systemic embryology, Fetal circulation	60	60
2	Basic concepts of Teratology and Genetics		
PAPER II (CODE NO : AVF3022) KOSHTHANGA SIRA DHAMANI SROTAS SHAARIR			100 Marks
Part A			
1	Koshthanga Shaarira: - Detail etymological derivation of 'Koshtha' and Koshthanga, including detail study of structure of each Koshthanga.	60	60
2	Respiratory System, Digestive System, Urinary System, Reproductive System, Reticulo-endothelial System		
Part B			
1	Ashaya: - Definition, detail description.		
2	Kala Shaarira:-Etymology, Definition, description of Seven Kala with their Modern component and applied aspects.	40	40

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weightage (Marks)
3	Paribhashika Shaarira: - Snayu, Kandara, Rajju, Sanghata, Jala etc. and their general description.		
4	Sira, Dhamani and Srotas Shaarira: - Etymological derivation, definitions, synonyms, number and types of Sira, Dhamani and Srotas, anatomical differences among Sira, Dhamani and Srotas, description of Vedhya and AvedhyaSira (Puncturable and Non puncturable Veins) and clinical importance of Sira, Dhamani and Srotas including Modern Anatomical counterparts - Cardiovascular System		
PAPER III (Code NO : AVF3023) MARMA SHAARIRA EVUM ASTHI SANDHI PESHEE SHAARIRA			100 Marks
Part A			
1	Marma Shaarira:- Derivation and definitions of the term Marma and their features, characteristics and number of Marma according to Sushruta Divisions of Marma on morphological basis (Rachana Bheda), Shadangatvam (Regional), Abhighataja (Prognostic) classification, Trimarma according to Charaka. Knowledge of 'Marmaabhighata', MarmaViddha, Detailed study of individual marma with their clinical and surgical importance. Importance of Marma in Shalyatantra.	50	50
2	Peshee Shaarira :- Etymological derivation,description, features, number, types and Applied anatomy of all Peshee (Myology)		

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weightage (Marks)
Part B			
1	Asthi Shaarira :- General introduction and description of Asthi, differences among number of Asthi. Types of Asthi. Detail study of each bone with its ossification and Applied anatomy.	50	50
2	Sandhi Shaarira :- Etymological derivation, description, features, number, types and Applied anatomy of all Sandhi (joints), Arthrology in detail with Applied Anatomy		
PAPER - IV (CODE NO : AVF 3024) TANTRA SHAARIRA EVUM ANTAH AND BAHIHGRANTHI VIGYANIYA			100 Marks
Part A			
1	Description of Panchgyanendriya – Ayurved and Modern aspects. (Sensory organs (Eye, Ear, Nose, Tongue and Skin with their applied anatomy).		
2	Anatomy of brain and spinal cord, Peripheral nervous system (explanation of Nerve Plexuses and peripheral nerves, Cranial nerves and Autonomic nervous system, Cerebro-spinal fluid, Venous sinuses of Brain, Ventricular system of Brain, Blood supply of Brain, Meninges with Applied Anatomy.	70	70
Part B			
1	Shat Chakra - Location and significance in Yoga. Description of Ida, Pingala, Sushumanadi.		
2	Antah Sravi Granthi and Bahih Sravi Granthi:- Detail study of Exocrine and Endocrine glands.	30	30

PRACTICAL TOTAL MARKS – 200

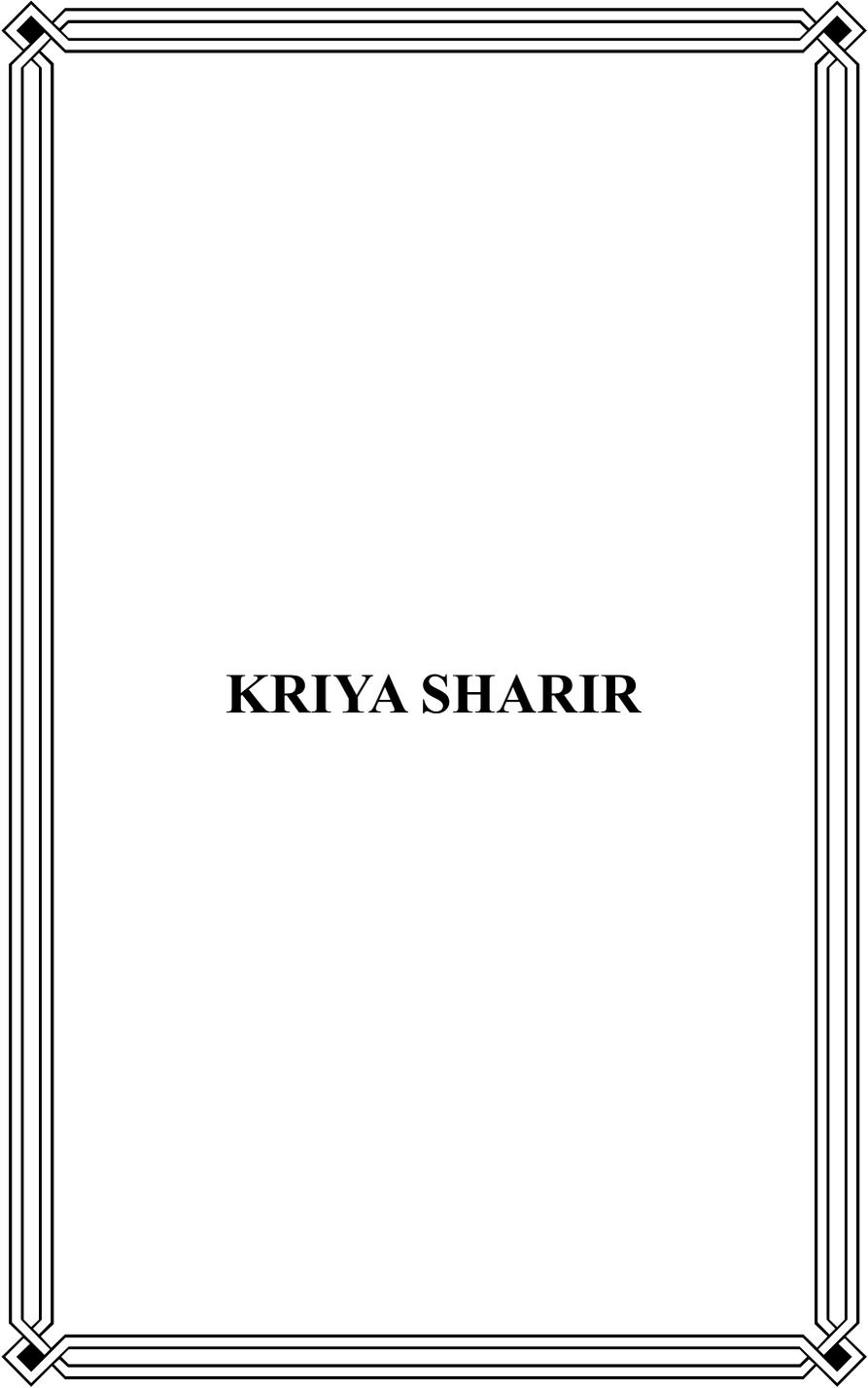
Sr. No.	List of Practicals
1	Dissection of atleast one cadaver during the Final part of the Program
2	Training of preservation techniques in the Embalming room
3	Preparation of Soft tissue specimen and Models using current technology like Plastination, Lumen casting etc. under the guidance of Teaching staff and Experts of the relevant fields.
4	Preparation of Charts and Models of Rachana Shaarira subject to the individual capacity
5	Observation of MRI, CT Scan, USG procedures, Colour Doppler etc.6) Visits to various Museums of other colleges in the Medical field
6	Observation of Ward procedures like Lumbar puncture, Tracheostomy, Abdominal parentesis, Liver biopsy, Venesection, etc. (subject to the availability and opportunities)

PRACTICAL – VIVA VOCE EXAMINATION : TOTAL MARKS- 200

Practical record book and log book	Spotting (Dissected organs and Bones-Joints-Muscles)	Dissection	Surface and Radiological Anatomy	Dissertation Presentation	Teaching Skills	Viva-voce
20	20	40	40	10	20	50

REFERENCE BOOKS

Sr. No.	Name of the Reference Book	Author	Edition
1	Pratyaksha Shariram	Gananath Sen	2002
2	Abhinava Shariram	Damodar Sharma Gaur	1982
3	Parishadyam Sabdatha Shariram	Damodar Sharma Gaur	-
4	Brihat Shariram	P S Varier	13 th edition, Chaukhamba Publication
5	Shiva Samhita	Raghavendra Sharma Raghav	1999
6	Gray's Anatomy	Susan Standring	Latest Edition
7	Human Anatomy	B D Chaurasia	7 th Edition
8	Cunningham's Companion to Manual of Practical Anatomy. Vol I, II and III	Cunningham	15 th edition
9	Developing Human	Keith L Moore and Persaud	11 th Edition
10	Clinically oriented Anatomy	Keith L Moore	7 th edition
11	Clinically oriented Neuro Anatomy	Richard Snell	7 th edition
12	Surface and Radiological Anatomy	Halim	3 rd edition, 2011, CBS publication
13	Grant's Methods of Anatomy	Grant	11 th Edition
14	Grant's dissector	Alan J. Detton	16/E edition (2017), Wolters Kluwer
15	Human Embryology	I. B. Singh	11 th edition



KRIYA SHARIR

TITLE OF THE PROGRAM : KRIYA SHARIR
PROGRAM CODE : AVF303
MARKS : THEORY – 400, PRACTICAL - 100, TOTAL -500

GOALS

The aim of the program is to prepare P.G. student in the subject of kriya-Sharir who shall

1. Teach and train future undergraduate and postgraduate medical students in Kriya-Sharir in Ayurved Colleges and Research Institutions.
2. Carry out and guide research and contribute to advancement of the subject.

LEARNING OBJECTIVE

At the end of Program a P.G. student should

1. Have thorough knowledge of functions of the body according to ayurved and modern physiology.
2. Interpret inter-relations between the systems according to ayurved and modern physiology.
3. Be able to examine the patients with help of basic Ayurvedic Parikshans.
4. Be able to perform various systemic physiological and clinical examinations.
5. Be able to design the research protocol related to subject.
6. Be able to design and prepare dissertation according to university norms.
7. Be able to come up with conclusion on selected research topic.

LEARNING OUTCOME :

- **COGNITIVE DOMAIN :**
All the systems of the body should be studied with respect to:
 - a) Historical aspect
 - b) Basic Principles of sharir.
 - c) Evolution and development

- d) Structure-gross and electron microscopic and functions at cellular level
- e) Quantitative and qualitative aspects
- f) Regulating mechanisms
- g) Variations in physiological and pathological conditions
- h) Applied physiology
- i) Recent advances
- **PSYCHOMOTOR DOMAIN :**
P.G. students should be able –
 - a) Demonstrate human experiments in ayurvedic and modern perspective
 - b) Perform Hematology experiments based on biophysical principles.
 - c) Acquire history taking and clinical examination skills.
- **AFFECTIVE DOMAIN**
The P.G. students should –
 - a) Develop communication skills to interact with students, colleagues, superiors and other staff members.
 - b) Provide information using verbal, nonverbal, written and technological skills.
 - c) Be able to work as a member of a team to carry out research activities.
 - d) Have right attitude (medical ethics) toward teaching profession.
 - e) Communicate results accurately and professionally with others verbally and in writing.
 - f) Demonstrate ability to effectively use the feedback provided by others.

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weight age (Marks)
PAPER – I (CODE NO. - AVF3031)			100
KRIYA SHARIR			Marks
Part A			
1.	Theory of Pancamahābhūta	2	15
2.	Principle of Loka-Purusa Sāmya	1	
3.	Importance of Sāmānya - Viśesa principle.	2	
4.	Different views on the composition of Purusa and the importance of Cikitsya Purusa.	2	
5.	Importance of Gurvādi Guna in Ayurveda.	2	
6.	General description of Tridosa theory	2	
7.	Mutual relationship between Triguna	2	
8.	Mutual relationship between Rutu-Dosa-Rasa-Guna.	1	
9.	Biological rhythms of Tridosa on the basis of Day – Night - Age -Season and Food intake.	2	
10.	Role of Dosa in the formation of Prakrti of an individual.	2	
11.	Role of Dosa in maintaining health.	2	
12.	Vāta Dosa: General locations (Sthāna), general attributes (Guna) and general functions (Sāmānya Karma). Five subdivisions of Vāta with their specific locations, specific properties, and specific functions (Prāna, Udāna, Samāna, Vyāna, Apāna)	7	15
13.	Pitta Dosa: General locations (Sthāna), general attributes (Guna) and general functions (Sāmānya Karma). Five subdivisions of Pitta with their specific locations, specific properties, and specific functions (Pācaka, Ranjaka, Ālocaka, Bhrājaka, Sādhaka). Similarities and differences between Agni and Pitta.	6	15
14.	Kapha Dosa: General locations (Sthāna), general attributes (Guna) and general functions (Karma) of Kapha. Five subdivisions of Kapha with their specific locations, specific properties, and specific functions (Bodhaka, Avalambaka, Kledaka, Tarpaka, Ślesaka).	6	15
15.	Applied physiology of Tridosa principle: Kriyākāla, Dosa Vrddhi-Dosa Ksaya.	2	

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weight age (Marks)
Part B			
16.	Dhātu Posana: Process of nourishment of Dhātu. Description of various theories of Dhātu Posana (Ksīra-Dadhi, Kedāri-Kulya, Khale Kapota etc).	4	15
17.	Dhātu: General introduction and definition of Dhātu. Formation, Definition (Nirukti), Distribution, Attributes, quantity, classification, Pāñcabhautika composition and Functions of all seven Dhātus in detail: Rasa, Rakta, Māmsa, Meda, Asthi, Majjā, Śukra.	12	
18.	Applied physiology of Dhātu: Manifestations of Ksaya and Vriddhi of each Dhātu. Description of Dhātu Pradosaja Vikāra.	5	
19.	Description of Āśraya and Āśrayī kind of relationship between Dosa and Dhātu.	2	
20.	Description of the characteristic features of Astavidha Sāra. Description of Rasavaha, Raktavaha, Māmsavaha, Medovaha, Asthivaha, Majjāvaha and Śukravaha Srotāmsi.	8	15
21.	Ojas: Definition, locations, synonyms, Formation, Distribution, Properties, Quantity, Classification and Functions of Ojas. Description of Vyādhiksamitva. Bala Vrddhikara Bhāva. Classification of Bala. Relation between Ślesmā, Bala and Ojas.	4	
22.	Applied physiology of Ojas: Etiological factors and manifestations of Ojaksaya, Visramsā and Vyāpat. Physiological and clinical significance of Ojas.	3	
23.	Upadhātu: General introduction and Definition of the term 'Upadhātu'. Formation, Nourishment, Quantity, Properties, Distribution and functions of each Upadhātu.	3	10
24.	Stanya: Characteristic features and methods of assessing Śuddha and Dūṣita Stanya, Manifestations of Vriddhi and Ksaya of Stanya.	3	

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weight age (Marks)
25.	Ārtava: Characteristic features of Śuddha and Dūṣita Ārtava. Differences between Raja and Ārtava, physiology of Ārtavavaha Srotāmsi.	3	
26.	Study of Tvak	2	
27.	Physiology of Mala - Definition of the term 'Mala'. Definition, Formation, Properties, Quantity and Functions of Purīsa, Mutra. Manifestations of Vrddhi and Kshaya of Purīsa and Mūtra.	5	
28.	Sveda – Definition, Formation, Properties, Quantity and Functions of Svedavaha Srotāmsi. Formation of Sveda. Manifestations of Vrddhi and Kshaya of Sveda.	2	
29.	Dhātumala – Definition, Formation, properties, Quantity, Classification and Functions of each Dhātumala.	3	
PAPER – II (CODE NO: AVF3032) PRAKRTI - SATTVA VIJÑĀNA			100 Marks
Part A			
1.	Deha-Prakrti: Various definitions and synonyms for the term 'Prakrti'. Factors influencing the Prakrti. Classification of Deha-Prakrti. Characteristic features of the individuals belonging to each kind of Deha-Prakrti. Recent advances in understanding the Prakrti.	20	30
2.	Pancajnanendriya: Physiological description of Pancajnanendriya and physiology of perception of Śabda, Sparśa, Rūpa, Rasa, Gandha. Indriya-panca-pancaka; Physiological description of Karmendriya.	20	20
3.	Manas – Definition, location (sthana), Properties, Functions and Objects of Manas.	5	
Part B			
4.	Ātmā – Definition, Properties of Ātmā. Difference between Paramātmā and Jīvātmā; Characteristic features of Ātmā.	5	20
5.	Buddhi – Location, Types, Functions of Buddhi; Physiology of Dhī, Dhrti and Smrti.	3	

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weight age (Marks)
6.	Nidrā – Definition of Nidrā, Classification of Nidrā. Tandra, physiological and clinical significance of Nidra; Svapnotpatti and Svapnabheda.	5	
7.	Physiology of special senses. Intelligence, Memory, Learning and Motivation.	18	15
8.	Physiology of sleep.	7	15
9.	Physiology of speech and articulation	10	
10.	Physiology of Pain and temperature.	7	
PAPER - III (CODE NO: AVF3033) KOSTHANGA KRIYA VIJÑĀNA			100 Marks
Part A			
1.	Āhāra: Definition and significance of Āhāra. Classification of Āhāra. Āhāra-vidhividhāna. Asta āhāra-vidhi viśesāyatana, Āhāraparināmakara bhāva.	15	30
2.	Āhārpāchana: Āhāra Pāka Prakriyā, Description of Annavaḥa Srotās. Description of Avasthāpāka and Nishthapaka. Role of doṣha in Āhārapāka. Sāra and Kitta Vibhajana. Absorption of Sāra. Utpatti and Udieeran of Vāta-Pitta-Kapha.	20	
3.	Definition of the term Kostha. Physiological classification of Kostha and the characteristics of each kind of Kostha.	04	
4.	Agni: Description of the importance of Agni. Classification of Agni. Locations, properties and functions of Jātharāgni, Bhūtāgni, and Dhātvaḥni. Applied physiology of Agni in Kriyā Śārīra and Cikitsā.	12	
5.	Description of the aetiology and features of Annavaḥa Srotodusti. Applied physiology of Annavaḥa Srotās: Arocaka, Aḥjīrna, Atīsāra, Grahanī, Chardi, Parināma Śūla Agnimāndya.	5	

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weight age (Marks)
Part B			
6.	Description of the process of digestion of fats, carbohydrates and proteins in human gastrointestinal tract. Different digestive juices, their enzymes and their mechanisms of action. Functions of Salivary glands, Stomach, Pancreas, Small intestine, Liver and large intestine in the process of digestion and absorption. Movements of the gut (deglutition, peristalsis, defecation etc.) and their control. Role of neuro-endocrine mechanisms in the process of digestion and absorption. Enteric nervous system. Applied physiology of gastrointestinal tract: Vomiting, Diarrhoea, Malabsorption etc. Recent understandings related to the gut microbiota and their role in health and disease.	22	30
7.	Introduction to biochemical structure, properties and classification of proteins, fats and carbohydrates.	4	10
8.	Description of the processes involved in the metabolism of proteins, fats and carbohydrates.	10	15
9.	Vitamins: sources, daily requirement and functions. Physiological basis of signs and symptoms of hypo and hyper-vitaminosis.	8	15
PAPER - IV (CODE NO: AVF3034) MODERN PHYSIOLOGY AND ITS APPLIED ASPECT			100 Martks
Part A			
1.	Physiology of Neuro-Immune-Endocrine Mechanisms: Physiology of Nervous System. General introduction to nervous system: neurons, mechanism of propagation of nerve impulse. Study of CNS, PNS and ANS. Sensory and motor functions of nervous system. Functions of different parts of brain and spinal cord, Hypothalamus and limbic system	15	15

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weight age (Marks)
2.	Physiology of Endocrine system. Classification and characteristics of different hormones. Description of hormones secreted by Hypothalamus, Pituitary gland, Thyroid gland, Parathyroid glands, Pancreas, Adrenal glands and their physiological effects. Effects of hypo and hyper-secretion of various hormones.	10	15
3.	Male and female reproductive physiology. Spermatogenesis and oogenesis. Hormonal regulation of uterine and ovarian cycles. Physiology of pregnancy and lactation. Parturition.	8	15
4.	Adipose tissue and its Function. Circulating lipids. Description of lipoproteins like VLDL, LDL and HDL and their composition.	2	
5.	Physiology of immune system. Definition and classification of immunity: Innate, acquired and artificial. Mechanisms involved in humoral and cell mediated immunity. Cardiovascular physiology, Respiratory physiology and Blood:	5	
Part B			
6.	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. Regional circulations. Physiology of lymphatic circulation.	8	30
7.	Physiology of Respiratory system: Functional anatomy of respiratory system. Ventilation. Mechanism of respiration. Exchange and transportation of gases. Neural and chemical control of respiration. Spirometry and lung function tests. Artificial respiration.	8	

Sr. No.	Syllabus	No. of lectures (Hrs.)	Weight age (Marks)
8.	Functions of Haemopoetic system: Composition and functions of blood and blood cells. Haemopoiesis- (stages and development of RBCs, WBCs and platelets); Introduction to bone marrow: composition and functions of bone marrow. Structure and functions of haemoglobin, mechanism of blood clotting, study of platelets. physiological basis of blood groups. Principles of blood transfusion, plasma protein synthesis and functions. Applied physiology: Anaemia, Jaundice.	8	
9.	Musculoskeletal Physiology: physiology of muscles. Classification of muscles. Electrical and mechanical properties of Cardiac, skeletal and smooth muscles.	5	15
10.	Physiology of excretion. Functional anatomy of urinary tract. Functions of kidneys. Mechanism of formation of urine. Control of micturition. Renal function tests. Structure and functions of skin, sweat glands and sebaceous glands.	11	
11.	Learners should be well versed with the following instruments-Physiograph, Computerised spirometry, Biochemical Analyzer, Pulse oxymeter, Elisa Reader, Hematology Analyzer, Tread mill Bridge areas including recent advances:	09	10
12.	Recent studies in biorhythms.	2	
13.	Recent advances in Neuro-Immune-Endocrine physiology.	5	
14.	Recent advances in stem cell research	4	

PRACTICAL DISTRIBUTION :

Sr. No.	TOPIC
	AYURVEDIC PRACTICALS
1.	Assessment of Prakrti
2.	Assessment of Sāra
3.	Assessment of Dosa Vrddhi Ksaya Laksana
4.	Assessment of Dhātu Vrddhi – Ksaya Laksana
5.	Assessment of Agni
6.	Assessment of Kostha
7.	Assessment of Śarīra Bala through Vyāyāma Śakti
8.	Mūtra Parīksa
9.	Nādī Parīksā
10.	Anguli Pramāna
11.	Assessment of Sātmya
	HEMATOLOGY
1.	Use and care of Compound microscope
2.	Histological study of different organs
3.	Hemoglobin estimation
4.	Total RBC count
5.	Total WBC count
6.	Differential leukocyte count
7.	Packed cell volume (PCV)
8.	ESR
9.	Bleeding time
10.	Clotting time
11.	Blood grouping and Rh typing
	URINE EXAMINATION
12.	Physical examination Specific gravity and reaction of urine
13.	Detecting the presence of Albumin in urine
14.	Detecting the presence of Sugar in urine
15.	Detecting the presence of Ketone bodies in urine
16.	Detecting the presence of Bile salts and bile pigments in urine
	CARDIOVASCULAR SYSTEM EXAMINATION
17.	Clinical methods of examining cardiovascular system
18.	Examination of Arterial Pulse
19.	Arterial blood pressure measurement
20.	ECG recording and its interpretation
21.	Heart Sounds

RESPIRATORY SYSTEM EXAMINATION	
22.	Clinical examination of Respiratory System
23.	Lung Function Tests including Spirometry
NERVOUS SYSTEM EXAMINATION	
24.	Clinical examination of nervous system
25.	Examination of higher mental functions
26.	Examination of cranial nerves
27.	Examination of reflexes
28.	Examination of sensory functions
29.	Examination of motor functions
30.	Examination of Autonomic Nervous System
31.	EEG recording (Demonstration)

PRACTICAL MARK DISTRIBUTION (100 Marks)

Practical Heads	Marks
Practical Record book	05
Ayurvedic Practical	10
Modern Practical -	10
Assessment of Teaching skill	10
Project work	10
Presentation of Thesis	15
Viva Voce	30
Log-Book	10

REFERENCE BOOKS FOR PRACTICAL :

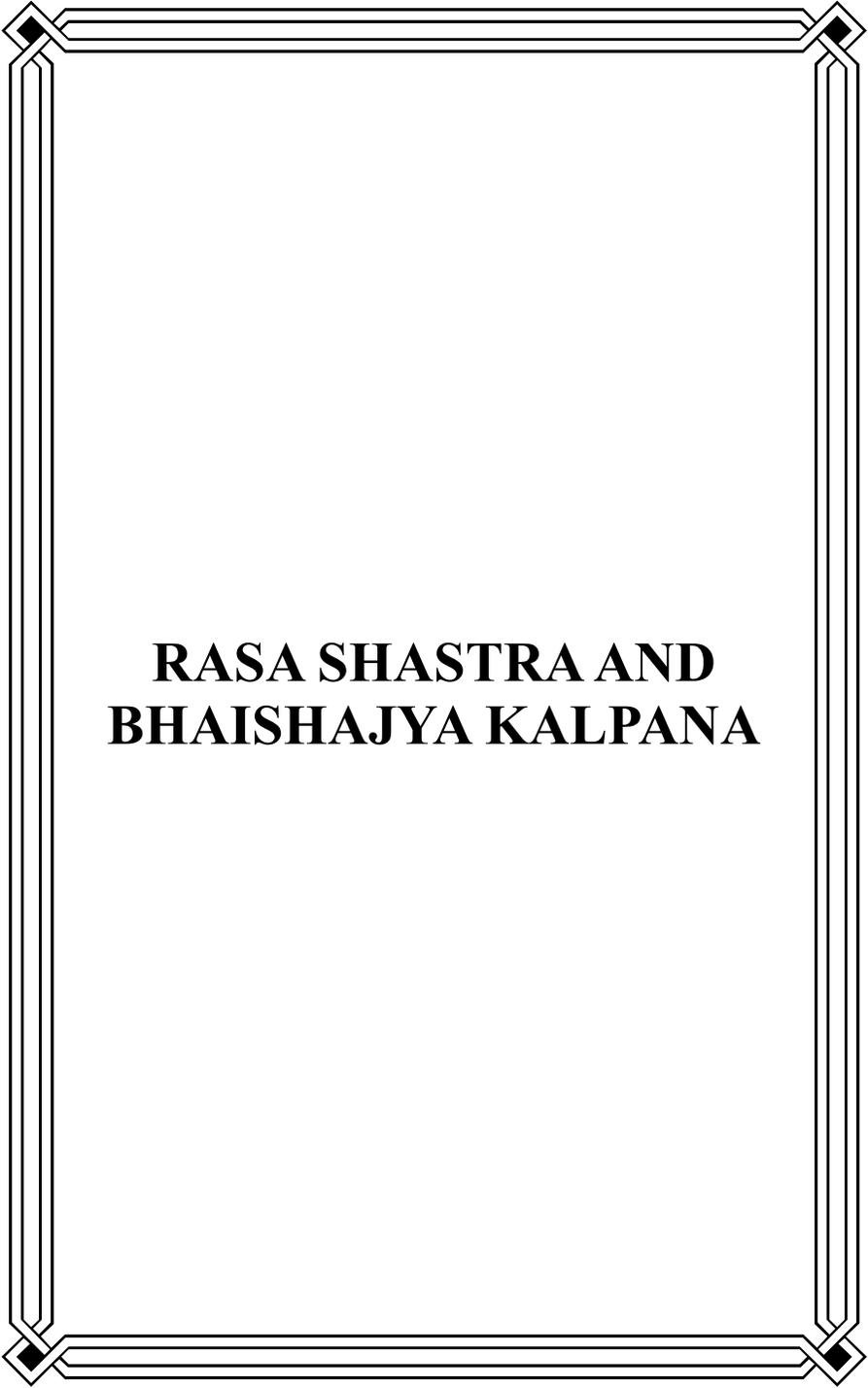
Sr. No.	Books	Author	Publication	Editions
1.	Ayurvediya Kriyasharir	Ranjit Rai Desai	Baidyanath ayurved bhavan, Ilahabad	2008
2.	Kayachikitsa Parichaya	C. Dwarkanath	Chaukhambha orientalia	1996
3.	Prakrit Agni Vigyan	C. Dwarkanath	--	--
4.	Sharir Kriya Vigyan	Shiv Charan Dhyani	Chaukhambha orientalia	1 st edition 1986
5.	Abhinava Sharir Kriya Vigyana	Acharya Priyavrata Sharma	Chaukhambha bharti akadmik	7 th edition 1996

Sr. No.	Books	Author	Publication	Edi-tions
6.	Dosha Dhatu Mala Vigyana	Shankar Gangadhar Vaidya	-	-
7.	Prakrita Dosha Vigyana	Acharya Niranjana Dev	Ayurvedic tibbi akadami	1 st edition 1971
8.	Tridosha Vigyana	Shri Upendranath Das	-	-
9.	Sharira Tatva Darshana	Hirlekar Shastri	Maharashtra rajya sahitya and sankruti mandal	1 st edition 1987
10.	Prakrita Agni Vigyana	Niranjana Dev	Ayurvedic tibbi akadami	1 st edition 1971
11.	Deha Dhatvagni Vigyana	Vd. Pt. Haridatt Shastri	-	-
12.	Sharir Kriya Vigyana (Part 1-2)	Acharya Purnchandra Jain	Chaukhambha sanskrut pratishthan	1 st edition 2000
13.	Sharir Kriya Vigyana	Shri Moreshwar Dutta Vaidya	Chaukhambha sanskrut pratishthan	2008
14.	Sharira Kriya Vijnana (Part 1-2)	Nandini Dhargalkar	Chaukhambha sanskrut series office	2 nd edition 2009
15.	Dosha Dhatu Mala Vigyana	Basant Kumar Shrimal	Chaukhambha surbharti prakashan	2005
16.	Abhinava Sharir Kriya Vigyana	Dr. Shiv Kumar Gaur	Nath pustak bhandar Rohatak	1973
17.	Pragyogik Kriya Sharir	Acharya P.C. Jain		
18.	Concept of Agni	Vd. Bhagwan Das	Vidya vilas press	1971
19.	Purush Vichaya	Acharya V.J. Thakar	Gujarat ayurved university, Ayurved mudranalay	1984

Sr. No.	Books	Author	Publication	Edi- tions
20.	Kriya Sharir	Prof. Yogesh Chandra Mishra	Chaukhambha publication	1 st edition 2008
21.	Sharir Kriya Vigyana	Prof. Jayaram Yadav and Dr. Sunil Verma	Chaukhambha orientalia	2013
22.	Basic Principles of Kriya-Sharir (A treatise on Ayurvedic Physiology)	Dr. Srikant Kumar Panda	Chaukhambha orientalia	2006
23.	Sharir Kriya – Part I and II	Dr. Ranade, Dr. Deshpande and Dr. Chobhe	Profishant publishing house	2015
24.	Human Physiology in Ayurveda	Dr Kishor Patwardhan	-	-
25.	Sharirkriya Vignyan Practical Hand Book	Dr. Ranade, Dr. Chobhe,	Profishant publishing house	2015
26.	Sharir Kriya Part 1 and 2	Dr. R. R. Deshapande	Shantanu Prakashan	2014
27.	Textbook of Physiology	Gyton and Hall	Elsevier publication	13 th ed. 2006
28.	Review of medical physiology	William Ganong	Lange publisher	22 nd edition
29.	Essentials Of Medical Physiology	Sembulingam, K.	Jayapee brothers	6 th edition 2013
30.	Concise Medical Physiology	Chaudhari, Sujit. K	New central book agency	6 th edition 2006
31.	Fundamental of Anatomy and Physiology	Martini	Pearson	11 th edition
32.	Principals of Anatomy and Physiology	Tortora and Grabowski	CBS publication/ saunders	13 th edition 2011
33.	Human Physiology	Richards, Pocock	Oxford publication	5 th edition 2015

Sr. No.	Books	Author	Publication	Editions
34.	Samson Wrights Applied Physiology, Keele, Neil, joels		OUP india	13 th edition 2015
35.	Brainstem Control of Wakefulness And Sleep	Steriade, Mirce	PLENUM press newyork/ Springer	2 nd edition
36.	An Introduction to Human Physiology	Green, J. h.	Oxford medical publication	1996
37.	Ancient Indian Medicine	Kutumbiah P.	Orient black swan	1999
38.	Biographical History of Indian Medicine	Srikanthamurthy KR	-	-
39.	Ayurveda Kriya Sharira	Yogesh Chandra Mishra	Chaukhambha sanskrut sansthan	1 st edition 2008
40.	Textbook of Medical Physiology	Indu Khurana	Elsevier publication	2013
41.	Tridosha Theory	Subrahmanya Shastri	Arya vaidya shala, Kottakal	April 2002
42.	Statistics in Medicine	K. Syamalan	Global education beauro	-

Sr. No.	IMPORTANT JOURNALS TO REFER
1.	Advances in Physiology Education
2.	Academic Medicine
3.	Indian journal of Physiology and Pharmacology
4.	Journal of Ayurveda and Integrative Medicine
5.	Evidence-based Complementary and Alternative Medicine AYU
6.	All journals of American Physiological Society
7.	Journal of Physiology
8.	Recent Reseach Papers in Kriya Sharir / Physiology



**RASA SHASTRA AND
BHAISHAJYA KALPANA**

**TITLE OF THE PROGRAM : RASASHASTRA AND BHAISHAJYA
KALPANA**
PROGRAM CODE : AVF304
MARKS: - THEORY- 400, PRACTICAL-100, TOTAL - 500

GOALS

To make student competent in Preparation of Herbo - mineral medicines and Standardization, Therapeutic uses.

LEARNING OBJECTIVE

1. To acquire the theoretical knowledge and principles related to Rasashastra and Bhaishajya kalpana.
2. To identify the various raw drugs used in the preparation of Ayurvedic medicine.
3. To collect the raw drugs used in the preparation of Ayurvedic medicine.
4. To know the standard operating procedure for ayurved dosage forms.
5. To know standardization parameter for raw drugs and ayurved dosage forms theoretically and Practically.
6. To develop and modify classical formulations adopting modern technology.
7. To know rules and acts related to manufacture Ayurved medicines.
8. To identify and knowledge of Modern instruments related to preparation and standardization.

LEARNING OUTCOME

1. Identify and collect various raw drugs.
2. Acquire the theoretical knowledge and principles.
3. Know the standard operating procedure for Ayurved dosage forms.
4. Know standardization parameter for raw drugs and Ayurved dosage forms theoretically and practically.
5. Know the therapeutic uses of various formulations.
6. Identify and know modern instruments for preparation and standardization.

- **COGNITIVE DOMAIN**

At the end of the training students should be able to -

1. Have theoretical knowledge about ayurvedic Iatrochemistry
2. Have knowledge of Formulation, various dosage forms, therapeutic uses of formulations, standardization, Modern instruments.

- **PSYCHOMOTOR DOMAIN**

At the end of the training students should be able to-

1. Identify various minerals and metals on ayurved and modern parameter.
2. Identify various medicinal plants on ayurved and modern parameter.
3. Demonstrate and standardize of raw drugs as per Ayurvedic Pharmacopeia of India and WHO guidelines.
4. Demonstrate and standardize of ayurvedic dosage forms as per Ayurved Pharmacopeia of India and WHO guidelines.
5. Prepare of different dosage forms as per Ayurved formulary of India.
6. Educational visits to minimum 5(five) GMP approved Ayurvedic pharmacies.
7. Establish ayurved pharmacy with GMP norms.
8. Prepare and deliver lecture on various topics using Audio – visual aids.
9. Identify various e-learning resources related to Rasashastra and Bhaishjya Kalpna and inculcate them for self learning.
10. Identify research topics, carry out pilot study and prepare synopsis.

AFFECTIVE DOMAIN

At the end of the training students should be able to-

1. Utilize Rasashastra and Bhaishajya Kalpana formulation and therapeutic uses in clinical practices.
2. Comprehend the acquaintance of identification, manufacturing and standardization of Ayurvedic Formulations.
3. Teach and spread knowledge at institute level and worldwide.
4. Support the students in their learning and inspire them to reach the level of excellence.
5. Utilize scientific methods for new inventions in Rasashastra and Bhaishajya kalpana.
6. Establish ayurved pharmacy

PROGRAM DESCRIPTION :

Sr. No.	Topics	Description	No of Lect-ures	Weigh-tage
PAPER I : (CODE NO. - AVF3041)				100
RASASHASTRA				Marks
Part –A				
1.	History and chronological evaluation of Rasashastra	Concept of Raseshwara darshan. Fundamental principles of Rasashastra, technical terminologies (Paribhasha) used in Rasa shastra	02	10
2.	Detailed Knowledge of ancient and contemporary Yantropakaran and their accessories used in aushadhikaran	Their contemporary modification such as yantra, mushas, Putas, koshtis, bhrashtris, muffle furnace and other heating appliances, ovens, driers etc. used in manufacturing of Rasaushadhis in small scale and large scale, along with their applications.	05	10
3.	Concept of Aushadhikaran	Study of sanskara, Role of Agni (heat), Jala (water) and other dravyas (Liquids), Kala (season), Patra (container) etc. and their significance in	02	05

Sr. No.	Topics	Description	No of Lect-ures	Weigh-tage
		Aushadhikaran		
4.	Concept of Bhavana	Concept of Bhavana, Study of Mardana and its significance and knowledge of ancient and contemporary Grinding Techniques	02	05
5.	Concept of Shodhana and Marana	Detailed Knowledge of different procedures of Shodhana, Jarana, Murchana and Marana, Concept of Puta, Definition, types and specifications of Different putas. Significance of Different Putas in Relation to Bhasmikaran and Therapeutic efficacy of dravya under process. Bhasma pariksha vidhi and its significance in Relation to contemporary testing procedures. Amritikaran and Lohitikaran	10	12
6.	Concept of Satva and Druti	Detailed Knowledge of satva and Druti, satva shodhan, mrudukaran and maran of satva, its significance, in relation to Therapeutic efficacy of dravya under process	02	05
7.	Concept of Pratinidhi	Concept of Pratinidhi (substitute) dravya and discussion on controversial drugs	01	03
Part B				
1	Parad	Detailed ancient and contemporary knowledge of parad and its compounds with reference to source, occurrence, physio-chemical characterization, graahya-agrahyatva, Parad dosha, Parad gati, Parad shodhan, study of Ashtasankara, Ashtadasha	11	10

Sr. No.	Topics	Description	No of Lect-ures	Weigh-tage
		sanskara etc., hingulottha Parad. Concept of Parad Jaran, moorchana, bandhan, pakshaccheda and marana etc. Therapeutic properties and uses of Parad.		
2	Classification of Rasa dravya and Detailed study	Detailed ancient and contemporary knowledge with Geochemical / mineralogical/ biological identification , source, Occurrence, Physio-chemical characterization, graahya-agraahyatva, shodhan, maranadi vidhi and therapeutic Propertiesand uses of dravyas etc. included in Maharasa, Uparasa, Sadharan Rasa, Dhatu, Upadhatu, Ratna, Uparatna, Visha, Upavisha, Sudha varga, Lavan varga, Ksharvarga, Sikata varga, and other miscellaneous drugs used in Rasashashtra	20	10
3	Rasakalpa – Bhasma and Pishti	Detailed Knowledge of manufacturing, pharmacopoeial standards, storage, shelf life, therapeutic efficacy, dose, anupana, vikarashanti upaya and development of Technology with standard operating Procedures of processing, standardization, quality control of following bhasmas & Pishtis. Bhasma- Abhraka Bhasma, Svarnamakshika Bhasma, kasis Bhasma, Svarna Bhasma, Rajat Bhasma, Tamra Bhasma, Loha Bhasma, Mandura Bhasma, Naga Bhasma, Trivanga Bhasma	20	10

Sr. No.	Topics	Description	No of Lect-ures	Weigh-tage
4		Pittala Bhasma, Kamsya and Vartaloha Bhasma, shankha Bhasma, Shukti Bhasma, Kapardika Bhasma, Godanti Bhasma, Praval Bhasma, Mrigashringa Bhasma, Mayurpiccha Bhasma, kukkutanda tvak Bhasma, Hiraka Bhasma, Manikya Bhasma. Dravaka- Shankha Dravaka Pishti- Pravala Pishti, Manikya Pishti, Mukta Pishti, jahara Mohara Pishti, Trinakantamani Pishti etc.		
5	Rasakalpa - kharaliya rasa, parpati, kupipakava rasa and pottali rasa.	Detailed Knowledge of manufacturing, storage, shelf life, pharmacopoeial standards, therapeutic efficacy, dose, anupana, and development of technology with standard Operating Procedures of processing, standardization, and quality control of kharaliya rasa, parpati, kupipakava rasa and pottali rasa.	10	10
6	Critical study of Classical Rasa texts.	Study of classical texts with respective commentaries and special emphasis on Rasarnava, Rasahridaya Tantra, Rasa ratna samucchaya, Rasendra Chintamani, Rasendra chudamani, Rasa ratnakar, Rasadhyaya, Rasa kamdhenu, Rasa chandanshu, Anandakanda, siddha Bhaishjya Manimala, Ayurved Prakash, Rasatarangini, Bhaishajya Ratnavali, Rasamritam etc. and	15	10

Sr. No.	Topics	Description	No of Lect-ures	Weigh-tage
		the books mentioned in the schedule I of D and C Act – 1940. Relevant portion of Brihatrayi.		
PART II (CODE NO. : AVF3042) BHAISHAJYA KALPANA				100 Marks
Part A				
1.	History and Fundamental Principal of Bhaishajya Kalpna	History and chronological evolution of Bhaishajya kalpana, concept of Bhesaja and aushadh fundamental principles of Bhaishajya kalpana. Technical terminologies (paribhasha) used in Bhaishajya Kalpana.	03	03
2.	Classical and contemporary concept of collection, Storage, saviryata avadhi and preservation of different fresh and dry aushadhi dravyas and their graahya-agraahyatva	Classical and contemporary concept of collection, Storage, saviryata avadhi and preservation of different fresh and dry aushadhi dravyas and their graahya-agraahyatva. Knowledge about Good colletion and storage practices (GCP and GSP) as per WHO and NMPB guidelines.	03	03
3.	Routes of drug administration, Aushadha matra, Posology, Anupana Aushada sevan kal	Detailed knowledge of routes of drug administration, Aushadha matra, Posology, Anupana, Sahapana, Aushadha Sevana kala, Sevan Avadhi, Pathya, Apathaya	03	03
4.	standardization, quality control, pharmacopoeial standards	Detailed Knowledge of manufacturing, standardization, quality control, pharmacopoeial standards, storage, shelf life and		

Sr. No.	Topics	Description	No of Lect-ures	Weigh-tage
		development of innovative technology with Standard operating Procedures of following dosage forms		
5.	Panchvidh kashay kalpna and Upkalpna	Panchavidha Kashaya, Churna, Rasakriya, Ghana, Avaleha, Pramathya, Mantha, Panaka, Sarkara, Kshirapaka Ushnodaka, Aushadha Siddha Udaka, Arka, Satva, Kshara, Lavana, Mashi, Gutika, Vatika Modaka, Guggulu and varti etc.	10	10
6.	Sneha Kalpana	sneha kalpana: concept of accha sneha and sneha pravicharana and murchhana. Sneha paka types of sneha paka and sneha siddhi lakshana, avartana. Sneha kalpa karmukata (pharmaco kinetics and dynamics of sneha kalpa). Role of Sneha in relation to absorption of drug	05	05
7.	Pathya kalpana	kritanna and Bheshaja Siddha Anna Kalpana, Shuka and Shimbi Dhanya Kalpana, Dugdha, Dadhi, takra vikar and Mansarasadi Krutanna Kalpana, Aharopayogi Varga, concept of medicinal and functional food, dietary supplements and neutraceuticals etc	05	05
8.	Sandhan Kalpana	Sandhana Kalpana: Madya varga and shukta varga. Asava yoni. Alcoholic and acidic fermentation. Sandhana kalpa karmukata (Pharmacokinetics and Dynamics). Advances in fermentation technology. Knowledge of regulations in relation to alcoholic drug	06	06

Sr. No.	Topics	Description	No of Lect-ures	Weigh-tage
		preparations		
9.	Bahya Prayogarthakalpana	Bahya Prayogarthakalpana: Lepa, Upanaha, Udvarthan, Avachurana / Avadhulana, Abhyanga, Dhupana, Malahara	05	05
10.	Mukha, karna, Nasa, Netropacharartha, Kalpana.	Mukha, karna, Nasa, Netropacharartha, Kalpana.	05	05
11.	Basti Kalpana	Basti Kalpana: Basti Yantra Nirmana, Types of basti. Anuvasana and Asthapana basti. Karma, kala and yoga basti etc. Basti Kalpa (Madhutailika, Piccha basti etc.) Comparison of Asthapana and Anuvasana basti with evacuation and retention enema	05	05
Part B				
All the following procedures are to be studied in relevance to Ayurvedic Bhaishajya kalpas				
1	Methods of Expression and Extraction	Methods of Expression and Extraction: Maceration, percolation, distillation, infusion and decoction. Knowledge about Filtration techniques	05	05
2	Methods of Drying	Drying, open and closed air drying, freeze drying, vacuum drying and other drying methods pharmaceutical excipients	07	07
3	Liquid Dosage Forms	Liquids : Clarified liquid, Syrup, Elixir	05	05
4	Solid dosage Forms	Solid dosage Forms : powders : Size reduction, separation techniques, Particle size determination, Principles of mixing Tablets : Methods of tableting,	10	10

Sr. No.	Topics	Description	No of Lect-ures	Weigh-tage
		Suppositories, Pessaries and Capsules, Sustained release dosage forms.		
5	Semisolid dosage forms	Semisolid dosage forms- Emulsions, Suspensions, Creams and Ointments, sterilization of Ophthalmic Preparations	08	08
6	Cosmetic Preparations	An introduction to various cosmetic Preparations such as Toiletries, Shampoo, Shaving Creams, Hair oils, Face powders (Talcum). Vanishing creams, lotions and Moisturisers, Face pack, Deodourants, Perfumes	10	10
7	Study of classical texts	Study of classical texts with special emphasis on Chakradatta, Sharangadhara Samhita, Bhaishajya Ratnavali, Bhava Prakasha, Yogaratnakara, relevant Portions of Brihatrayi, Ayurvedic Pharmacopeia of india, Ayurvedic Formulary of india	05	05

Sr. No.	Topics	Description	No of Lect-ures	Weigh-tage
PAPER-III : (CODE NO. - AVF3043)				100
RASA CHIKITSA and AUSHADHA YOGA VIGYANA				Marks
Part –A				
1	Ashudh and Apakva sevana dosha and Rasachikitsa	Rasachikitsa, Kshetrikaran, Rasajarna, Lohajarna, Ashuddha, Apakva, Avidhi Rasadravya Sevanajanya Vikara evam Vikara shanti upaya (Management and Knowledge of untoward effects of inappropriately Processed and	05	05

		administered drugs)		
2	Formulation design and composition	Detailed Knowledge of Aushadhi patha Nischiti and Sanyojan (Formulation design and composition), Dose, Anupana and Method Of administration, therapeutic efficacy and Uses (indications and contra – indications), Probable mode Of action etc.Of the following Aushadhi Yogas	05	05
a	Kharaliya Rasa	Kharaliya Rasa: Shwasa Kuthara Rasa, Tribhuvana Kriti Rasa , Higuleshwara Rasa, Anand bhairava Rasa, Maha Lakshmivilasa Rasa, vasnata Kusumakara Rasa, vasanta malti Rasa, Brihat vata chintamani Rasa,Laghu suta shekhar Rasa, suta shekhara Rasa, Ram ban Rasa, Chandra kala Rasa, Yogendra Rasa, Hridyarnava rasa, Grahani Kapata Rasa, Garbha pala Rasa, Jalodarari Rasa, Mrityunjaya Rasa, Madhumalini vasanta Rasa, Arsha Kuthara Rasa, Krimi mudgara Rasa, Suchika bhavana Rasa,Tri nerta Rasa, Smruti sagara Rasa, Vata gaJankusha Rasa, Agni Kumar Rasa, Ekangavir Rasa, Kama dudha Rasa, Purna chandrodaya Rasa, Pratap lankeshwara Rasa, Maha Vata vidhwansaka Rasa,Kasturi bhairava Rasa, Ashwa Kanchuki Rasa, Gulma Kuthara Rasa, Maha Jwarankusha Rasa, Chandramrita Rasa, Kapha Ketu Rasa, Prabhakara Vati, Pravala Panchamrita, Gandhaka Rasayana, Chaturbhuj rasa, NavaJivan rasa, Shonitargal rasa,	10	10

		Raktapitta Kulakandan rasa, Amavatari Rasa, Kravyada Rasa, Garbha chintamani Rasa, Chintamani Rasa, Trailokya chintamani Rasa, Pradarantaka Rasa, Vangeshwara Rasa, Brihat vangeswara Rasa, Shwasakasa Chintamani Rasa, Arogya vardhini Vati, Chandra Prabha Vati, Agni tundi vati, Shankha vati.		
b	Kupipakva Rasa	Kupipakva Rasa : Rasa Sindura, Makaradhawaja, Sidha makaradhawaja, Samira Pannaga Swarnarvangeshvar, Malla sindura, Rasa Karpur, Rasa pushpa, Manikya Rasa.	10	10
c	Parpati Rasa	Parpati Rasa:Rasa Parpati, Loha Parpati, Tamra Parpati, Suwarna Parpati, Gagana Parpati, Vijay Parpati , Panchamrit Parpati, Shwet Parpati, Bola parpati	05	05
d	Pottali Rasa	Pottali Rasa : Rasagarbha pottali, Hemagarbha pottali, Mallagarbha pottali, Hiranyagarbha pottali, Shankagarbha pottali, Lokanath Rasa, Mriganka Pottali	05	05
e	Loha evam Mandura Kalp	Loha evam Mandura Kalpa: Ayaskriti, Loha Rasayana, Amlapittantaka loha, Chandanadi loha, Dhatri loha, Navayasa loha, Putapakva vishama Jwarantaka loha, Shilajatwadi loha, Tapyadi loha, Saptamrita loha, Pradaranatka loha, Rohitaka loha. Punarnava Mandura, Shatavari Mandura, Triphala Mandura, Mandura, Vataka etc.	10	10
f		Knowledge of Essential ayurvedic drug list as Prescribed by Dep. Of AYUSH (Govt of india) and its significance.		

Part B				
Detailed Knowledge Of Aushadhi patha Nischiti and sanyojan (Formulation designing and composition), dose anupana and methods of administration, therapeutic efficacy and uses (indications and contra-indications), probable mode of action etc. of the following Aushadhi yogas				
1-a	Panchavidha Kashayas and their Upakalpa	Panchavidha Kashayas and their Upakalpa: Ardraka swarasa, Tulasi swarasa, Vasa Putapaka, Nimba Kalka, Rasona Kalka, Kulattha Kwath, Punarnavasthaka Kwatha, Rasna Saptaka Kwatha, Dhanyak hima, Sarivadi hima, Panchakola Phanta, Tandulodaka, Mustadi Pramathya, Kharjuradi mantha, Shadanga Paniya, Laksha rasa, Arjuna Kshirapaka, Rasona Kahirapaka, Chinch Panaka, Candana Panaka, Banapsha sharkara, Nimbu sharkara, Amrita satva, Ardraka satva, Ajamoda arka, yavanyadi arka	05	05
b	Kritanna and Bheshaja Siddha Ahara Kalpana	Kritanna and Bheshaja Siddha Ahara Kalpana: yavagu, (Krita and Akrita), Ashtaguna manda, Laja manda, Peya, Vilepi, Krishara, yusha, Mudga yusha, Kulattha yusha, Saptamushtika yusha, Khada, Kambalika, Raga, Shadava, Mamsarasa, Veshavar, Dugdha Vikara- Piyush, Kilata, Kshirashka, Hyaiyangavina, Morata, Santanika, Dadhi and Dhadhi Vikar- Katvar Dadhi, Dadhi Mastu, Takra, Ghola, Udasvita, Mathita, Chhacchika etc.	05	05
c	Churna Kalpa	Churna: Sitopaladi Churna, Talisadi Churna, Triphala Churna, Hingvashtaka Churna, Avipattikara Churna, Swadishta Virechana Churna, Bhaskar Lavana Churna, Sudarshana	05	05

		Churna, Maha Sudarshana Churna, Gandharva Haritaki Churna, Pushyanuga Churna, Ajamodadi Churna, Hingvadi Churna, Eladi Churna, Dadimashtaka Churna, Trikatu Churna, Vaishwanara Churna, Gangadhara Churna , JatiPhaladi Churna, Narayana Churna etc.		
d	Gutika	Gutika: Arogya vardhani Vati, Chandra Prabha Vati, Chitrakadi Gutika, Sanjivani Vati, Lasunadi Vati, Lavangadi Vati Vyoshadi Vati, Khadiradi Vati, Kankayana Vati, Abhayadi modaka, Marichyadi gutika, Amalakyadi gutika, Samshamani Vati, Kutaja Ghana Vati, Shiva Gutika, Eladi Vati, Kasturyadi Gutika, Arshoghni Vati.	05	05
e	Guggulu Kalpa	Guggulu: Yogaraja Guggulu, Maha Yogaraja Guggulu, Trayodashanga Guggulu, Kanchanara Guggulu, Rasnadi Guggulu, Triphala Guggulu, Simhanada Guggulu, Gokshuradi Guggulu, Kaishora Guggulu, Panchatikta Guggulu, Amritadi Guggulu, Vatari Guggulu, Lakshadi Guggulu, Abha Guggulu, Navak Guggulu, Navakarshika Guggul	05	05
f	Sneha Kalpa			
g	Sneha Moorchhana	Sneha Moorchhana- Ghrita Murchana, Taila Murchhana	02	02
h	Siddha Ghrita	Siddha Ghrita- Shatavari Ghrita, jatyadi Ghrita, Phala Ghrita, Dadimadi Ghrita, Kshirashatpala Ghrita, Mahatriphala Ghrita, Dhanvantari Ghrita, Amritaprasha Ghrita, Kalyanaka Ghrita, Brahmi Ghrita, Changeri Ghrita,	03	03

		Panchatikta Ghrita, Sukumara Ghrita, Panchagavya Ghrita.		
i		Siddha Taila - Maha Narayan taila, Maha Masha Taila, Bala Taila, Nirgundi Taila, Shadbindu Taila, Vishagarbha Taila, Sahacharadi Taila, Jatyadi Taila, Apamarga Kshara Taila, Tuvarak Taila, Kshirabala Taila (Avarita), Lakshadi Taila, Anu Taila, Kumkumadi Taila, Hingutriguna Taila, Kottumchukadi Taila, Prasarinyadi Taila, Dhanwantri Taila, Balashwagandhadi Taila, Balaguduchyadi Taila, Nilibhringyadi Taila, BrihadSaindhavadi Taila, Irimedadi Taila, Chandanadi Taila, Panchaguna Taila, Arka Taila, Pinda Taila, Kasisadya Taila	05	05
J	Rasakriya, Avaleha, Khanda	Rasakriya, Avaleha, Khanda etc: Darvi Rasakriya, Vasa Avaleha, Brahma rasayana, Chyavanprasha Avaleha, Kushmanda Avaleha, Dadima Avaleha, Bilvadi Avaleha, Kantakaryavaleha, Haridrakhanda, Marikel Khanda, Soubhagyashunthi Paka, Amritabhallataka, Kamsa Haritaki, Chitraka Haritaki, Vyaghri Haritaki, Bahushala Guda, Kalyana Guda.	05	05
k	Sandhana Kalpa	Sandhana Kalpa: Lodhrasava, Kumaryasava, Ushirasava, Chandanasava, Kanakasava, Sarivadyasava, Pippalyasava, Lohasava, Vasakasava, Kutajarishta, Draksharishta, Raktamitrarka, Dashamularishta, Abhayarishta, Amritarishta, Ashokarishta,	05	05

		Sarasvatarishta, Arjunarishta, Khadirarishta, Ashwagandha Arishta, Vidangarishta, Takrarishta, Drakshasava, Mahadrakshasava, Mritasanjivani sura, Maireya, Varuni, Sidhu, Kanji, Dhanyamla, Madhu Shukta, Pindasava.		
1	Any Kalpa	Any Kalpa : Phala varti, Chandrodaya varti, Arka lavana, Narikela lavana, Triphala masi, Apamarga kshara, Snuhi kshara, Ksharasutra, Atasi upanaha, Sarjarasa malahara, Gandhaka malahara, Sindhuradi malahara, Shatadhouta Ghrita, Sahasra Dhouta Ghrita, Sikhta taila, Dashanga lepa, Doshaghna lepa, Bhallataka taila patana, Jyotishmati Taila, Bakuchi Taila, Dashanga dhupa, Arshoghna dhupa, Nishadi Netra bindu, Madhutailika Basti, Piccha basti, Yapan Basti.	05	05

Sr. No.	Topics	Description	No of Lectures	Weightage
PAPER – IV (Code No. - AVF3044)				100
PHARMACOLOGY AND PHARMACY MANAGEMENT				Marks
Part –A				
1	General Pharmacology	Principles of Pharmacology, a.Pharmacodynamics and Pharmacokinetics: Absorption Distribution, Metabolism and excretion, mechanism of action, dose determination and dose response, structure activity relationship. b.Routes of drug administration c.Factors modifying drug effect, Bioavailability and Bioequivalence, drug interactions, adverse drug reaction and Drug toxicity. d.Preclinical evaluation : Experimental pharmacology [Bioassay, In vitro , In vivo, Cell line studies], Animal ethics.	15	15
2	Clinical pharmacology	Evaluation of new chemical Entity- Phases and methods of clinical research. Ethics involved in human research.	10	10
		Elemental constituents of human body such as Iron, Copper ,Zinc, Calcium, Manganese etc and its physiological importance.Deficiencies and excess of various elements.	05	05
		Toxicity of heavy metals and chelation therapy.	05	05
		Knowledge of toxicity and pharmacological activities of herbomineral compounds.	10	10
3	Pharmacovigilance	Detailed knowledge of Pharmacovigilance - National and International Scenario. Pharmacovigilance of Ayurvedic Drugs.	05	05

Sr. No.	Topics	Description	No of Lectures	Weightage
Part B				
1	Scope and evolution of pharmacy	1. Scope and evolution of pharmacy. Information resources in pharmacy and pharmaceutical science	05	05
2		Pharmaceutical formulation designing and dosage form design (Preformulation)	05	05
3		Packaging materials and Labeling.	05	05
4		Management of pharmacy, store and inventory management, Personnel management, Good Manufacturing Practices related to Ayurvedic drug industry.	05	05
5		Pharmaceutical Marketing, product release and withdrawals. Hospital, Dispensing and Community pharmacy	05	05
6		Patenting and Intellectual Property Rights	05	05
7	Laws Governing Ayurvedic drugs	<p>a. Relevant regulatory provisions of Ayurvedic drugs in Drug and Cosmetics Act - 1940 and rule 1945</p> <p>b. Laws pertaining to Drugs and magic remedies (Objectionable Advertisement) Act -1954.</p> <p>c. Prevention of Food Adulteration (PFA) act.</p> <p>d. Food Standards and Safety Act-2006</p> <p>f. Laws Pertaining To Narcotics</p> <p>f. Factory and Pharmacy Acts</p> <p>g. Consumer Protection Act-1986</p> <p>Knowledge of Good Clinical Practices and Inspection Manual prescribed by Dept. of AYUSH, Govt of India.</p>	10	10
8		Regulatory Affairs related to	02	02

Sr. No.	Topics	Description	No of Lectures	Weightage
		International Trade and Practices of Ayurvedic Drugs.		
9		Introduction to Ayurvedic Pharmacopoeia of India, Ayurvedic Formulary of India.	03	03
10		Introduction to Indian Pharmacopoeia, British and United States Pharmacopoeia, Pharmacopoeia Codex	03	03
11		Introduction to Traditional knowledge Digital Library.	02	02

PRACTICALS :

- Minimum 150 Practicals are to be performed covering all the dosage forms.
- Minimum 150 Practicals are to be performed covering all the dosage forms
- Rasashastra- 60
- Bhaishajya kalpna- 60
- Drug Testing and Drug Standardization - 30

A) RASASHASTRA PRACTICAL LIST - (Any 60 Practical)

Sr. No.	Rasashastra Practical list	Sr. No.	Rasashastra Practical list
1.	Hidgulotha ParadNirman	2.	Hidgulotha ParadNirman
3.	Parad ShamanyaShodhan	4.	Parad ShamanyaShodhan
5.	Parad SwedanSanskar	6.	Parad SwedanSanskar
7.	Parad MardanSanskar	8.	Parad MardanSanskar
9.	Parad MurchanSanskar	10.	Parad MurchanSanskar
11.	Parad UtthapanSanskar	12.	Parad UtthapanSanskar
13.	Parad Trividha PatanSanskar	14.	Parad Trividha PatanSanskar
15.	Parad Rodhan Sanskar	16.	Parad Rodhan Sanskar
17.	Parad Niyman Sanskar	18.	Parad Niyman Sanskar
19.	Parad DipanSanskar	20.	Parad DipanSanskar
21.	Gandhak DrutriNirman	22.	Gandhak DrutriNirman
23.	Kajjali Nirman	24.	Kajjali Nirman
25.	Rasa parpati Nirman	26.	Rasa parpati Nirman
27.	Rasasindur Nirman	28.	Rasasindur Nirman

Sr. No.	Rasashastra Practical list	Sr. No.	Rasashastra Practical list
29.	Rasapottali Nirman	30.	Rasapottali Nirman
31.	DhanyabhrakNirman	32.	DhanyabhrakNirman
33.	Abhrak Maran	34.	Abhrak Maran
35.	Abhrak Amrutikaran	36.	Abhrak Amrutikaran
37.	Abhrak Lohitikaran	38.	Abhrak Lohitikaran
39.	Suvarnamakshik Vishesh Shodhan	40.	Suvarnamakshik Vishesh Shodhan
41.	Suvarnamakshik Maran	42.	Suvarnamakshik Maran
43.	Suvarnamakshik Amrutikaran	44.	Suvarnamakshik Amrutikaran
45.	Shilajatu Prapti Agnitapi	46.	Shilajatu Prapti Agnitapi
47.	ShilajatuPrapti Suryatapi	48.	ShilajatuPrapti Suryatapi
49.	Sasyak Satvapatan	50.	Sasyak Satvapatan
51.	Sasyak Maran	52.	Sasyak Maran
53.	Gairik Shodhan	54.	Gairik Shodhan
55.	Kasis Maran	56.	Kasis Maran
57.	Kankshi Shodhan	58.	Kankshi Shodhan
59.	Hartal samanya Shodhan	60.	Hartal samanya Shodhan
61.	Hartal Vishesh Shodhan	62.	Hartal Vishesh Shodhan
63.	Hartal Bhasm Nirman	64.	Hartal Bhasm Nirman
65.	Rasmanikya Nirman	66.	Rasmanikya Nirman
67.	ManShila Shodhan	68.	ManShila Shodhan
69.	Rasanjan Nirman	70.	Rasanjan Nirman
71.	Pushpanjan Nirman	72.	Pushpanjan Nirman
73.	Souviranjan Nirman	74.	Souviranjan Nirman
75.	Kankushtha Shodhan	76.	Kankushtha Shodhan
77.	Kampillak Shodhan	78.	Kampillak Shodhan
79.	Gouripashan Shodhan	80.	Gouripashan Shodhan
81.	Gandhak shodhan	82.	Gandhak shodhan
83.	Mugdha rasa	84.	Mugdha rasa
85.	Navsagar Shodhan(Urdhavpatan)	86.	Navsagar Shodhan (Urdhavpatan)
87.	Kaparda Maran	88.	Kaparda Maran
89.	Hingul Shodhan	90.	Hingul Shodhan
91.	Raspushpa Nirman	92.	Raspushpa Nirman
93.	Rasakarpur Nirman	94.	Rasakarpur Nirman
95.	Rashpushpa Malhar Nirman	96.	Rashpushpa Malhar Nirman
97.	Suvarna Samanya Shodhan	98.	Suvarna Samanya Shodhan
99.	Suvarna Vishesh Shodhan	100.	Suvarna Vishesh Shodhan

B) BHAISHAJYA PRACTICAL LIST - (Any 60 Practical)

1. Swaras Kalpana – 02	2. Waruni Nirman-01
3. Kalka Kalpana – 02	4. Shukta Nirman – 01
5. Kwath Kalpana – 02	6. MaireyakNirman – 01
7. Him Kalpana – 02	8. Chukra Nirman – 01
9. PhantKalpana – 02	10. SandakiNirman – 01
11. KshirPaka Nirman – 02	12. Guggul Shodhan – 01
13. Panak Nirman – 02	14. Guggul Kalpa Nirman – 08
15. Mantha Nirman – 02	16. Churna Nirman – 05
17. Shadangodak Nirman – 01	18. GutikaNirman – 10
19. Tandulodak Nirman – 01	20. Lavan kalp Nirman – 02
21. Ghan Nirman – 02	22. MashiNirman – 02
23. KhandPakaNirman – 02	24. LepaNirman – 02
25. Avaleha Nirman – 02	26. MalharNirman – 02
27. Siddha Ghrit Nirman – 02	28. UpanahNirman – 01
29. Siddha Tail Nirman – 02	30. Kshar Nirman – 02
31. Bhallatak Tail Patan – 01	32. Kshar Sutra Nirman – 01
33. LakshaRas Nirman – 01	34. BastiDravyaNirman – 02
35. Pramathya Nirman – 01	36. NetraBinduNirman – 01
37. Asava Nirman – 04	38. AnjanNirman – 02
39. Arishta Nirman – 04	40. Preparation of AharKalpana – 10
41. Sidhu Nirman – 01	42. Ark kalpana -01
43. Sura Nirman – 01	44. Varti Kalpana- 01

**DRUG TESTING AND DRUG STANDARDIZATION
(30 Practical = Rasa 15 + Bhaishajya 15) RASASHASTRA**

Chromatographic separation T.L.C., H.P.T.L.C. or any other applicable tests
– any 15 Drugs.

- a) Bhasmas- 6
- b) Pottali - 2
- c) Parpati- 3
- d) Khalvi Rasayan- 3
- e) Sindur- 2
- f) SudhaVarga- 2

BHAISHAJYA :

Student should perform any 15 practicals using available tests at department from following list.

A. EXPERIMENTS FOR CHEMICAL ANALYSIS

- g) Determination of Foreign matter
- h) Determination of Moisture %
- i) Determination of Ash value, ash analysis
- j) Chromatography
- k) Spectrophotometric finger printing

B. OILS and FATS TESTING

- a) Specific gravity
- b) Refractive index
- c) Estimation of Iodine value
- d) Saponification value
- e) Acid value

C. TESTS FOR PREPARATIONS LIKE ASAVAS, ARISTAS, TABLETS ETC

- a) Determination of pH value
- b) Determination of Alcohol content of Asavas and Arista
- c) Determination of Sugar content of Asavas and Arista
- d) Test for aflotoxine
- e) Determination of Viscosity (Oswald's viscometer)
- f) Determination of Specific gravity
- g) Determination of Disintegration time for tablets
- h) Hardness test for tablets
- i) Friability test for tablets

Educational Visits to minimum five (5) GMP approved Ayurvedic Pharmacies. The brief report of each visit should be written by student in a journal (Duly signed by Guide and HOD)

- a) Visit to three State Ayurvedic Pharmacy (GMP Approved)
- b) Visit to one out of State Ayurvedic Pharmacy (GMP Approved)
- c) Visit to one Modern Pharmacy (MNC) such as Glaxo, Pfizer, FDA Laboratory etc.

Posting in R and D / Production unit in GMP certified Ayurvedic Pharmacy. Duration - 30 days should complete in final M. D. first year. 15 days for R and D, 15 days for Production Unit and Q. C.

- Minimum attendance in three National Conferences within three academic years.
- Minimum 10 Clinical Cases Using Different Doses Form are to be studied and recorded for Efficacy and ADR's (If any)
- Minimum one research paper on the core contributory work of dissertation published or accepted in peer reviewed ,indexed journal.
- Examinee has to submit supporting documents in relation to above mentioned academic activities at the time of Practical examination.

NOTE :

1. All practicals should be performed in accordance with Authoritative Textbooks of Schedule-I of D. C. Act - 1940.
2. All practicals related to Pharmacopoeial Standards should be performed in accordance with Methods Published in Protocol for testing of ASU Medicines and Laboratory Guidelines for the Analysis of Ayurveda and Siddha Formulations published by Deptt. of AYUSH, Government of India.

EVALUATION SCHEME (PRACTICAL) TOTAL MARKS – 100

Sr. No.	Practical Examination	Marks
A	Log Book, report of pharmacy visit, Case Record	10
B	All Practical Journals	05
C	Two Long Experiment (One Rasa, One Bhaishjya)	20
D	Two Short Experiment (One Rasa, One Bhaishjya)	10
E	Drug Testing Practical (Rasaushadhi-1 and Kashthaushadhi-1)	10
F	Spotting on Instrument/Equipment/Drugs	10
G	Power point presentation on Dissertation work and Demo Lecture on Subject Topic	15
H	Viva-voce	15
I	Communication Skill	05

REFERENCE BOOKS :

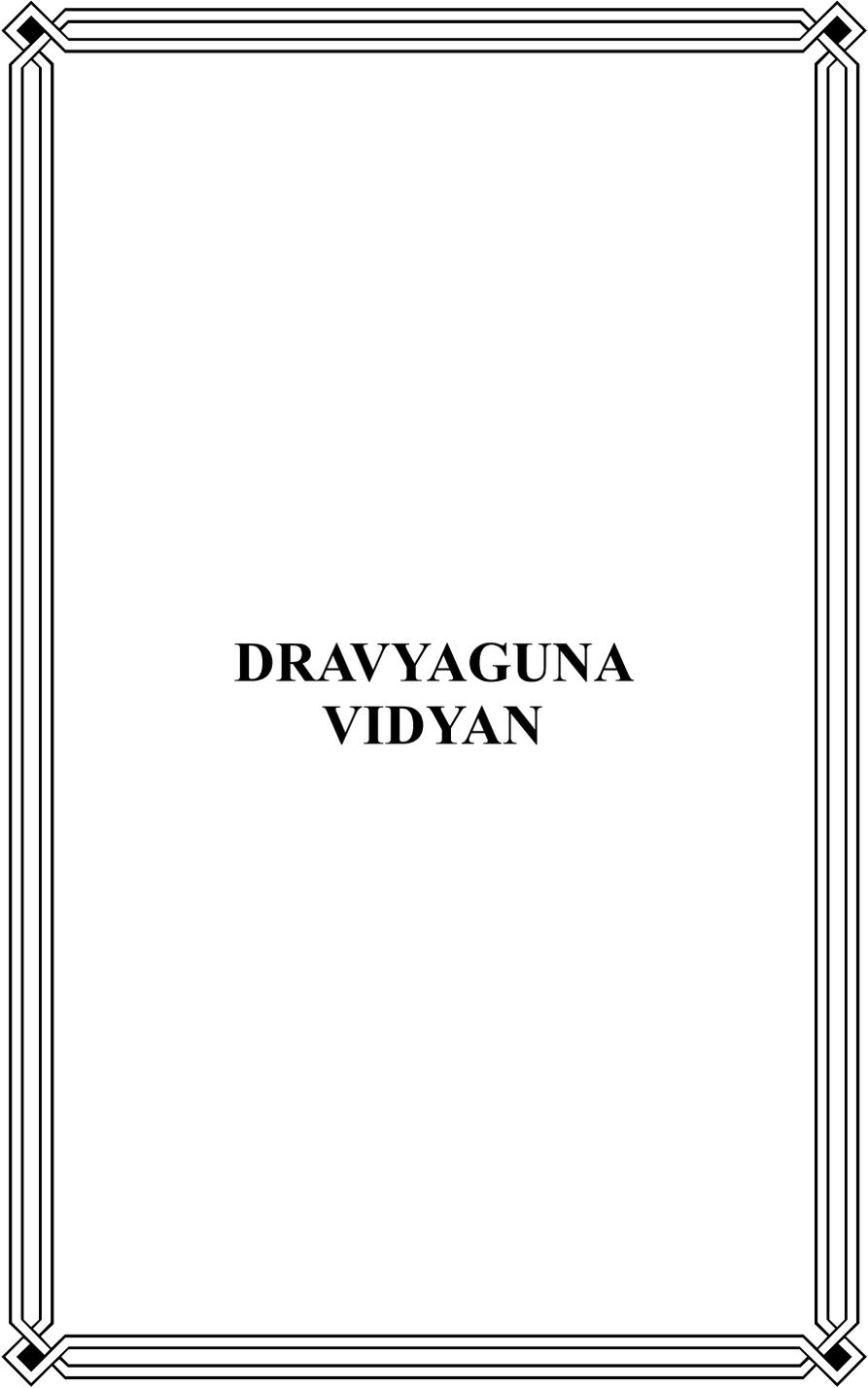
Sr. No.	Book Name	Author	Publication	Edition
01	Rasahriday Tantra	Bhikshu Govindapadacharya		
02	Rasarnava	Indradev Tripathi,	Chaukhamba, Varanasi	3 rd Editio, 1995
03	Rasaratna Samuccahaya	Dr.Indradev Tripathi	Chaukhamba, Varanasi	reprint 2012
04	Ayurved Prakasha	Shri Gulraj Sharma mishra	Varanasi, Chaukhamba Prakashan	reprint 1999
05	Rasendrachudamani	Aacharya Somdev	Chaukhamba, Varanasi	Reprint 2009
06	Rasendra Chintamani	Aacharya Dhundhuknath	Chaukhamba, Varanasi	1 st edition, 2000
07	Rasataragini	Aacharya Sadanand Sharma	Motilal Banarasidas, Varanasi	Reprint 2000
08	Rasprakash Sudhakar	Acharya Yashodhar	Chaukhamba, Varanasi	2 nd Edition 1998
09	Rasamrita	Dr Damodar Joshi	Chaukhamba, Varanasi	Reprint 2007
10	Rasa Chandanshu	Vd Datta Ballal Borkar	Shree Gajanan Book Depo, Mumbai	3 rd Edition, 1983
11	Sharangadhara Samhita	Murthy K R Shrikantha	Varanasi, Chaukhamba	reprint edition 2012
12	Sharangadhara Darpan	Dr B P Pandey	Chaukhamba, Varanasi	Reprint 2012
13	Bhavaprakasha nighantu	Prof Chunekar	Chaukhamba, Varanasi	2013
14	Yoga Ratnakara	Vd Shri Laxmipati Shastri	Varanasi, Chaukhamba Prakashan	Reprint 2012
15	Bhaishajya Ratnavali,	Prof Siddhi nanndann Mishra	Chaukhamba, Varanasi	1 st ed. 2005

Sr. No.	Book Name	Author	Publication	Edition
16	Siddha Bhaishajya Manimala	Kaladhar Bhatt	Chaukhamba, Varanasi	2 nd edition 1999
17	Bharat Bhaishajya Ratnakara	Vd. Nagindas Shaha,	Jain publication New Delhi	Reprint 1985
18	Rasayoga Sagara	Vd. Hariprappann Sharma	Krushnadas academy, Varanasi	reprint 1999
19	Rasakamdhenu	Vd. Santoshkumar Sharma	Chaukhamba, Varanasi	Reprint 2010
20	Sahasrayogam	Vd Mahenndrapal Arya	CCRAS, New Delhi.	1990
21	Siddha Yoga Sangraha	Yadavaji Trikamji Acharya	Baidyanath, Ayurved Bhavan	11 th edition 2000
22	Vaidyaka Paribhasha Pradeepa	Dr. Indradev Tripathi	Chaukhamba, Varanasi	1 st edition, 1982
23	Vaidyaka Paribhasha Pradeepa	Dr. Indradev Tripathi	Chaukhamba, Varanasi	1 st edition, 1982
24	Ayurvediya Aushadhikarana	Puranik and Dhamanakar	Shri Dhootpapesh war Ayurved Vidyalaya, Mumbai	2 nd edition
25	Dravyaguna Vijnan Part - 1 and 2	Yadavji Trikamji	Baidhyanath Ayurved Bhavan, Nagpur	7 th edition, 1997
26	Chakradatta - Ratnaprabha, Relevant Parts from Charaka Samhita, Sushruta Samhita, Kashyapa Samhita, Ashtanga Sangraha, Ashtanga Hridaya	-	-	-

Sr. No.	Book Name	Author	Publication	Edition
27	Remington: Science and Practice of Pharmacy	-	-	-
28	Theory and Practice of Industrial Pharmacy	Leon Lachman <i>et al</i>	-	-
29	Clinical Pharmacology	KD Tripathi	-	-
30	Clinical Pharmacology	Lawrence Benette	-	-
31	Drug Discovery and Evaluation (Pharmacological assays)	HG Vogel	-	-
32	Pharmacological Basis of therapeutics	Goodman and Gilman	-	-
33	Data Base of Medicinal Plants of	-	CCRAS	-
34	Quality and Standards of Medicinal Plants	-	ICMR publication	-
35	Quality Control of Ayurvedic Drugs	-	PLIM, Gaziabad	-
36	Ayurvedic Pharmacopeia of India	-	Govt. of India, Ministry of Healt, and Family Welfare, Dept. of Ayush, New Delhi	edition 2008
37	Ayurvedic Formulary of India	-	Govt. of India, Ministry of Healt, and Family Welfare, Dept. of Ayush, New Delhi	-
38	Indian Pharmacopeia	-	-	-
39	British Pharmacopeia	-	-	-

Sr. No.	Book Name	Author	Publication	Edition
40	United States Pharmacopeia	-	-	-
41	Pharmacopeia Codex	-	-	-
42	Current Good Manufacturing Practices	-	-	-
43	Drugs and Cosmetic Act 1940 and Rules 1945 with latest amendments	-	-	-
44	Drugs and Magic remedies (Objectionable advertisement) Act-1954	-	-	-
45	Prevention of Food Adulteration (PFA) act	-	-	-
	Laws pertaining to Narcotics	-	-	-
46	Factory and Pharmacy Acts	-	-	-
47	Consumer Protection Act - 1986	-	-	-
48	Brief information on the peer reviewed journals, official websites and other official search engines along with their links (related with the subject)	-	-	-
49	Rutleys Elements of Mineralogy	-	-	-
50	Bhasma Vigyaniam	-	-	-

Sr. No.	Book Name	Author	Publication	Edition
51	Kupipakva Vigyaniam	-	-	-
52	Anupana Manjari	-	-	-
53	Parad Samhita,	Niranjana Prasad Gupta	Khemraj, Shrikrushnadas, Mumbai	1997
54	Parad Vigyaniya	Vd Vasudev Dwivedi,	Sharma Ayurved Mandir, Nagpur	3 rd edition 1997,
55	Chakradatt,	Dr. Indradev Tripathi,	Chaukhamba Prakashan, Varanasi	Reprint 2014,
56	Sharangdhar Samhita	(Savarikar)		



**DRAVYAGUNA
VIDYAN**

TITLE OF THE PROGRAM : DRAVYAGUNA VIGYAN
PROGRAM CODE : AVF305
MARKS - THEORY- 400, PRACTICAL – 200 TOTAL – 600

GOAL :

To produce knowledgeable and skilled students will able to work successfully in the field of drug research, clinical practice and teaching.

PROGRAM OBJECTIVE : STUDENTS SHOULD ACQUIRE

- Knowledge and skill of identification of herbal drug W.S.R. to adulteration, substitutes and standardization technique.
- Knowledge of skill of animal experimentation and models for drug research.
- Knowledge and skill clinic pharmacological studies and ADR.
- Knowledge of ethno botanical plants.
- Knowledge and skill of teaching Dravyaguna subject to UG student.
- Knowledge of pharmacogenomics.

PROGRAM OUTCOME:

- 1) Recognize the importance of Dravyaguna in the context of drug research.
- 2) Practice ethically single drug therapy .
- 3) Develop skills in using educational methods and techniques as applicable to the teaching of Ayurveda UG students, general physician and paramedical health workers.
- 4) To be able to critically analyze relevant published research literature and use them appropriately to influence practice of Ayurveda.

COGNITIVE DOMAIN:

- Comprehend the knowledge of Basic Fundamentals Of Dravyaguna Vidnyan and various aspects of medicinal plants and raw drugs like their identification, properties, action and their therapeutic uses along with adulteration in it.

- Knowledge of standardization technique.
- Knowledge of protocol of drug research.
- Knowledge of pharmacovigilance and pharmacogenomics.

PSYCHOMOTOR DOMAIN:

At the end of the training student should be able to-

- Demonstrate and dissect various useful parts of medicinal plants by its macroscopic and microscopic examination and powder microscopy of various parts of medicinal plants.
- Field identification of ethno botanical plants.
- Apply standardization technique for drugs.
- Prepare and deliver seminar on various topic of Drayaguna Vidnyan using audio visual aids.
- Application of skill of animal experimentation.

AFFECTIVE DOMAIN:

At the end of the training student should be able to-

- Application of Knowledge of medicinal plants properties in all clinical subjects along with ADR and pharmacovigilance.
- Competent Ayurvedic pharmacologist.
- To perform the almost possible ethical practice in the society.
- Be a good researcher.

PAPER I: NAMARUPA VIGYANA (AYURVEDA AND MORDERN PHARMACOGNOSY)				100 Marks
Part-A				
Sr. No.	Topic	Discription (Learning objective)	No. of Lectures	Weight age
1	Namarupagyana	Importance of Namagyana of Dravya, origin of Namarupagyana of Aushadhi in Veda and nighantus. etymological derivation of various names and synonyms of Aushadhi.	2	10
2	Rupagyana	Rupagyana in relation to Aushadhi	1	05
3	Basonym and Synonyms	Basonym and Synonyms of dravyas(AushadhaandAhara) mentioned in vedic compendia, Brihatrayee, Bhavaprakash and Rajanighantu. (Synonyms in Bhavaprakashnighantu should be focused)	2	10
4	Morphological characteristics features	Distinguishing morphological characteristics features (swaroopa) of medicinal plants listed in Ayurvedic pharmacopoeia of india (API).	170	15

MUST TO KNOW PLANTS					
Sr. No.	Name of Plant	Sr. No.	Name of Plant	Sr. No.	Name of plant
1.	Ahiphen	63	Haritaki	125	Nyagrodha
2.	Ajmoda	64	Haridra	126	Nimbuk
3.	Amalaki	65	Hingu	127	Nirgundi
4.	Aaragvadha	66	Indravaruni	128	Paribhadra
5.	Arka	67	Jirak	129	Pashanbheda
6.	Asana	68	Jambu	130	Patha
7.	Ashoka	69	Jayapal	131	Patala
8.	Ashwagandha	70	Jatamansi	132	Palasha
9.	Ashvattha	71	Jatiphala	133	Parpat
10.	Atasi	72	Jyotishmati	134	Pippali
11.	Atibala	73	Jati	135	Pippalimula
12.	Ativisha	74	Kankol	136	Plaksha
13.	Akarakarabh	75	Kampillak	137	Priyala
14.	Apamarga	76	Kantakari	138	Prushniparni
15.	Aparajita	77	Kanchanar	139	Pushkarmula
16.	Adrak	78	Karavir	140	Punarnava
17.	Arjuna	79	Karkatshringi	141	Parasikayavani
18.	Agnimanth	80	Karpasa	142	Pudina
19.	Amra	81	Khadira	143	Rasna
20.	Aralu	82	Kiratatikta	144	Rasona
21.	Asthishrunkhala	83	Krishnajirak	145	Rudraksha
22.	Atmagupta	84	Kushtha	146	Sariva
23.	Babbul	85	Kumari	147	Shankhapushpi
24.	Bakuchi	86	Kutaj	148	Saptaparni
25.	Bala	87	Kadamba	149	Shatapushpa
26.	Bibhitak	88	Kakamachi	150	Shigru
27.	Bijapura	89	Karanj	151	Sahachar
28.	Bilva	90	Karavellak	152	Shaka
29.	Bhallatak	91	Katuki	153	Shalaparni
30.	Bhringaraj	92	Kokilaksha	154	Shalmali
31.	Bharangi	93	Kamal bheda	155	Shati
32.	Bhanga	94	Katphala	156	Saral
33.	Bramhi	95	Koshataki	157	Sarshapa
34.	Bhruhati	96	Karchur	158	Shatapatrika
35.	Changeri	97	Katak	159	Shinshapa
36.	Chakramarda	98	Kushmanda	160	Shirisha
37.	Chandrashur	99	Kulattha	161	Surana
38.	Champaka	100	Kulanjana	162	Shyonyaka

MUST TO KNOW PLANTS					
39.	Chandanbheda	101	Keshar/Kumkum	163	Sarja
40.	Chincha	102	Lavanga	164	Shatavari
41.	Chitrak	103	Latakaranj	165	Shrungatak
42.	Chavya	104	Lajjalu	166	Sarpagandha
43.	Chopachini	105	Langali	167	Tagar
44.	Daruharidra	106	Lodhra	168	Tila
45.	Danti	107	Madanphal	169	Trivrutta
46.	Dhanyaka	108	Madhuka	170	Tulasi
47.	Dhataki	109	Marich	171	Tailaparni
48.	Draksha	110	Manjishtha	172	Twak
49.	Durva	111	Mashaparni	173	Udumbar
50.	Dadima	112	Musta	174	Ushir
51.	Devadaru	113	Madayantika	175	Utangan
52.	Dhattura	114	Mahanimba	176	Vacha
53.	Dhanvayasa	115	Mandukaparni	177	Varahi
54.	Dravanti	116	Mayaphal	178	Varun
55.	Dugdhika	117	Mishreya	179	Vasa
56.	Eranda	118	Mudgaparni	180	Vatsanabha
57.	Ela	119	Meshashringi	181	Vruddhadaru (Bastantri)
58.	Guggul	120	Methika	182	Vishamushthi (Kupilu)
59.	Gunja	121	Nimba	183	Vidarikanda
60.	Gambhari	122	Nagavalli	184	Yava
61.	Gokshur	123	Nagakeshar	185	Yavani
62.	Guduchi	124	Narikela	186	Yashtimadhu

NICE TO KNOW PLANTS :

1. Meaning (Sarthaktva) of Synonyms related to External morphology.
2. Basonyms and Synonyms Eg. Kasheruka- Balya, Bruhan.

Sr. No.	Plant Name	Sr. No.	Plant Name	Sr. No.	Plant Name	Sr. No.	Plant Name
1	Musli (White)	18	Trinavarga	35	Kaliyak	52	Kapittha
2	Swarnapatri	19	Samudraphala	36	Parish	53	Harenuka
3	Tamalaki	20	Chakramarda	37	Karvellak	54	Rohisha
4	Akshotaka	21	Saireyak	38	Kebuka	55	Karmarda
5	Vyaghranakhi	22	Vastuk	39	Elavaluka	56	Kasturilatika
6	Jal Pippali	23	Katak	40	Khatmi	57	Kharjura
7	Ikshu	24	Patranga	41	Murva	58	Nili
8	Kadamba	25	Vikankat	42	Ashtavarga	59	Priyangu
9	Mulak	26	Talamuli	43	Kumbha	60	Pilu
10	Prasarani	27	Kodrava	44	Lavali	61	Rudraksha
11	Tejovha	28	Utangan	45	Amraharidra	62	Saptala
12	Gojivha	29	Vrushchikali	46	Amrataka	63	Tala
13	Sahadevi	30	Ankot	47	Irimeda	64	Upakunchika
14	Kadali	31	Bhurjapatra	48	Bimbi	65	Utpala
15	Kakajangha	32	Gavedhuka	49	Chirbilva	66	Tinduka
16	Kakanasika	33	Gundra	50	Majuphal		
17	Badar	34	Hingupatri	51	Ishvari		

Sr. No.	Topic	Description (Learning objective)	No. of Lectures	Weightage
5	Anuktadravya (Extra – pharmacopoidal drug	Knowledge of Anuktadravya (Extra – pharmacopoidal drugs) with regards to Namarupa.	2	05
6	Controversial drugs	Sandigdhadravaya (controversial drugs) vinischaya.	2	05

Sr. No.	Topic	Description (learning Objective)	No. of Lectures	Weightage
Part - B				
1	Pharmacognostical study and Qualitative and Quantitative analysis	Pharmacognostical study of different parts of the plants with reference to Macroscopic and microscopic study and Qualitative and Quantitative analysis like foreign matter, extractive	10	10

Sr. No.	Topic	Discription (learning Objective)	No. of Lectures	Weightage
		(water and alcohol), ash value, acid insoluble ash and TLC separation. (Kanda (Guduchi, Apamarga), Patra (Vasa, Markandika), Pushpa (Lavang, Nagapushpa), Phala (Pippali, Bibhitaka), Beeja (Vidanga, Kuchala), Tvak (Arjuna, Kutaja), Mula (Shatavari, Ashwagandha), Niryasa (Hingu, Guggul).		
2	Standardization and Quality control.	Methods of drugs Standardization and Quality control.	2	10
3	Biodiversity	Knowledge of biodiversity, endangered medicinal species.	1	05
4	TKDL Various acts	Knowledge of TKDL, Introduction to relevant portions of following Acts – Drugs and Cosmetic Act, Drug and Magic Remedies Act, FSSA, AFA, Wildlife and Biodiversity Acts and Intellectual property Right (IPR) and Regulations pertaining to Import and Export of Ayurvedic Drugs.	3	10
5	tissue culture techniqhes.	Knowledge of tissue culture techniqhes.	2	05
6	Genetically Modified Plants.	Knowledge of Genetically Modified Plants.	2	05
7	cultivations of medicinal plants	Knowledge of advances in cultivations of medicinal plants.	2	05

PAPER - II : GUNA KARMA VIGYAN (AYURVEDIC and MORDERN PHARMACOLOGY)				100 Marks
Part-A				
Sr. No.	Topic	Discription (Learning Objective)	No. of Lectures	Weightage
1	Drug action	Fundamental principles of drug action in Ayurvedaandconvention al medicine.	2	08
2	Applied aspects of fundamental principles of Dravyaguna	Detailed study of rasa-guna- virya- vipaka-prabhava and karma with their applied aspects and commentators (Chakrapanidatta, Dalhana, Arunadatta, Hemadri and Indu) views on them.	6	10
3	Study of karma	Comprehensive study of karma as defined in Brihatrayee and Laghutrayee	5	08
4	study of Guna and Karma	Detailed study of Guna and Karma of dravyas listed in API and Bhavaprakasha Nighantu along with current research review.	50	10
5	Aharadravya	Detailed study of aharadravya ,aharavarga and kritannavarga described in Brihatrayee and various nighantus. (Especially Bhavaprakash and Kaiyadevnighantu)	4	10
6	Anuktadravya	Knowledge of guna and karma of anuktadravyas. (Only karma should be asked not guna of	2	04

		anuktadravyas).		
Part B				
1	General pharmacology	Fundamental Principles of General pharmacology	1	10
2	pharmacological principles: various systems	Modern pharmacological principles and knowledge of drugs acting on various systems.	13	15
3	experimental pharmacology	Basic knowledge on experimental pharmacology for the evaluation of – analgesic, antipyretic, anti inflammatory, anti diabetic, anti hypertensive, hypo lipidemic, anti ulcer, cardio protective, hepatoprotective, diuretics, adaptegens, CNS activities, anti microbial and antimycotic activities.	15	15
4	purification of poisonous plants	Studies on changes occurring in purification of poisonous plants drugs	2	10

PAPER - III PRAYOGAVIGYAN (PHARMACOTHERAPEUTICS / CLINICAL PHARMACOLOGY)				100 Marks
Part A				
Sr. No.	Topic	Discription (Learning objective)	No.of Lectures	Weightage
1	Bhaishajyaprayoga Siddhant [Principles of drug administration]	Bhaishajyaprayoga Siddhant [Principles of drug administration]- BhaishajyaMarga (routes of drug administration), Vividhakalpana (dosage forms), Principles of Yoga Vijnan (compounding), Matra (dasage), Anupana (Vehicle), Aushadha Sevanakal, (shedules of drug administration), Sevankalavadhi (duration of drug administration), Pathyapathya (Do's and Don'ts), Complete Prescription writing (Samagra Vyavasthapatraka)	20	50
2	Amayikaprayoga	Amayikaprayoga (therapeutic uses) of important plants described in Brihatrayee, chakradatta, Yoga ratnakar, and Bhavaprakash.	10	15
3	Samyoga-viruddha Siddhanta	Samyoga-viruddhaSiddhanta and its importance with examples.	2	10

Part-B (Marks 25)				
1	Pharmaco-vigilance	Knowledge of Pharmaco-vigilance in Ayurveda and modern medicine	2	05
2	ADR	Adverse drugreactions and drug interaction of medicinal plants.	3	05
3	Clinical pharmacology	Knowledge of clinical pharmacology and clinical drug research as per GCP guidelines	5	05
4	Pharmacogenomics.	Knowledge of Pharmacogenomics.	2	05
5	Drugs knowledge	Basic knowledge of essential drugs (EDL) and orphan drugs in Ayurveda	2	05

PAPER – IV : NIGHANTU and YOGA VIGYANA (MATERIA MEDICA and FORMULATIONS)				100 Marks
Part A				
Sr. No.	Topic	Discription (Learning objective)	No. of Lectures	Weightage
1	Nighantu,	Etymology of Nighantu, their relevance, utility and silent features.	2	15
2	Nighantu,	Details of the following Nighantus with regards to auther's name, period, and content Paryayaratnamala, Dhanvantari Nighantu, Hridayadipakanighantu, Ashtanganighantu, Rajanighantu, Siddhamantranighantu, Bhavaprakashanighantu, Madanpalanighantu, Rajavallabhanighantu, Madhava Dravyaguna, kaiyadevanighantu, shodhalanighantu, shaligramnighantu, NighantuRatnakar, Nighantuadarsha, and Priya Nighantu	20	25
3	Ekala Aushadhakalp ana	Detailed study of Ekala Aushadhakalpana (manufacturing of dosage forms of single drugs) mentioned in Sharangadharasamhita and Ayurvedic Formulary of india (AFI).	5	15
4	Dashemani and Agryasangraha	Dashemani and Agryasangraha of Charak and Vagbhat should be included.	15	20

Part B				
1	Nutraceuticals cosmoceutical	General awareness on aharayogi (Nutraceuticals), soundaryaprasadana (cosmoceutical), food additives, excipients etc.	2	05
2	Plant extracts	Knowledge of Plant extracts, colouring and flavouring agents and preservatives. (natural and chemical)	5	10
3	pharmacopoeias	Knowledge of pharmacopoeias of different countries- API, BHP.	2	05
4	Departments andministries of Govt. of India: scientific publications	Knowledge of important scientific publications of various Departments andministries of Govt. of India – like department of AYUSH, CCRAS, RAV, ICMR, CSIR etc.	2	05

Sr. No.	Name of Experiment	Discription (Learning objective)	No. of Hours
1	Study Tours:	Field identification of medicinal plants through at least five local Dravyaguna study tours. Within the state and one study tour out of state and preparation of minimum 50 herbarium sheets along with prayojyanga (raw drug). Field visit should also include demonstration of cultivation practices of important medicinal plants.	10 days (50 Hours)
2	Evaluation of Crude Drugs:	Macro and microscopic methods of examining three drugs of each of different useful parts of plants, including their powders.	50 Hours
3	Phytochemical evaluation of raw materials	Qualitative and Quantitative analysis like foreign matter, extractive (water and alcohol), ash value, acid insoluble ash and TLC separation of various parts of minimum two plants of Ayurvedic Pharmacopoeia of India.	25 Hours

Sr. No.	Name of Experiment	Discription (Learning objective)	No. of Hours
4	Pharmacology:	<ul style="list-style-type: none"> • Rasa nirdharana by Taste Threshold method of minimum one drug for each of rasas. • Observation of animal experimentation models (both in vitro and in vivo) for any five pharmacological activities cited in paper II 	25 Hours
5	Practical Training-	<p>a) Posting for minimum one month in each of the following units Quality control laboratory of nearest pharmacy/institution for crude drug identification, adulterants and substitutes and understanding standardization techniques. Experimental Pharmacology Laboratory for developing skill in animal experimentation.</p> <p>b) Regular clinical training in the Teaching hospital for submission of record of Ekala Aushadhi Prayoga(single drug trial/clinic-pharmacological studies.) and Adverse drug reaction (ADR)s</p>	2 Months
6	Dissertation	A Dissertation, as per the approval of Departmental Research Committee/Competent Committee for the purpose, be prepared under the guidance of approved supervisor in Dravyaguna and submitted 06 months before the final examination. The approval of Dissertation shall be pre-requisite for appearing in the final examinations.	18 Months
7	Paper presentation	Post Graduate scholar is expected to present minimum two scientific papers in National/ international seminars during the Program of study.	In due Program
8	Publication	Post Graduate scholar is expected to publish / get accepted at least one paper	In due Program

Sr. No.	Name of Experiment	Discription (Learning objective)	No. of Hours
		in journal as per PG regulations under the supervision of guides	

PATTERN OF PRACTICAL EXAMINATION: Total- 200 Marks

REFERENCE BOOKS :

Herbarium	Pharmacognosy practical record	Pharmacology practical record	Clinical records record	Practical examination (Identification of green and raw drugs, microscopic examination, Ekala aushadha pariksha)	Thesis Presentation	Viva voce and communication skill
10	10	10	10	60	20	80

REFERENCE BOOKS :

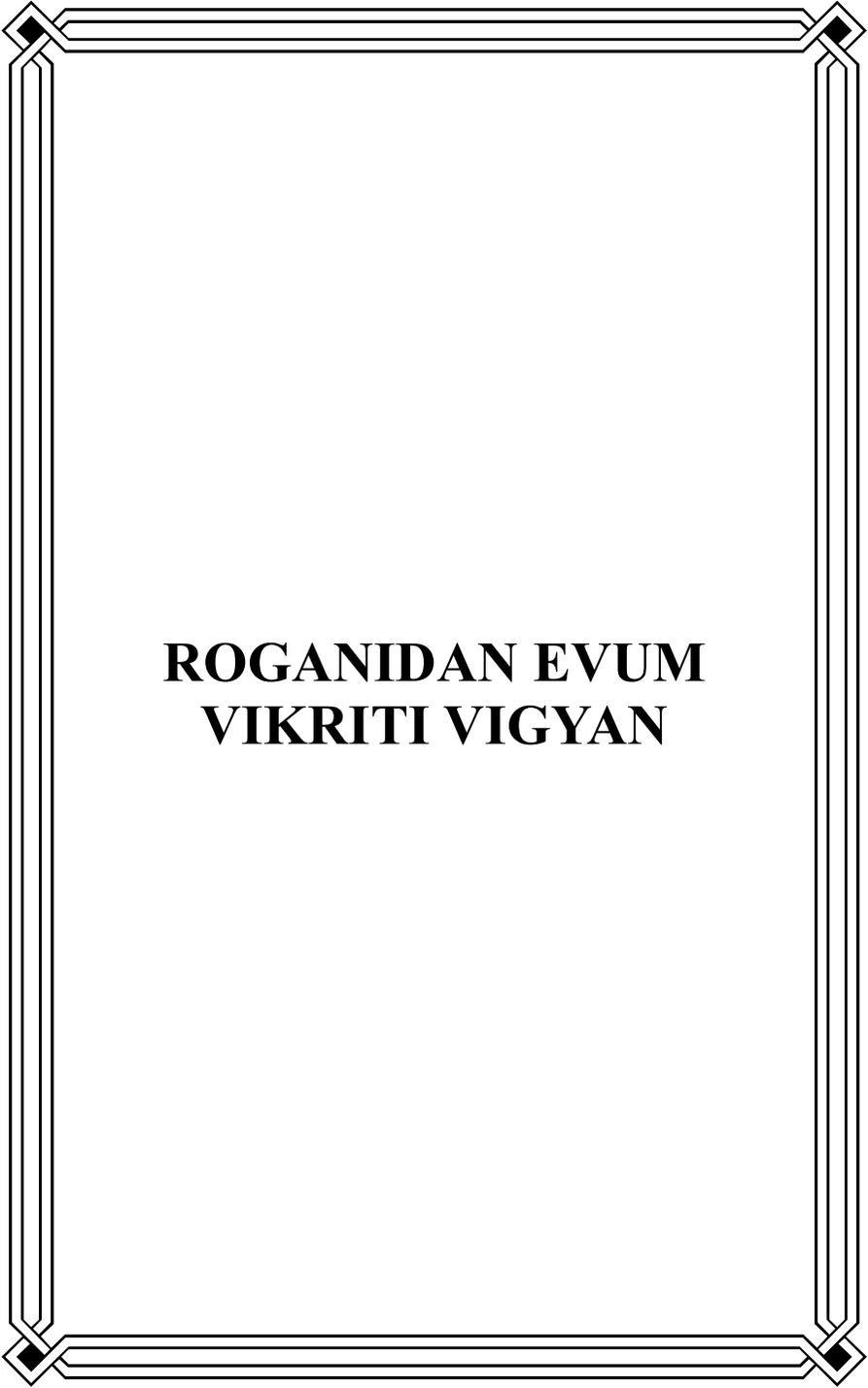
Sr. No.	Book name	Author	Edition	Publication
1	Abhinav Buti Darpan (Vol. 1-2)	Vd. Roop Lal Vaishya, Kaviraj Ganpati Singh Verma	II	Choukhamba Bharati academy
2	Aushadha Vigyna Shastra	Acharya Pt. Vishvanatha Acharya Pt. Vishvanath	-	-
3	Bedi Vanaspati Kosha Vol 1-6 Prof.	Ramesh Bedi: i	-	Kitabghar Prakashan, 2006
4	Bhaishajyaguna Vigyana	Dr. Alakhnarayan Singh	-	-
5	Bhav Prakash Nighantu (English) Shreekanthamurti	Shreekanthamurti	-	-
6	Ayurvediya Aushadnkarma Vigyna	Bhav Prakash Nighantu Acharya V.J. Thakur	-	-
7	Bhav Prakash Nighantu	Vd. Krishna Chandra Chuneekar	2013	chauhambha Sanskrit

Sr. No.	Book name	Author	Edition	Publication
		commentary), Choukhamba Sanskrit pratishthan, 2013		pratishthan,
8	Bhrinad dravyagunadarsha Yogaratanakara	Mahendra Kumar Shastri	-	-
9	Classical Uses of Medicinal Plants	Acharya Priyavrata Sharma	1996	choukhambha Publication
10	Controversial Medicinal Plantsi	Vd. G. Bapa Lal	2005	Choukhamba orientalia
11	Shastra Dalhana Ka Dravyaguna Ke Kshetra Me Yogadana	Vd. Shiv Kumar Vyas		
12	Dravyaguna Kosha	Acharya Priyavrata Sharma	2012	Choukhamba orientalia
13	Dravyaguna Sutram	Acharya Priyavrata Sharma		
14	Dravyaguna Vigyana	Dr. Gyanendra Pandey	edition 3, 2005	Chaukhambha Publication
15	Dravyaguna Vigyana (Vol. 1-2)	Acharya Yadavji Tikramji	2015	Chaukhambha Publication
16	Dravyaguna Vigyana	Vd. V. M. Gogate	4 th edition, 2017	Vidyarthimitr a prakshana
17	Dravyaguna Vigyana (Vol. 1-5)	Acharya Priyavrata Sharma	2014	Choukhamba Bharati academy
18	Dravyaguna Shastrum	Vaidya G. A. Phadake		
19	Dravyagunavijn ana basic Principles	Prof. D. S. Lucas	2 editions (2012)	choukhambha visvabharati
20	Dravyaguna Vijyana	Dr. A. P. Deshpande	2006	Proficient, Reprint
21	Forgotten Healers (Indian Medicinal Plants)	Dr. Prakash Pranjape	2012	Choukhamba Sanskrit Pratisthan

Sr. No.	Book name	Author	Edition	Publication
22	Glossry of Vegetable Drugs in Bhritrtrayis	Thakur Balwant Singh, Vd. Krishna Chandra Chunekar	1 ST edition (2015)	Chaukhamba Amarbharti Prakashan;
23	Introduction to Dravyaguna Acharya Priyavrat Sharma	Priyavrata Sharma	1 st edition, 1976	Chaukhamba
24	Materia Medica	Acharya Ghosh,		Popular Prakashan
25	Kriyatamka Aushadi Parichaya Acharya Pt. Vishvanath	Acharya Pt. Vishvanath Dwivedi		
26	Nighantu Adarsh (Vol. 1-2) Vd.	Bapa Lal	edition (2016)	Chaukhambha Bharati Academy;
27	Pharmacological basis of Medical Practice	Goodman and Gillman		
28	Pharmacology andPharmacothe rapeutics	Satoskar Bhandarkar and Ainapure	24 ed. (20 July 2015)	Elsevier Health INR
29	Prayogatamaka Dravyaguna Vigyana Dr. Maya Ram Uniyal	Dr.Maya Ram Uniyal	1 st edition 2009	Choukhamba orientalia Var anasi
30	Priya nighantu Acharya Priyavrata Sharma Chaukhamba 2004	Acharya Priyavrata Sharma	2004	Chaukhamba
31	Raspanchaka/ Dravyaguna Siddhanta	Prof. Shivcharan Dhyani		
32	System of Plant Nomenclature in Ayurveda	Dr. Gyanendra Panday	1 st edition 1997	Choukhamba sanskrit Varanasi

Sr. No.	Book name	Author	Edition	Publication
33	Textbook of Pharmaconogy	Trees and Valis	2nd ed., 2005	CBS publisher,
34	Textbook of Dravyaguna;	Dr. K. Nishteswar	2015 edition	Chaukhamba Surbharati Prakashan;
35	Unani Dravyaguna Vigyana	Vigyana Hakim Daljeet Singh,	2010, 12 th edition	Baidyanath publication
36	Useful parts of Charaka, Sushurut, and Vagbhata	-	-	-
37	Uttarakand Ki Vanaspatiya	Dr. Gyanendra Pandey	-	-
38	Vanoashadi Darshika Thakur Balwant Singh	Thakur Balwant Singh	-	-
39	Vanoashadi Nidarshika	Dr. Ram Sushil Singh		
40	Vedic Vanaspatiyan	Dr. Dinesh Chandra Sharma	-	-
41	Indian Pharmacopeia, 4 volumes	-	8 th edition	The Indian pharmacopeia commission 2017
42	Database on medicinal plants all the volums	all the volums of CCRAS	2000	CCRAS publication
43	Aurveda formulary of India – all the volums	--	2003	Gov. of India
44	Shodhal Nighantu,	Gyanendra pandey	1 st edition 2009	Choukhamba Krushndas academy
45	Madanpal Nighantu, khemrajshrikrishna das, 2008	Khemraj Shrikrishna Das, 2008	2008	--

Sr. No.	Book name	Author	Edition	Publication
46	Shaligram Nighantu, Das, kshemraj Shrikrishan, 1923	Das,kshemraj Shrikrishan, 1923	1923	--
47	Raj Nighantu,	Satishchandra	2012	Chaukhamba
48	Kaideva Nighantu	--	1 st edition, 1979	Choukhmba Orientalia
49	Dhanvantari Nighantu	Dr. Amrit Pal singh	2008	Chaukhamba Orientalia
50	Ayurvedic Pharmacopeia of India, Published by Pharmacopoeia	--	2016	By Pharmacopoeia Commission For Indian Medicine and Homoeopathy Ghaziabad , Government of India Ministry of Ayush



**ROGANIDAN EVUM
VIKRITI VIGYAN**

**TITLE OF THE PROGRAM : ROG NIDAN AVUM VIKRUTI
VIDNYAN**
PROGRAM CODE : AVF306
MARKS: - THEORY – 400, PRACTICALS: 200 TOTAL - 600

GOALS :

1. To provide PG students comprehensive Knowledge of principles of Ayurvedic diagnosis at clinical and laboratory.
2. To facilitate PG students with various Hematological, Biochemical, Serological and Microbiological diagnostic tests in their research.
3. Students should gain the knowledge and research in the subject like unique Ayurvedic Ashtavidha examinations such as Nadi pariksha, Tail bindu etc, in a period of three years.
4. To enhance the knowledge acquisition process for PG's in Ayurvedic diagnosis along with Modern scientific methods.

LEARNING OBJECTIVES :

Providing basic methodology of Roga Nidana and Vikruti Vidnyana with recent developments in clinical diagnostics and bestowing complete knowledge of bedside clinics and advanced investigations with clinical interpretation.

LEARNING OUTCOME :

1. At the end of the course the candidate should acquire a high standard of theoretical knowledge in nidan panchak, rog and rogi pariksha, details of every vyadhi.
2. The candidate should also be conversant with the recent developments in concepts and practice of Rognidan subject.
3. The candidate should become competent and proficient in imparting training and to various categories of ayurvedic medical professional including research in the subject.
4. At the end of the Program the candidate should Practice the tools of Avayavika Pariksha like -USG, X-ray, MRI, CT, ECG etc.

PROGRAM DESCRIPTION :

Sr. No	Topic with Description	No of Lectures (Hrs)	Weightage (Marks)
PAPER - I (CODE NO : AVF3061) FUNDAMENTAL PRINCIPLES OF ROGANIDAN			100 Marks
Part A			
1.	Paribhasha (Definition) : comprehensive definitions of Technical Terminologies such as: Roga, Nidana, Vikriti Vijnana, Purvarupa, Rupa, Upashaya, Samprapti, Arishtha, Upadrava, Dosha, Dushya, Vyadhi, Vyadhiavastha, Aama, Kleda, Srotas, Srotodushti, srotovaigunya, Avarana, Prajnyaparadha etc.	5	10
2.	Concept and pathological implications of Tridosha (Doshavaishmya). 63 permutations and combination of Tridosha. Leena and stambhitadosha. Cause and importance of Tridosha in manifestation of Samprapti.	6	15
3.	Concept of Rakta as a Chaturtha Dosha. Importance of Rakta in the manifestation of diseases.	3	10
4.	Concept of Ashrayashrayibhava and its applied utility.	2	10
5.	Different types of Dosha Gati.	3	10
6.	Causative factors and practical utility of movement of Doshas from Kostha to shakha and shakha to Kostha. Concept of Ashayapakarsha.	8	10
7.	Trayorogamarga, their diseases and clinical importance of Roga Marga.	5	
8.	Concept and classification of Avarana, its role in pathogenesis, mode of diagnosis of Avarana and its importance in chikitsa sutra.	4	10
9.	Applied aspect of Dhatu Poshanakrama and Dhatu Samvahana. Concept of Marga and sthanastha Dhatus.	5	10
10.	Concept of Vyadhiavastha and applied	4	10

Sr. No	Topic with Description	No of Lectures (Hrs)	Weightage (Marks)
	aspects of Doshapaka and Dhatupaka		
11.	Fundamental and applied aspects of Dhatu, Upadhatu, and mala. Diseases developed due to their vitiation. (Pradoshajanyavikara)	3	15
12.	12. Concept and applied aspects of Srotas, their impotance in health and diseased conditions. Concept and applied aspects of sroto Dushti and khavaigunya. Understanding the various srotas which are not included in classical list of srotas but enumerated while describing the samprapti of diseases.	3	15
13.	Description of Dosha – Dushya - Sammurchhana, concept of Prakriti Sama Samaveta and Vikriti Vishama Samaveta Sammurchhana. Importance of Dosha – Dushya - Sammurchhana in diagnosis and treatment.	4	15
14.	Concept of Vikaravighata bhavabhava prativisesha.	2	15
15	Anukta Vyadhi: Hetu Lakshan, Srotas Dushti, Upshay	5	10
Part B			
1	Concept of Agni and it's role in manifestation of health and disease.	3	15
2	Concept and pathogenesis of Ama. Contemporarary interpretation of Ama and it's role in pathogenesis.	3	15
3	Sama, Nirama stages of Dosha, Dhatu and Mala.	3	15
4	Understanding Samprapti of Santarpanottha and Apatarpanottha Vyadhi.	3	15
5	Detailed classification of diseases as described in Ayurveda. Knowledge of ICD, DSM and other systems of classification of diseases.	3	10
6	Detailed understanding of Nidan Panchak with their classification and clinica	3	10

Sr. No	Topic with Description	No of Lectures (Hrs)	Weightage (Marks)
	importance.		
7	Nidanakaratra of contemporary food items and lifestyle.	2	5
8	Relation between 'Hetu and Lakshana' and Samprapti and Lakshana'	2	10
9	Explanation and applied aspects of kriyakala and it's utility in diagnosis and treatment.	2	10
10	Importance of Upadrava, Arishta and Sadhyasadyata and Udarka.	2	10
11	Natural History of the Diseases (Vyadhi), concept of vyadhisankara in Ayurveda.	2	10

Sr. No.	Topic with Description	No. of Lecture (Hrs.)	Weightage (Marks)
PAPER - II (CODE NO : AVF3062)			100
ROG VIGYANA			Marks
Part A			
Comprehensive knowledge of diseases mentioned in Samhitas. Knowledge of classical Samprapti of following diseases with interpretation of NidanaPanchaka including Upadrava, Arishta and Sadhyasadhyata and (Samanya) Chikitsa sutra. Knowledge of commonly occurring diseases of the respective systems mentioned in contemporary medicine.			
1.	Diseases of Pranavaha srotas – Pratishyaya, kasa-shwasa-Hikka-Urahkshata-Shosha-Rajayakshma and common clinical entities like Pneumonia, pleural effusion, Bronchitis, Bronchiectasis, Pulmonary Tuberculosis, Bronchial Asthma.	6	10
2.	Diseases of Annavaha-Pureeshavahasrotas-Agnimandya –Ajirna-vishuchika, vilambika-alasak- Aruchi-Chhardi, Amlapitta-Shool, Grahani-Gulma-UdaraRoga-Vibandha, Atisara-Pravahika along with various clinical presentations. Common clinical entities like peptic ulcer, Irritable Bowel Syndrome, Diarrhoea, Dysentery, Constipation; Ulcerative colitis. Nutritional disorders.	8	15
3.	Diseases of Udakavahasrotas –Udarvyadhi, shotha, Trishna, Daha and knowledge of water and electrolyte imbalance disorders.	8	10
4.	Diseases of Rasavaha Srotas -jwara.Common clinical entities like various types of fever - Malaria, Typhoid, viral fever. Pandu, Amavata, Hridroga, Hridrava, Hritshoola, Hritgraha Shotha and common clinical entities like Anaemia and its classification, Rheumatic fever, Rheumatoid arthritis, Angina, Ishaemic Heart Disease, Hypertension, Myocardial Infarction, Congestive cardiac failure. Endocrinal disorders.	7	10
5.	Diseases of Raktavaha Srotas-Kamala-Raktapitta-Vatarakta-kroshtukaseersha-Shitpitta-Maha kushta-Visarpa-shwittra and	8	10

Sr. No.	Topic with Description	No. of Lecture (Hrs.)	Weightage (Marks)
	kshudrakushta and common clinical entities like jaundice, hepatitis, bleeding disorders, Gout, Thrombo Angitis Obliterans (TAO), Deep vein Thrombosis (DVT), Leukaemia, Thalessemia, Sickle cell Anaemia. Introduction to Urticaria, Leprosy, Psoriasis, Eczema, Pemphigus, Herpes.		
6.	Diseases of Mansavahasrotas - Introduction to Granthi, Arbuda, Galaganda and Arsha. All types of neoplasia.	7	10
Part B			
1	Diseases of Medovahasrotas - Sthoulya - karshya-Prameha and common clinical entities like Obesity and Diabetes mellitus.	5	15
2	Diseases of Asthi- Majjavahasrotas- Sandhigatavata, Introduction to Asthimajjaparipaka, Asthigata Vidradhi and common clinical entities like Osteoarthritis, Osteomyelitis; Osteoporosis.	5	10
3	Vatavyadhi-Akshepaka-Apatanaka-Ardita-Pakshaghata-Gridhrasi-Vishwachi, Avabahuka, Manyasthambha - katigraha-pangutwa – khanja - khalwee and common clinical entities like Hemiplegia, Parkinson's disease, Lumbago-Sciatica syndrome, Bell's palsy, Ankylosing Spondylitis, Motor Neuron Disease and other commonly occurring neurological diseases.	6	15
4	Diseases of Sukravahasrotas - klaibya, Vandhyatva, Shookadosha and understanding of male and female Infertility, Impotence.	5	10
5	Diseases of Mutravahasrotas - Mutrakrichha, Mutraghata, Ashmari, common clinical entities like Urinary Tract Infection, Urolithiasis, Nephropathies and Renal failure.	5	10
6	Diseases of Swedavahasrotas - Knowledge of Khalitya, Palitya and Cosmetology.	5	15
7	Diseases of Manovahasrotas-Vishada, Udvega, Bhaya, Bhrama, Anidra, mada, Madatyaya,	7	10

Sr. No.	Topic with Description	No. of Lecture (Hrs.)	Weightage (Marks)
	Murchha, sanyasa, Apasmara, Unmada, Atatwabhinivesha and common clinical entities like Epilepsy, Schizophrenia, Alzheimer, Depression, Anxiety neurosis, phobia, personality disorders.		
8	Indriya Pradoshaja Vikara.	2	5
9	Jarajanya Vyadhi: Common Geriatric disorders	4	5
10	Concept and tools for the study of AnuktaVyadhi - Unexplained and newly emerging diseases such as AIDS; Dengue, hickungunia, H1N1, Leptospirosis, Metabolic syndrome etc.	8	10
11	Understanding the concept of karmaja Vyadhi.	4	10

Sr. No.	Topic with Description	No. of Lecture (Hrs.)	Weightage (Marks)
PAPER - III (CODE NO : AVF3063)			100 Marks
PARIKSHA VIGYANA (CLINICAL EXAMINATION AND LABORATORY DIAGNOSIS)			
Part A			
1.	Introduction to clinical methods and techniques for the study of clinical examination.	3	10
2.	Importance of medical history taking and its importance in clinical medicine.	6	15
3.	Aims, Objectives and Methods applied aspects and importance of various Rogi and Rogapariksha as per classics.	7	10
4.	Srotaspariksha, ShadangaParikshavis-a-vis general and systemic examination of patient.	7	10
5.	Interpretation of Charakokta trividha pramana pariksha and Sushrutokta shadvidha pariksha with clinical methods mentioned in modern medicine.	7	10
6.	Interpretation and use of asthasthana nirikshana along with use of current tools as	7	10

Sr. No.	Topic with Description	No. of Lecture (Hrs.)	Weightage (Marks)
	per Ayurved.		
7.	Charakokta dashavidha and Sushrutokta Dwadashavidha pariksha along with the use of modern supportive tools for understanding of rogabala and rogabala concept to derive chikitsa sutra.	7	10
Part B			
1	Ayurvedic interpretation of all relevant findings of modern clinical examination.	5	10
2	Understanding of diagnostic procedures in medical emergencies.	6	10
3	Concept of good clinical practices in Ayurveda and modern medicine.	7	10
4	Knowledge of standard clinical laboratory set up.	5	10
5	Knowledge of Ancillary common laboratory investigations (haematology, Biochemistry, Serology, Body fluids) for diagnosis of diseases, their methods, normal and abnormal values, factors influencing values and clinical significance as mentioned in practical syllabus.	8	10
6	Importance of Bio markers and their utility in clinical researches.	6	10
7	Update knowledge of emerging diagnostic tools and technologies.	7	10
8	Knowledge of Various Ayurvedic diagnostic softwares/ programmes available	5	10
9	Avayavapariksha-Radio-Imaging techniques; ECG, EEG etc and their clinical interpretation.	7	15

Sr. No.	Topic with Description	No. of Lectures (Hrs)	Weight age (Marks)
PAPER - IV (CODE NO : AVF3064)			100 Marks
VIKRITI VIGYANA AND JIVANU VIGYANA (GENERAL PATHOLOGY, PARASITOLOGY AND MICROBIOLOGY)			
Part A			
1.	Introduction to general pathology.	8	15
2.	Cell injury and cellular adaptations.	8	10
3.	Immunity and Immunopathology including amyloidosis. Concept of vyadhikshamatva and concept of Ojasvis - a- vis Bala, Anurjata, Asatmya, Hypersensitivity.	8	10
4.	Concept of Shotha; Inflammation, Oedema and healing.	9	10
5.	Derangement of Homeostasis and Haemodynamic disorders.	9	10
6.	General character and classification of Neoplasia.	8	10
7.	Concept of genetic diseases and Bijadosha.	8	15
Part B			
1	Upasargajanya Vyadhi (Communicable diseases)-Romantika-Measles, Chickenpox. Upadamsha- Phirang and introduction to syphilis, AIDS, Leprosy, Tuberculosis.	7	10
2	Detail study of krimiVigyanam with classification and diseases caused.	8	10
3	Concept of Snayuka, Shleepada and introduction to Filariasis and classification, mode of infection, life cycle and diseases caused by common parasites.	9	10
4	Concept and applied aspects of Janapadodhvansa and Environmental diseases.	8	10
5	Nutritional disorders	3	10
6	Knowledge of common Bacteria, Virus, Fungi and their classification with their disease processes, Nutrition requirements, media and methods for culture and sensitivity.	7	10

PRACTICAL DEMONSTRATION AND HANDS ON EXPERIENCE: -

1. Regular posting in Roga Nidan / Hospital O.P.D.
2. Regular posting in Roga Nidana / Hospital I.P.D.
3. Regular posting in Laboratories, X-ray, USG, ECG Units.
4. Four Weeks posting in Dr. D. Y. Patil Medical College departmental units of MRI, CT, USG, EEG and Educational Tour (Visit to Blood bank, ART centre, Chemotherapy, Serum institute, Isolation hospital, NABL accredited laboratories) to update current medical knowledge.
5. Laboratory record- maintenance of observation dairy and laboratory record book.
6. Experience in conducting following laboratory investigations for diagnosis of diseases and their methods.
 - a) Hematological , biochemical and Serological measures, Peripheral blood film examination.
 - b) Rapid diagnostic techniques.
 - c) Screening test for bleeding disorders-Platelet count, bleeding time (BT), Clotting time(CT), Prothrombin time(PT).
 - d) Blood grouping -ABO system, Rh typing (Rhesus system)
7. Urine Examination
 - a) Ayurveda anusaramutrapariksha.
 - b) Physical Examination, Chemical Examination, and Microscopic Examination
 - c) Dipstick examination
8. Stool Examination
 - a) Ayurveda anusarapurishapariksha - Physical examination-Samaniramapariksha
 - b) Microscopic and Macroscopic examination of stool

9. Sputum Examination
 - a) Ayurveda parikshaanusarasthivana.
 - b) Physical,Chemical and Microscopic Examination of the sputum.
10. Semen examination
 - a) Ayurveda anusaraRetaspariksha
 - b) Semen examination and clinical interpretation
11. Biochemical test related to various organ panels-Liver, kidney, Heart, Thyroid, Pitutary and bones.
12. Knowledge of different staining techniques in microbiology.
13. Knowledge of Sero-immunological Investigations: RA, Widaltest, ASLO titer, ANA, etc.
14. Physical,chemical, microscopic, biochemical and bacteriological tests for various kinds of body aspirates.
15. Knowledge of histopathological techniques.

PRACTICAL/CLINIC IN - ROGNIDAN AVUM VIKRUTI VIDNYAN:

1. Expertise in clinical methods (General and Systemic Examination)
2. Parctical knowledge of examination of Roga based on PanchaNidana.
3. Practical knowledge of instruments used for clinical examination.
4. Practical records of clinical examination of at least 30 long cases in I.P.D.
5. Practical records of clinical examination of at least 30 short cases.
6. Practical knowledge of ECG, USG and Imaging techniques and their clinical interpretation.
7. Understanding of various Ayurvedic diagnostic software/ programmes avaliable like Ayusoft, Rudra, Ayur Nidana etc.

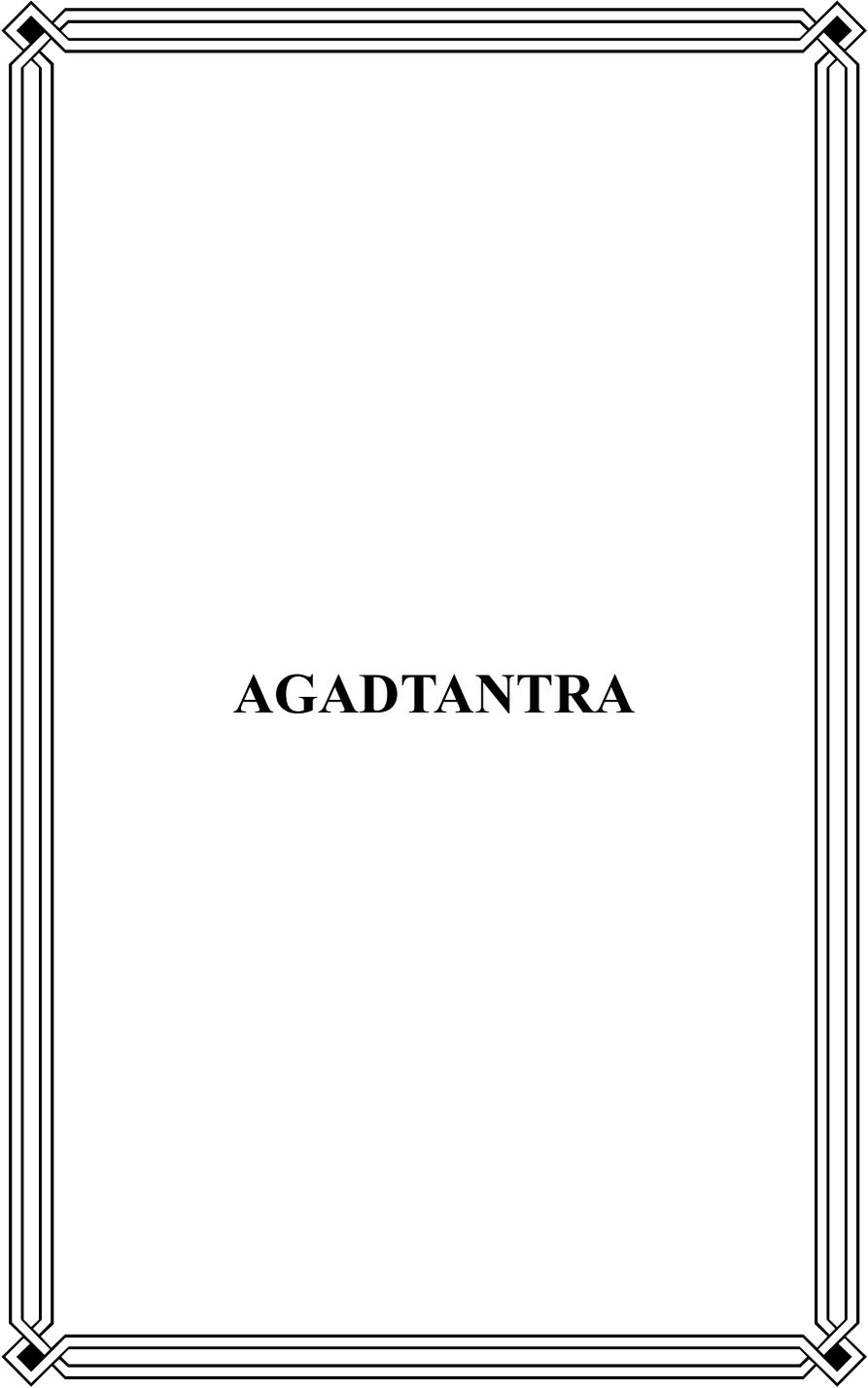
EVALUATION SCHEME (Practical)**(Marks- 200)**

Sr. No.	Examination	Marks
1.	Observation Diary	10
2.	Laboratory record	10
3.	Short Case (including Case Record)	20
4.	Long Case (including Case Record)	30
5.	Laboratory Work	40
6.	Thesis Presentation	40
7.	Viva Voce	50

REFERENCE BOOKS :

Sr. No.	Reference Books	Author	Publisher / Edition
1	Madhav Nidan (Madhukosha Commentary)	Shri Krushnalal Data	Chaukhambha Prakashan, Varanasi 2013 Revised Edition
2	Relevant Portions Of Charak Samhita	Bhagvan Das	Chaukhambha Prakashan, Varanasi (2017)
3	Relevant Portions Of Charak Samhita	Ravidatta Tripathi	Csp Publisher (2015)
4	Relevant Portions Of Charak Samhita	Bramha Nand Tripathi	Chaukhambha Prakashan , Varanasi (2013)
5	Sushrut Samhita	Ambika Datta	Chaukhambha Prakashan , Varanasi (2017)
6	Sushrutsamhita	Yadavji Trikam Ji	Chaukhambha Prakashan 2009
7	Sushrut Samhita	Kaviraj Kunjal	Chaukhambha Prakashan 2003
8	Sushrut Samhita	Anant Ram Sharm	Chaukhambha Prakashan 2013
9	Vagbhata	Ganesh Garde	Chaukhambha Prakashan 2016
10	Doshakaranatwa Mimamsa	Acharya P. V. Sharma	Chaukhambha Prakashan 2008
11	Nadi Pariksha	Gananath Dvivedi	Chaukhamba Publication 2014

12	Nadipariksha	Gp Upadhyay	Chaukhamba Publication, Varanasi (1980-1 st Edition - 2009)
13	Rogiparikshavidhi	Acharya Priyavrata Sharma	Chaukhamba Publication (2013)
14	Nidanpanchak	Shivcharan Dhyani	Chaukhamba Publication, Varanasi (2 nd Edition 1995)
15	Vyadhivigyan I and Ii	Yadav Thrikamji	Baidyanath Publication (3 rd Edition 1983)
16	Ayurvediya Nidan Evum Chikitsa Ke Siddhanta	Prof. Ram Harsh Singh	Chaukhamba Publication (2000 – 3 rd Edition)
17	Clinical Methods In Ayurveda	K. R . S. Murthy	Chaukhamba Publication (2013)
18	Parameswarappa's Ayurvediya Vikriti Vigyan and Roga Vikriti Vigyan	Dr. P. S. Byadgi	Chaukhamba Publication 2013
19	Oxford Handbook Of Clinical Examination – And Practical Skills	Tim Raine and Kate Wiles	10 Th Edition – 2017) – Oxford University
20	Symptoms and Signs In Clinical Medicine - Chamberlains	Andrew Houghton and David Grey	Elsevier (13 th Edition 1 jan 2010)
21	Hutchison's Clinical Methods	Dr. Michell Glynn	Elsevier Health Science (24 th Edition - 2017)
22	Bedside Clinics In Medicine Part- I and Ii	Kundu	Academic Publisher (Edition 7 th , 2014)
23	Practicalpathology	Dr. K. Uma Chaturvedi	Pinewood Publications (1 jan 2017)
24	Medical Laboratory Technology	R. Sood	Jaypee Publication 2009
25	Clinical Diagnosis And Management By Laboratory Methods	Todd, Sanford and Davidson	(14 December 2016)
26	Kayachikitsa Vidnyan	Dr. Shirke J. M.	Rushi Publication - (2006 - 1 st Edition)



AGADTANTRA

TITLE OF THE PROGRAM : AGADA TANTRA EVUM

VIDHIVAIDYAKA

PROGRAM CODE : AVF307

MARKS : THEORY- 400, PRACTICAL - 100 TOTAL - 500

GOALS :

To achieve comprehensive training (in all three domains) of the subject so as to practice and propagate thorough and correct knowledge.

LEARNING OBJECTIVE :

- Be competent ayurvedic physician so as to treat various types of poisoning cases.
- To perform the utmost possible ethical practice in the society.
- Support the education of forthcoming student in the subject and inspire them to achieve excellence
- To identify scope of research in the subject and pursue research activity.

PROGRAM OUTCOMES

- 1) Understand the medico legal responsibility of general physician while rendering community service either in rural primary health center or an urban health center.
- 2) Be a competent Ayurvedic physician to treat poisoning and medico-legal cases.
- 3) Perform utmost ethical practice in the society.
- 4) Identify research topics, carry out research and critically analyze relevant published research literature.

PROGRAM OBJECTIVES:

a) COGNITIVE DOMAIN :

At the end of the Program the student should be able to-

- Comprehend the knowledge of Agadtantra - Vidhivaidyak about various aspects of poison.
- Understand the medico legal responsibility of general physician while rendering community service either in rural primary health center or an urban health center.

- Describe the medico legal aspects and findings of postmortem examination in case of death due to common unnatural

b) LEARNING OBJECTIVE (PSYCHOMOTOR)

At the end of the training students should be able to-

- Perform Physical and Chemical analysis of plant origin poisons such as Datura, Karaveera, Vatsanabha, Jayapala, Arka and Bhallataka with methods such as Microscopy, powder microscopy, TLC, solvent extraction, detection of Phenol, tannins etc.
- Identify various relevant chemicals such as acids, alkalies, alcohols etc.
- Detect relevant minerals such as Copper, Mercury, Lead, Arsenic and their compounds.
- Detect human blood, hair, semen and other biological secretions of Forensic importance.
- Acquire Practical training in post-mortem examination
- Manage (Treat) the cases of poisoning and its Medico-legal aspect.
- Prepare and deliver lecture on various topics of Agadtantra-Vidhivaidyak using audio visual aids.
- Identify various E-learning resources related to Agadtantra-Vidhivaidyak and inculcate them for self learning.

c) PERSONALITY DEVELOPMENT (AFFECTIVE DOMAIN)

At the end of the training students should be able to-

- Be a competent Ayurvedic physician to treat poisoning and medico-legal cases.
- Perform utmost ethical practice in the society.
- Educate the undergraduate students about various aspects of poisonous drugs and various medico legal cases.
- Support the students in their learning and inspire them to reach to the level of excellence.
- Stimulate inquiry in students.
- Identify research topics, carry out research and prepare a dissertation on topic

Sr. No.	Topics	Description	No of Lectures	Weight age
PAPER-I (CODE NO – AVF 3071) AGAD TANTRA (AYURVEDIC AND CONTEMPORARY TOXICOLOGY)				100 Marks
Part A				
1	Agadatantra its sequential development.	Agadatantra its sequential development during vedakala, samhitakala, samgrahakala, adhunikakala	4	5
2	Toxicodynamic And Toxicokinetic Study As In Ayurveda	Defination of visha, properties of visha and its comparison with madya and oja, vishasamprapti, vishaprabhava, vishavega, vegantara and vishakarmukata (toxicodynamic and toxicokinetic study).	5	10
3	Study of Upavisha	Descriptive and comparative study of upavisha in union with contemporary toxicology.	5	10
4	Examination of poisons	Examination of poisons as per contemporary and ayurvedic methods	5	5
5	a) visha and upavisha	Detailed study of the following: a) visha and upavisha – arka, snuhi, langali, karaveera, gunja, ahiphena, dhatura, bhallataka, vatsanabha, kupeelu, jayapala, bhanga, tobacco, partheniumhistoferous, chitraka, eranda, digitalis, cerebra odollumetc.	10	20
	b) acid and alkalies	b) acid and alkalies - sulphuric acid, hydrochloric acid, nitric acid, hydrocyanic acid, oxalic acid, carbolic acid, formic acid and alkalies etc.	5	20

Sr. No.	Topics	Description	No of Lectures	Weight age
	c) Asphyxiants	c) Asphyxiants – carbon monoxide, carbon dioxide, hydrogen sulphide etc. antihistamines, cocaine hallucinogens- LSD sedatives and hypnotics – Barbiturates petroleum- kerosene poisoning organo phosphorus compounds – aluminium phosphate, zinc phosphide etc.	5	20
	d) metal and nonmetal	d) metal and nonmetal a. nonmetallic poisons- phosphorous , iodine etc b. metallic poisoning- arsenic, mercury, lead, copper,zinc,tin, radiation metalsetc. Introduction to radioactive substances.	5	20
6	Study of jangamavisha	Study of jangamavisha and their sources (animal poisoning and zoonotic diseases). descriptive study of snakes according to ancient and contemporary knowledge. Causes of snake bite and its types, composition of snake venom and its pharmacological actions. Sign and symptoms of envenomation and its prognostic signs. Clinical features of vrischika (scorpion), luta (spider), grihagodhika (lizard), mushaka (rats), alarka (dogs), makshika and mashaka (mosquitoes) and their pathological manifestations including their role in the manifestation of communicable diseases.	23	25
7	Shankaavisha, vishasankat	Shankaavisha and its management. vishasankat	2	5

Sr. No.	Topics	Description	No of Lectures	Weight age
Part B				
1	Garvisha and Dushivisha	Garvisha and Dushivisha , their varieties, signs, prodromal symptoms, symptoms prognosis, complications and management with contemporary relevance. Detailed study of Allergies including allergic manifestations in the eyes, nose, lungs and skin.	4	15
2	Madyavisha	Detailed study of madyavisha and introduction to substances acting on the nervous system ; substance abuse (Diagnosis, management and de-addiction).	8	15
3	Vishajanyaja napandodhav ansaniyaroga	Detailed study of the contemporary knowledge about vishajanyajanapandodhavansani yaroga (community health problems due to poison-environmental pollution, water pollution, soil pollution, air pollution, industrial pollution etc. their features and management according to ancient and recent concepts	5	10
4	Virudhaaahara	Concept of virudhaaahara, aaharavisha and satmyasatmyata in contemporary and ayurvedic views	9	10
5	Drug interactions and incompatibility	conceptual study – Drug interactions and incompatibility, pharmacovigilance	5	5

Sr. No.	Topic	Description	No of lecture	Weight age
PAPER II : (CODE NO. AVF3072) VISHA CHIKITSA VIGYAN (MANAGEMENT OF POISONING)				100 Marks
Part A				
1	Treatment of Poisoning	Fundamental Principles for treatment of poisoning	16	20
2	Treatment of Different Types of Sthavaravisha	General and specific treatment of different types of Sthavaravisha enumerated in paper 1.	30	20
3	Treatment of Different Types of Jangamavisha.	General and specific treatment of different types of Jangamavisha (animal poisons; insect poisons; snake bites; and other zoonotic diseases) enumerated in paper 1.	15	20
4	Emergency medical management of poisoning.	Emergency medical management of poisoning including preparation; administration and complications of antivenoms / antisera.	6	15
5	Chaturvimsatiu pakrama	Chaturvimsatiupakrama (24 management procedures).	8	15
6	Management of Garavisha and Dushivisha	Management of Garavisha and Dushivisha treatment of Allergies including allergic Manifestations in the eyes; nose; lungs; and skin.	2	15
Part B				
1	Drug Induced Toxicity.	Diagnosis and Management of Drug Induced Toxicity.	4	5
2	contact poisons	Management of the toxic manifestations caused by the contact poisons (paduka; vasthra; abharana; Mukhalepavishabadha etc).	4	12
3	food poisoning	Management of food poisoning.	3	15
4	suspected poisoning.	Duty of physician in poisoning; in cases of suspected poisoning.	5	10

Sr. No.	Topic	Description	No of lecture	Weight age
		Postmortem findings in poisoning.		
5	Corporeal techniques.	Introduction to Extra corporeal techniques (dialysis etc) for removal of poisons.	7	7

Sr. No.	Topic	Description	No of lecture	Weight age
PAPER III : (CODE NO-AVF3073)				100
VYAVAHARA AYURVEDA EVAM VIDHI VAIDYAKA				Marks
Part A				
1	Vyavahara Ayurveda.	Definition of Vyavahara Ayurveda; its evolution in ancient and contemporary periods.	1	5
2	Personal identity	Personal identity and its medico legal aspects.	4	10
3	Death (Medical Thanatology)	Death and its medico legal aspects (Medical Thanatology)	7	20
4	Asphyxial deaths	Asphyxial deaths and its medico legal importance.	8	20
5	Death due to starvation, heat and cold, lightning and electricity.	Death due to starvation, heat and cold, lightning and electricity. and its detail medicolegal study	6	15
6	Suspended Animation	Suspended Animation its detail medicolegal study	2	5
7	Medico legal autopsy	Medico legal autopsy definition rules methodology and preservation of viscera postmortem findings in poisoning.	5	20
8	Injuries due to explosions, chemical and nuclear warfare.	Its Detail Description And Medicolegal Importance	2	10
9	Medico legal aspects of injuries and wounds.	Medico legal aspects of injuries and wounds its types and their detail study	5	25
10	Impotence and sterility	Impotence and sterility its medicolegal aspects. Regulations of Artificial Imsemination. Medicolegal aspects of surrogate motherhood.	4	15

Sr. No.	Topic	Description	No of lecture	Weight age
11	Sexual offences and perversions.	Types of natural and unnatural Sexual offences and perversions	5	15
12	Medico legal aspects of virginity, pregnancy, delivery, abortion, infanticide and legitimacy with related acts.	Medico legal aspects of virginity, pregnancy, delivery, abortion, infanticide and legitimacy with related acts. its detail study with related acts	6	20
PART B				
1	Indian Penal Code, Criminal procedures code and study of related acts like Indian Evidence Acts, Pre Natal Diagnostic Test Act, Nursing Home Act, Human Organ Transplantation Act, Drugs and Cosmetic Act 1940, Narcotic drugs and Psychotropic substances Act 1985, Pharmacy Act 1948, Drugs and Magical Remedies (Objectionable Advertisements) Act 1954, Medical and Toilet	Detail study of all the act	5	10

Sr. No.	Topic	Description	No of lecture	Weight age
	Preparations Act 1955 and Anatomy Act etc. Any related act enacted by the government from time to time.			
2	Courts and Legal procedures.	Introduction, types of Courts procedure of trials, types of evidences witness etc.	4	15
3	Forensic Science Laboratory.	Forensic Science Laboratory its detail study	5	5
4	Medico legal aspects of mental illness. (insanity)	Types and Medico legal aspects of mental illness.	8	15
5	Duties and privileges of physician	Duties and privileges of physician	5	5
6	Structure of Central Council of Indian Medicine, its jurisdiction and functions. Code and Conducts as per the CCIM, Rules and Regulation there under.	Detail study and their functions	2	5
7	Respective State Council of Indian Medicine, its structure, power, voluntary duties.	Detail study and their functions	2	5
8	Doctor patient relationship.	Doctor patient relationship.	2	5
9	Rights and privileges of patients,	Rights and privileges of patients, Euthanasia its detail study	1	5

Sr. No.	Topic	Description	No of lecture	Weight age
	Euthanasia			
10	Professional secrecy and privileged communication.	Professional secrecy and privileged communication.	3	5
11	Professional negligence and malpractice	Professional negligence its types and Malpractice in detail	2	5
12	Indemnity Insurance scheme.	Indemnity Insurance scheme.	1	3
13	Consumer Protection Act	Consumer Protection Act and its detail study in reference to medical practice in contemporary context	2	7
14	Ethics as in classics	Ethics as in classics Types of physicians and methods of identification, Pranabhisara and Rogabhisara Physicians, qualities of physician, responsibilities of Physicians, Chaturvidhavaidyavriti, duties of physicians towards patients, Vaidyasadvritam, ApujyaVaidya who is accepting fees, relationship with females.	3	10

Sr no	Topic	Description	No. of lecture	Weight age
PAPER IV: (CODE NO - AVF3074) AUSHADHA YOGA VIGYAN				100 Marks
Part-A				
1	Pharmacodynamics in Agadatantra.	Pharmacodynamics of different formulations used in Agadatantra.	15	10
2	Antidotes	Study of pharmacology and usage of antidotes as per the Ayurvedic and contemporary science.	10	12
3	Fundamentals of pharmaceutics	Fundamentals of pharmaceutics according to Ayurveda and contemporary point of view.	25	10
4	Introduction to forensic Science Laboratory.	Introduction to forensic Science Laboratory. Chemical, analytical, laboratory examination of poisons and suspicious substance	10	10
Part B				
1	Introduction of different instruments/equipments used in the examination of poisons.	Introduction of different instruments / equipments used in the examination of poisons. Microscopes viz compound, binocular, trinacular, research advanced pH meters Photoelectric colorimeter TLC HPTLC HPLCS DNA profile GC GC-MS	25	10

Sr no	Topic	Description	No. of lecture	Weight age
		AASs UV Spectrophotometer Electrophoresis		
2	Introduction to Clinical toxicology.	How to diagnose poisoning treatment deal emergencies and medicolegal aspect.	5	10
3	Introduction to Experimental toxicology	Its Introduction And Relevant Study	5	10
4	Introduction to Toxicogenomics	Its Introduction And Relevant Study	3	5
5	vishachikistasampradaya	Introduction to of the traditional and folklore vishachikista sampradaya.	2	5

PRACTICAL :

Marks - 100

Sr. No.	Topic
1	Identification of specimens models and equipments of toxicology and jurisprudence importance.
2	Practical training in postmortem examination (10 cases)
	Medico-legal cases (20 cases)
3	Chemical Identification of various acids, alkalies, alcohols, Hydrochloric acid, Nitric acid, Sulphuric acid, Ascorbic acid, Sodium Hydroxide and Potassium Hydroxide.
4	Introduction to Detection of minerals Copper, Mercury, Lead, Arsenic and their compounds.
5	Introduction to Physical and Chemical analysis any two of Datura, Karaveera, vatsanabha, Jayapala, Arka and Bhallataka with Microscopy, powder microscopy, TLC, solvent extraction, detection of Phenol, tannins, etc. (10 studies)
6	Detection of human blood, hair, semen and other biological secretions of Forensic importance
7	As per MSR, at least one paper to be published/accepted in a peer reviewed journal.
8	Clinical postings

	a. Regular clinical postings in the Agadatantra OPD/ IPD. 4 weeks
	b. Modern medical hospitals - 2 weeks (For emergency management of poisoning).
9	Other Postings
	a. Postmortem postings - 2 weeks
	b. Court postings - 1 week
10	Visit to
	1. Forensic Laboratory
	2. Anti snake venom serum manufacturing Unit (optional)

PRACTICAL EXAMINATION PATTERN

Total 100 Marks

Sr. No.	Examination Scheme	Marks
1	Postmortem / Medico-legal case record and clinical record	20
2	Clinical case presentation / xray, weapons, bones	20
3	Spotting related to Visha, Upavisha and other poisonous drugs	20
4	Thesis presentation	20
5	Viva- voce	15
6	Communication skill	05

REFERENCE BOOKS:

Sr. No.	Book Name	Author	Edition	Publication
1	Useful Portion of Charak-Sushrut vagbhata	-	-	-
2	Dravyaguna Vigyan	Acharya Yadavji	7th Edition 1997	Baidyanath Ayurved Bhavan
3	Aushadhigunadh arma Shastra	Pt Visvanath Dvivedi	3 th Edition 1986	Swati Enterprise
4	Kriyatmat Aushada Parichaya Vigyan	Pt. Visvanath Dvivedi	2nd Edition 1993	Chaukhambha Bharati
5	Ayurvedic Vyadhi Vigyan	Acharya Yadavji Trikamji	3rd Edition 1983	Baidyanath Ayurved Bhavan

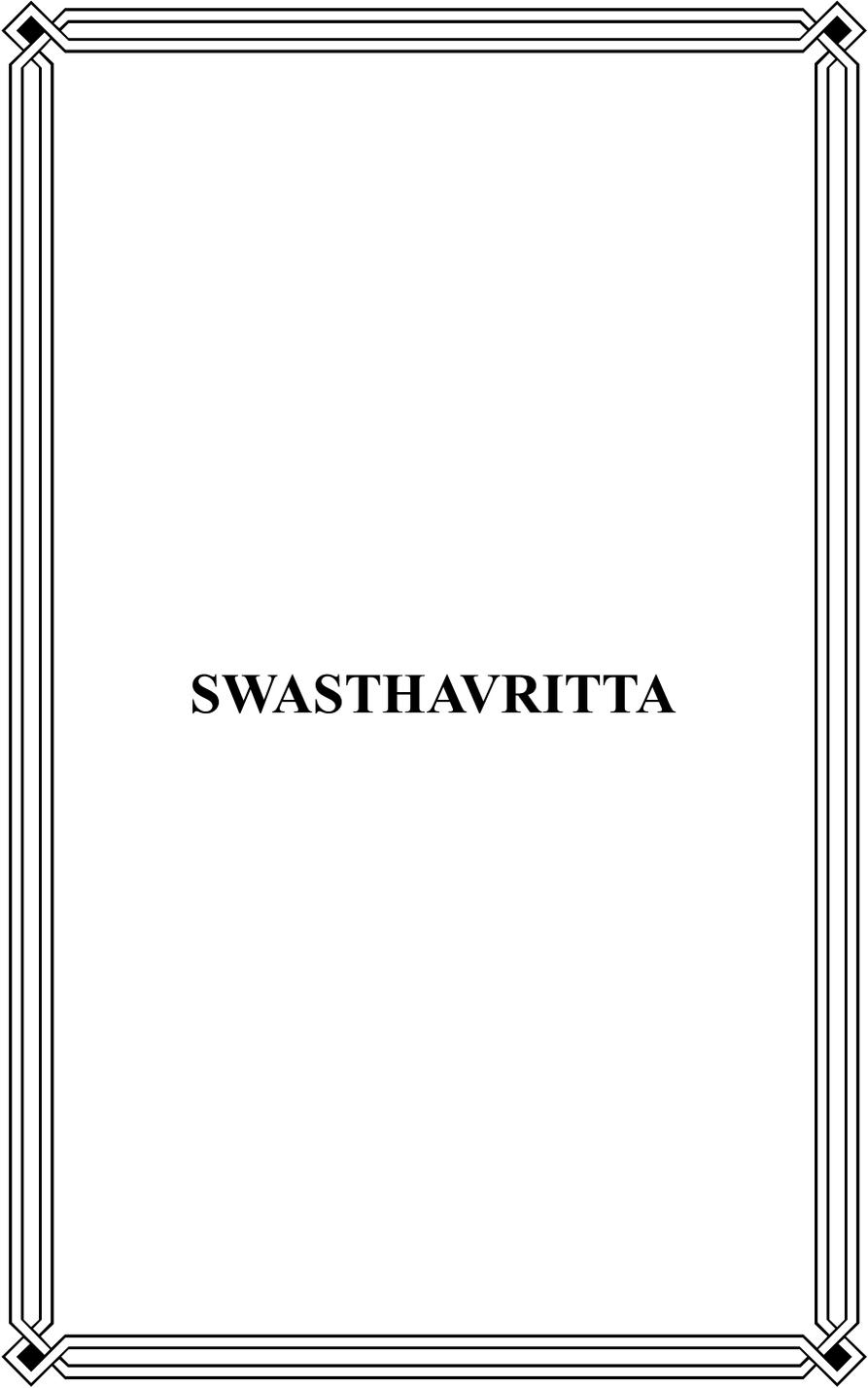
Sr. No.	Book Name	Author	Edition	Publication
6	Madhavanidan With Madhukosha Commentary	Madhukosha Commentary	-	Chaukhambha
7	Sharangadhara Samhita	Gudharthade epika Commentary	Reprint 2012	Chaukhambha Oriental
8	Yogaratanakara	Laxmipati Shastri	Reprint 2017	Chaukhambha
9	Aushadigunadhara Shastra	Pt Gangadhara Shastri Gune	1st Edition 2014	Chaukhambha Sanskrit
10	Rasendra Chintamani	Siddhi Nandan Mishra	Reprint 2011	Chaukhambha Orientalia
11	Rasaratna Samuchhaya	Indradev Tripathi	Reprint 2009	Chaukhambha Sanskrit
12	Vishavigyan	Dr. Krishna Kumar	-	-
13	Related Matter of Kautilya Arthashastra	Shri Vachaspati Gairola	4 th Edition 2003	Chaukhamba Surbharati Pratishtan
14	Harmekhlatantra	Siddhi Nandan Mishra	Reprint 2010	Chaukhambha Prakashan
15	Anupana Manjari	Yadavji Trikamji	Reprint 2010	Chaukhambha Prakashan
16	Ayurvedprakash	Shri Gulraj Sharma Mishra	Reprint 1999	Chaukhambha Bharati
17	System of Clinical Medicine	Savil	14 th Edition	Cbs Publishers
18	Forensic Pharmacy	B. M. Mhithai	--	--
19	Hand Book of Forensic Medicine And Toxicology	Dr. P.V. Chadha	5th Edition 2009	Jaypee
20	Viva Forensic Medicine And Toxicology	L. C. Gupta	1998	Jaypee
21	Forensic	J. P. Narena		

Sr. No.	Book Name	Author	Edition	Publication
	Medicine And Ethics			
22	Modi's Medical Jurisprudence And Toxicology	Jaising P. Modi	24th edition, 2011	Lexis-Nexis India
23	The Essentials of Forensic Medicine And Toxicology	Dr.K.S. Narayan Reddy	Third Edition (2015)	Jaypee Brothers Medical Publishers
24	Medical Laws And Ethics	Dr. H.S. Mehta	-	-
25	M.R.K. Krishnan's Handbook of Forensic Medicine	-	-	-
26	Textbook of Medical Jurisprudence And Toxicology	Dr. C.K. Parikh	6 th Edition 1 December 2007	Cbs
27	Atlas of Forensic Medicine	Dr. Tomio Watenbe	-	-
28	Medico Legal Postmortems (Atlas)	Dr. Parikh And Others	-	-
29	Textbook Of Forensic Medicine And Toxicology	Dr. V. V. Pillay	18 th Edition - 2017	Paras
30	Textbook Of Forensic Medicine And Toxicology	Dr. Karmakar	-	-
31	Textbook of Forensic Medicine And Toxicology	Singhal	5 th Edition 2015	National

Sr. No.	Book Name	Author	Edition	Publication
32	Textbook of Forensic Medicine And Toxicology	Dr. Krishnan Vij	5 th Edition (February 10, 2014)	Elsevier India
33	Forensic Pathology	Dr. Bernard Knight	4 th Edition (December 18, 2015)	Crc Press
34	Textbook of Forensic Medicine And Toxicology	Lyon's	11 th Edition	Aiims
35	Pocket Picture Guide To Forensic Medicine	Gower's Medical Publication	-	-
36	Forensic Medicine	Simpson Knight	11 th Edition (January 15, 1997)	Crc Press
37	Taylor's Principles And Practical Of Medical Jurisprudence	J And A Churchis	19 th Reedition 2017	Churchill Livingstone
38	Doctor And Law	Singhal	Third Edition	National
39	Textbook Of Toxicology	Singhal	Ninth Edition-2017	The National Book House
40	Medicine Harrison's Principal Of Internal Medicine	-	Indian 19th Edition (12 July 2015)	Mc Graw Hill Education / Exclusively Distd. By Jaypee
41	Agad Tantra	Dr. Shekhar Namboodri	2007	Chaukhambha
42	Modern Medical Toxicology	Dr. V. V. Pillay	Fourth Edition (2013)	Jaypee Brothers Medical Publishers
43	Critical Care Toxicology	Bruent Wallace	1 Edition December 31, 2004	Mosby

Sr. No.	Book Name	Author	Edition	Publication
44	Diagnosis And Management of Common Poisoning	Agarwal Wal	-	-
45	Colour Atlas of Forensic Medicine	Govindaiah	2nd Edition 2009	Jaypee Brothers Medical Publishers
46	Guidelines of Poisons	W.H.O.	-	W.H.O.
47	Doctors Patients Relationships	Dr. Lavekar	-	-
48	Bhavaprakasha.	Vd Chunekar	1st Edition 2014	Chaukhambha Oriental Varanasi
49	Vishavaidya Jyotsnika English Translation	Vpsv Ayurveda College, Kottakkal	Edition 2005	-
50	Lakshnamritham	-	-	-
51	Toxicology, Ayurvedic Perspective	Vpsv Ayurveda College, Kottakkal.	-	-
52	Textbook of Agadatantra	Dr. Huparikar, Dr. Joglekar	-	-
53	Agadatantra Ki Pathyapustaka	Dr. Huparikar, Dr. Joglekar	Edition 2008	Rashtriya Shikshan Mandal
54	Vyavahar Ayurveda Vigyanam	Dr. Indramohan Jha(Sachchan)	Edition 2008	Rashtriya Shikshan Mandal
55	Forensic Medicine	Dr. B. Umadathan	-	-
56	Visha Chikitsa	Dr. M. Balakrishnan Nair	1st Edition 2010	Mbi
57	Park Textbook Of Preventive And Social Medicine	K. Park	Twenty Third Edition 2015	Bhanot

Sr. No.	Book Name	Author	Edition	Publication
58	Environmental Science And Biotechnology - Theory And Practice	A.G. Murukesan and C. Rajakumari	1st Edition September 22, 2005	Mjp Publishers
59	Veterinary Toxicology	Dr. Satish K. Garg	1st Edition 1 December 2010	Cbs
60	Guide To Drinking Water Quality (3 Volumes)	Who Publication	2008	Who Publication
61	A Short TextBook of Medical Entomology	H.S. Bhatti, R. Sehgal, R.C. Mahajan.	--	--

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SWASTHAVRITTA

TITLE OF THE PROGRAM : SWASTHAVRITTA AND YOGA
PROGRAM CODE : AVF308
MARKS: - THEORY- 400 PRACTICAL- 200 TOTAL - 600

GOAL:

- To make the student competent in preventive aspect of total and positive health by holistic approach of Ayurved, Yoga and Naturopathy.
- To make the student competent to achieve total health comprising physical, mental, social and spiritual for the society.
- To promote the concepts of yoga and naturopathy for health enhancement and disease prevention in student of Ayurveda.

LEARNING OBJECTIVES:

- To Provide community based Services.
- To Provide Preventive services with respect to communicable, Non communicable diseases.
- To Know and involve in national health Programs
- To Understand and Practice preventive aspect of Ayurveda, Yoga and Naturopathy
- To make the student competent to execute the research project.
- To make the student competent to do total health counseling for prevention of diseases.

LEARNING OUTCOME :

COGNITIVE DOMAIN :

- To Apply Knowledge of Personal, Social, Occupational, Maternal, Child and Environmental Health.
- To apply Knowledge of Dinchraya, rutucharya, rasayan, vajikaran, Ahar, Yoga and Naturopathy
- To Apply Knowledge of Diet and Nutrition (Pathya-Apathya) in the management of Healthy and diseased
- Implementation of National Health Program, National and International Health Agencies, Health Administration System in India, Primary Health care.
- Management of Communicable and Non communicable Diseases

- Implementation of Medical Statistics
- Diagnosing newer emerging diseases with differential diagnosis

PSYCHOMOTOR DOMAIN :

- To obtain medical, Social, Behavioral and Medical history from patient / relative and elicit about diet, hygiene and other health related behaviors.
- To diagnose communicable and non-communicable diseases ,its Incident rate, Prevalence rate and able to guide the Prevention of respective disease
- To advise and demonstrate Yogic, Naturopathic, preventive Panchakarma Procedures and Procedure of Dincharyas.

AFFECTIVE DOMAIN :

- Be able to consult the patient and society about personal hygiene, diet, yoga and Nisargopachar for prevention and cure of the diseases.
- Be competent teacher in academics.
- Be competent in public health services.
- Be a competent researcher.

INTEGRATION :

- Understand and integrate modern aspects of Preventive and Social Medicine wherever necessary as per the Ayurveda specially swasthviritta curriculum so as to participate in patient management in any Ayush clinic.
- **PROGRAM DESCRIPTION :**

PAPER-I : (CODE NO. - AVF3081) VAIYAKTIKA SWASTHAVRITTAM SADVRITTAM CHA (PERSONAL AND MORAL HYGIENE)			100 Marks
Sr. No.	Topics	No of Lectures (hours)	Weight age (Marks)
Part A			
1.	Role of Swasthavritta in socio cultural, developmental and environmental aspects of health.	1	2
2.	Study of indicators of health-mortality indicators, morbidity indicators, disability rates and nutritional status indicators.	1	2
3.	Dinacharya – Detailed accounts by Charaka, Sushruta, Vagbhata and Bhavamishra.	1	5
4.	Practical application of Dinacharya in today's era and probable physiological effect of these procedures.	2	5
5.	Ratricharya – Bhavamishra and otherclassics.	1	2
6.	Study of Day and night pattern in various countries and its relevances to the status of health.	1	2
7.	Ritucharya – Classical description by Charaka, Sushruta, Vagbhata, Bhela Samhita and Bhavamishra.	1	5
8.	Preventive and Promotive aspects of Ritucharya and its need and importance in present Era, Importance of Ritusandhi and Yamadamshtra.	2	5
9.	Ritu Shodhana technique with reference to various Ritus, its method and mode of action in diseaseprevention.	1	3
10.	Relevance of Vegadharana and Udirana in disease manifestation and Management.	2	5
11.	Ahara – Classical food items described in Charaka, Sushruta, Vagbhata, Yogaratnakara and Sharngadhara.	2	5
12.	Aharavargas and their comparison with todays' fooditems.	1	5
13.	Dietetics intervention in malnutrition, under nutrition and over nutrition as per Ayurveda and modernscience.	3	5

Part - B			
14.	Rules of Dietetics according to Charaka, Sushruta and Vagbhata.	3	5
15.	Pros and Cons of vegetarian and non-vegetarian foods.	1	2
16.	Viruddhahara – Classical and modern day examples and its impact on health.	2	2
17.	Knowledge about Assessment of nutritional status of individual and community.	2	2
18.	Pathya Apathya in various diseases as per Ayurvedic classics viz. Jwara, Pandu, Raktapitta, Gulma, Prameha, Hridroga, Shosha, Unmada, Apasmara, Kamala, Udara, Shwasa, Kasa, Hikka, Agnimandya, Ajirna, Atisara, Grahani, Amlapitta, Pravahika, Arsha , Kushtha, Mutrakrichchra, Ashmari, Vidradhi, Shotha, Visarpa, Vatavyadhi, Vatarakta, Shiro-Karna-Nasa-Mukha- Netra Roga.	10	5
19.	Ayurvediya Ahara, Aushadha Kalpana in relation with nutraceuticals and nutrigenomics (Prakruti AnurupAhara).	2	3
20.	Food adulteration, methods for detecting, controlling food adulteration and its legislative control.	2	2
21.	Role of Nidra, Brahmacharya, Abrahmacharya in maintenance of health and causation of diseases and their management.	3	10
22.	Sadvritta – Description of Charaka, Sushruta and Vagbhata. Clinical importance of Achar Rasayana, Nitya Rasayana and Sadvritta in prevention of disease and promotion of health.	2	5
23.	Rasayana - its utility in health and disease condition.	2	3
24.	Scope of Vajikarana in health. – Pathya Apathya Kalpana and Vihara forVajikarana.	2	3
25.	Role of Ayurveda in mental health.	2	2
26.	Vyadhikshamatva – Ayurvedic, Modern concepts and its practical implementation.	2	3
27.	Concept of genomics in relation with status of health.	1	2

PAPER-II : (CODE NO. - AVF3082) SAMAJIKA SWASTHAVRITAM (COMMUNITY HEALTH)			100 Marks
Part A			
Sr. No.	Topics	No of Lectures (hours)	Weight age (marks)
1.	Ayurvedic aspect of social health.	1	1
2.	Vyadhi Sankarya as a causative factor of a Vyadhi. Web of causation of diseases, multifactorial causation.	1	1
3.	Natural history of diseases. ICD - International Classification of Diseases.	1	1
4.	Ecology and community health. Impact of bio-geo-chemical cycle (impact of changing global nitrogen cycle on human health)	2	1
5.	Environment and community health (Bhumi, Jala, Vayu their Shuddhikarana and Prakasha, Shabda, Vikirana)	12	10
6.	Disinfection practices for the community – Ayurvedic and Modern.	2	10
7.	Immunization programmes. Possible contribution of Ayurveda. E.g. Suvarnaprashana, Karnapalibhedanaetc.	2	5
8.	HousingStandards. Description of Aaturalaya (hospital), Sutikagara, Kumaragara, Panchakarmagara and Mahanasa (Kitchen)	3	5
9.	Disposal of Wastes- refuse, sewage. Methods of excreta disposal in sewerred and unsewerred areas. Disposal of dead body.	3	5
10.	Management of biomedical waste. Biomedical waste act - 1998, 2016.	2	5

Part B			
11.	Occupational Health. Role of Ayurveda in Occupational health, in ESI and other Government sectors.	4	10
12.	Medical Entomology– Arthropods of medical importance and their control measures.	2	5
13.	Medical parasitology and control in relation to communicable diseases.	2	5
14.	School Health Services and possible contribution of Ayurveda.	3	10
15.	Demography and Family Planning. Recent developments in family planning measures and contribution of Ayurveda.	5	10
16.	Family Welfare Program and the role of Ayurveda in it.	2	2
17.	Old age problems in community. Role of Swasthavritta in Geriatric care.	2	2
18.	Role of Ayurveda in palliative, rehabilitative and convalescence care.	2	1
19.	Lifestyle disorders and Non Communicable diseases in community and role of Ayurveda in them.	12	10
20.	Medical Sociology.- adolescent health, social and behavioral problems, its policy for prevention and control, public relation, doctor patient relationship and hospital sociology.	5	1

PAPER-III (CODE NO. - AVF3083) SAMKRAMAKA ROGA PRATISHEDHAM EVAM SWASTHYA PRASHASANAM (EPIDEMIOLOGY AND HEALTH ADMINISTRATION)			100 Marks
Part A			
Sr. No.	Topics	No of Lectures (Hours)	Weight age (Marks)
1.	Modern Concept of Epidemiology	1	3
2.	Critical evaluation of Janapadodhdhwamsa.	2	5
3.	Clinical epidemiology of different communicable diseases, re-emerging and newer diseases and the role of Ayurveda in them.	6	10
4.	Investigations for communicable diseases	2	1
5.	Sexually Transmitted Diseases and their control	4	5
6.	Ayurvedic view of Samkramaka Rogas.	1	4
7.	Investigation and control of an Epidemic and probable role of Ayurveda in it.	2	1
8.	Host Defenses.	2	1
9.	Notifiable diseases and procedure for notification and other formalities.	1	1
10.	Ayurvedic concept of health maintenance for travelers.	1	2
Part B			
11.	Nosocomial infection, iatrogenic diseases, opportunistic infection, isolation ward and its Ayurvedic perspective.	4	5
12.	AYUSH- aims, objectives, structure, function and health policies.	2	10
13.	National Health Programmes and possible contribution of Ayurveda in them.	5	10
14.	Health administration in India.	2	5
15.	National Health Mission, National AYUSH Mission, administration, functions and programmes. Swachha Bharat Abhiyana.	5	10
16.	National and International Health Agencies and their activities.	5	10
17.	Disaster management.	2	5
18.	Statistics related with Infectious diseases at International, National and State levels.	1	1
19.	Vital Statistics.	2	10

PAPER - IV (CODE NO. - AVF3084) YOGA EVAM NISARGOPACHARA YOGA AND NATURE CURE)			100 Marks
Part A			
Sr. No.	Topics	No of Lectures (Hrs.)	Weightage (Marks)
1.	History and evolution of Yoga	1	2
2.	Nirukti and definitions of yoga	1	3
3.	Rajayoga – (Ashtanga yoga) philosophy of Patanjali according to Yogasutras.	1	3
4.	Hathayoga - according to Hatha Pradipika, Gheranda Samhita and ShivaSamhita.	2	3
5.	Karmayoga – Philosophy according to BhagavadGita	1	3
6.	Mantrayoga, Layayoga, Jnanayoga and Bhaktiyoga.	4	3
7.	Concept of Sthula, Sukshma and Karana Shariras.	2	3
8.	Concept of Panchakoshas.	2	3
9.	Concept of Shat Chakras, Nadis and Kundalini. Signs of Nadishuddhi.	3	5
10.	Physiological effect of Yoga on Body and mind – ancient and modern concepts.	3	5
PART B			
11.	Suryanamaskara and its effect on health.	2	10
12.	Shat Kriyas and its physiological their therapeutic effects.	6	5
13.	Therapeutic effect of Yogic practice in the following diseases - Diabetes, Hypertension, Cardiovascular disorders, Obesity, Asthma, Irritable Bowel Syndrome, Eczema, Psoriasis, Stress Disorders, Eye disorders, Headache, Juvenile Delinquency, Mental Retardation, Depression, Neurosis, Sexual Dysfunction, Gynecological, Uterine Disorders, Cancer, Addiction.	10	5
14.	Utility of Yoga in Rehabilitation and the usage of props.	3	10
15.	Yoga in Ayurveda – Concept of Moksha, Tools for Moksha, Naishtiki chikitsa,	5	10

	TattvaSmriti, Satyabudhhi, YoginamBalamAishwaram, Mukta Atmalaxana (Charaka Samhita Sharirasthana chapter 1 and5)		
16.	History of Nisargopachara.	1	1
17.	Basic Principles of Indian School of Nature Cure –Panchabhuta Upasana and its therapeutic effects and utility.	3	5
18.	Basic Principles of Western School of NatureCure.	1	1
19.	Different types of Mud therapy, Hydrotherapy, Helio therapy and Chromo therapy Massage and excise therapy, fasting and relaxation therapy and their therapeutic effects and utility.	8	10

SCHEME OF PRACTICALS DURATION: - 02 YEARS

- 1) Health promotive and protective practices of Dinacharya procedures viz.
Dantadhavana, Anjana, Nasya, Kavala, Gandusha, Dhumapana,
Abhyanga, Udvartana
- 2) Practical Demonstration and self- practice of Yoga

a) Sukshma and Sthula Vyayama

b) Suryanamaskara

c) Aasanas:

Sitting Position

1. Padmasana
2. Swastikasana
3. Siddhasana
4. Bhadrasana
5. Gomukhasana
6. Vajrasana
7. Suptavajrasana
8. Simhasana
9. Paschimottanasana
10. Ardhamasytendrasana
11. Ushtrasana

Supine position:

1. Shavasana
2. Uttanapadasana
3. Sarvangasana
4. Halasana
5. Karnapidanasana
6. Naukasana
7. Matsyasana
8. Setubandhasana
9. Proneposition:
10. Makarasana
11. Niralmbasana
12. Shalabhasana
13. Bhujangasana
14. Dhanurasana
15. Mayurasana

Standing position:

1. Tadasana
2. Utkatasana
3. Vrikshasana
4. Ardhakaticharasana
5. Trikonasana
6. Natarajasana

d) Mudra

- a. Viparitarani
- b. YogaMudra
- c. ShanmukhiMudra
- d. BrahmaMudra
- e. Ashwinimudra

e) Bandha

- a. Jalandhara, Uddiyana, MulaBandha

f) Shuddhikriya –

Jala Neti, Sutra Neti, Jala Dhauti, Trataka, Shankhprakhshalana, Kapalbhathi- Vyutkrama and Shitkrama Kapalbhathi, Nauli.

g) Pranayama

Nadishudhhi-Anulom Vilom Pranayama

h) Kumbhaka Bhedas

- a. Suryabhedana
- b. Ujjayi,
- c. Bhastrika,
- d. Bhramari
- e. Sheetalī
- f. Sitkari

i) Dhyana

3) Practical Demonstration of Naturopathy procedures

- a. Mruttika Snana (Mud Bath)
- b. Mruttika Patti (Mud Pack)
- c. Pada and Hasta Snana (Foot and Arm bath)
- d. Bashpasnana (Steam bath)
- e. Avagahana (Immersion bath)
- f. Prishthasana (Spinal bath)
- g. Katisnana (Hipbath)
- h. Alternate hot and cold bath
- i. Water packs
- j. Deferent massage techniques
- k. Sun Bath techniques
- l. Relaxation techniques – QRT (Quic Relaxation Technique), IRT (Instant Relaxation Technique), DRT (Deep RelaxationTechnique).

4) Long case sheets for Pathya, Apathya, Yoga and Nisargopachara adviceto

- a. Non communicable diseases 10
(Proforma attached as Annexure ‘A’/ ‘E’)
- b. Communicable diseases10
(Proforma attached as Annexure ‘B’)
- c. Garbhini Paricharya 10
(Proforma attached as Annexure ‘C’)
- d. Malnutrition treatment cases10
(Proforma attached as Annexure ‘D’)

5) Departmental Practicals

- 1) Dantadhavana
- 2) Anjana
- 3) Nasya
- 4) Gandusha

- 5) Kavala
- 6) Dhoompana –Dhumavarti Nirmana

6) Educational Visits-

The brief report of each visit (Minimum 10 compulsory) should be written by student in a journal (Duly signed by Guide and HOD)

- 1) Water Purification Centre
- 2) MilkDairy
- 3) Industry
- 4) Leprosy Centre
- 5) T.B. Centre
- 6) Yoga Centre
- 7) Naturopathy Centre
- 8) Primary Health Center
- 9) Disposal of Waste Unit
- 10) Sewage Disposal Unit
- 11) Psychiatric Hospital
- 12) Isolation Hospital
- 13) A.R.T. Centre
- 14) Food and Drug Administration Centre
- 15) District / Civil Hospital

7) Field Work

- a) Community Health Survey (Minimum 10 forms)–
(Proforma attached as Annexure ‘F’)
- b) School Health Check-up (Minimum 10 forms)

8) Departmental duties : Regular Attendance-

1. Duty in OPD and IPD
2. Museum Development
3. Yoga training for Self, Swastha and patients.
4. Departmental Seminars minimum 10 in 2 years
5. Research Journal /Article Reviews (Minimum2)
6. Submit minimum 2 papers in any publications.
7. Micro Teaching (Training to take Lectures and Practicals of UG).
Minimum10.
8. Health Awareness talk for public.
9. Daily diary- Log book

ANNEXURE 'A'

PROFORMA : (Non - Communicable Disease case)

A] General Information :

1. Name of the Patient: _____
2. Age: _____ yrs.
3. Sex : Male / Female
4. Religion: _____
5. Date of Admission: _____
6. Address: _____
7. Occupation: _____
8. Education: _____
9. Per Capita income: _____ Rupees.
10. Socio economic class (Modified _____)

B] Present illness:

Chief complaints (chronological order): _____

C] History of past illness :

1. Similar complaints in past: _____
2. Any other significant history: _____

D] History of illness in Family :

1. Type: _____
2. Composition: _____
3. Similar illness in family : Yes /No If yes, give details: _____

E] Lifestyle and personal history :

1. Occupation : Manual Work / Table Work / Field Work/ Administration /Any other (Specify)
2. Muscular exertion (occupational / domestic etc.) Minimum / Moderate /Heavy
3. Exercise: Nil / Walking / Running / Jogging/ Cycling / Swimming / Weightlifting / Any other specify _____
4. Mental Stress and Strain : Occupational/ domestic/ any other specify _____
5. Hobby, Recreation: _____
6. Diet:
 - a. Veg. / Non Veg. / Mixed
 - b. Total calorie intake _____ calorie /day adequate / inadequate / excess

- c. Fat: adequate / inadequate/ excess Vegetable / Animal fats
Predominantly saturated / unsaturated
 - d. Spice and Hot foods(Specify)
 - e. Regularity in taking meals
 - f. Type of diet : balanced / Non balanced (Give reason)
7. Sleep and rest : adequate /inadequate
8. Habits and addictions:
Smoking : Yes / No /Past Smoker
If yes : Type /duration/quantity/frequency. _____
Alcohol : Yes / No /Past Alcoholic
If yes : Type /duration /quantity/frequency. _____
Any Other : Specify, give details. _____

F] General Examinations: _____

G] Systemic Examination: _____ RS/CVS/CNS/PA: _____

H] Diagnosis :

- i. Provisional: _____
- ii. Differential: _____

I] Investigations :

Investigation done: _____
Any further investigations required: _____

J] Final Diagnosis : _____

K] Management:

Drug therapy (give details): _____
Diet modification: _____
Health Education / Lifestyle modification: _____
Follow up: _____

L] Prevention and Control Measures

Primary Prevention: _____
Secondary Prevention: _____
Tertiary Prevention: _____

Sign. of Student

Sign. of Guide

Date :-

ANNEXURE 'B'

PROFORMA (Communicable Disease case)

A] General Information :

1. Name of the Patient: _____
2. Age: _____ yrs. 3. Sex : Male /Female
4. Date of Examination: _____
5. Address.: _____
6. Locality : Urban – Slum / Non-Slum/ Rural /Other (Specify) _____
7. Duration of Stay in the Locality; _____ (years/months)
8. Hospital Registration No.: _____ 9. Date of Admission: _____
10. Religion / Caste: _____ 11. Education: _____
12. Occupation: _____ 13. Type of Family: _____
14. Total No. of Family Members: ___ 15. Total Family income: _____
16. Per Capita income per month: _____ Rs.
17. Socio-economic Status(As per ___ classification): _____

B] Chief Complaints (In Chronological order)

1. _____
2. _____
3. _____
4. _____

C] H/O Present illness: _____

D] H/O Past illness: _____

- i. Similar complaints in past: _
- ii. Any other significant history: _____

E] History of illness in the family: _____

F] Personal History:

- a. Dietary: _____
- b. Immunization: _____
- c. Habits: _____

G] Environmental history (Pertinent to the route of transmission)

- i] Water Supply ii] Excreta Disposal iii] Drainage iv] Cattle
- ii] Pet animals, Poultry vi] Housing condition vii] Over Crowding
- iii] Insect Nuisance ix] Courtyard of house etc.

H] Epidemiological information (Backward tracing of index case.)

- i. Any similar case in the family / neighborhood / School / Place of recreation / any other Specify. __
- ii. History of attending to similar case - if yes, when?
- iii. History of visiting any unaccustomed place if yes, When?
- iv. Total contacts
- v. High risk contacts.

I] Provisional Diagnosis (with justification in brief) _____

J] Differential Diagnosis: _____

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____

K] Investigation Done:

- a. If yes, reports and your comments. _____
- b. Other investigations required (with reason) if any.

L] Final Diagnosis:

M] Management of Patients:

- 1. Chemotherapy / Other drugs (Specify with name, dose schedule, route of administration, duration of treatments and precautions if any)
- 2. Diet modification _____
- 3. Personal Hygiene _____
- 4. Health Education _____
- 5. Any other (Specify) _____
- 6. Follow up: _____

N] Preventive and Control Measures at:

- a. Family Level
 - i. Chemoprophylaxis _____
 - ii. Immunization (Active /Passive) _____
 - iii. Personal Hygiene (specify) _____
 - iv. Chemical disinfections of (Specify) _____
concentration, quantity, technique, contact period, way of disposal of disinfected material

- v. Follow up _____
- vi. Care of Contacts _____
- b. Community Level
 - i. General Intervention measures _____
 - ii. Specific measures against the illness _____
 - iii. Any other(Specify) _____
- c. National Level _____
National Health Programme for control / Eradication of the disease or related health programmes.

Sign. of Student

Sign. of Guide

Date :-

ANNEXURE 'C'

PROFORMA (Ante-natal case)

A] General Information :

- 1) Date of Examination: _____
- 2) Name: _____
- 3) Age: _____ yrs.
- 4) ANC Registered : Yes/No If yes, place/date/month of registration _____
- 5) Education of pt _____ Occupation of pt _____
- 6) Education of Husband _____ Occupation of Husband _____
- 7) No of family members _____ Total family income _____ Rs/month
- 8) Socio-economic class _____ (as per Modified _____ classification)
- 9) Address: _____

B] Complaints - if any: _____

C] Menstrual History : Menarche, cycles-day/month, regularity, flow etc.

L.M.P _____ E.D.D. _____

D] Obstetric History :

Gestational

Age (wks) Type of Delivery Hosp. / Home Conducted by

Baby : alive/stillborn/abortion Live birth interval

Use of contraceptives (specify)

E] Family History :

F] Past History : Hypertension/ Diabetes/ S.T.D./T.B./Leprosy etc.

G] Personal History : Bowel / Bladder / Sleep / Appetite / Habits /

Addictions etc. Immunization status : Tetanus toxoid / Any other (specify)

- a) For current pregnancy _____
- b) For previous pregnancy _____
Nutritional status (based on Calorie Intake, other nutrients,
anthropometry etc.)

H] General Examination :

- Height _____ Cms./Wt. _____ kgs, / TPR/B.P _____ mm of Hg.
- Pallor/Icterus/ Cyanosis/Oedema/ Lyphadenopathy. any other (specify)
- Cleanliness of : Skin /Nails/Hair/Clothes/Eyes/Ears/Nose/Oral Cavity / breasts and Nipples etc.

I] P/A Examination:

- Ht. of uterus/presentation and lie of foetus /Head-floating or engaged / foetal movements / FHS /
- Anyother(specify) _____

J] Systemic Examination:

RS/ CVS/CNS _____

K] Investigations: - Urine: Albumin/sugar/microscopic/culture.

- Hb % Blood grouping and cross matching/VDRL/HIV/Blood Sugar
- Any other (specify) _____

L] Clinical impression :

- Whether high risk ? If yes, mention the risk factors _____

M] Advice to the Patient and Management :

- Immunization/Diet/Supplementary nutrition/personal hygiene/preparation for motherhood/ drugs given (if any) / Warning signals/fallow up visits
- Whether the patient/ family members are availing services from Anganwadi /Other Community Health Centre /Private Health Agency? If yes – Give details.
- Give details of referral in high risk cases. _____

N] Follow up :

Findings and Remarks(including advice) _____
During subsequent visits (mention the date of visits) _____

O) Comments :

Sign. of Student

Sign. of Guide

Date :-

ANNEXURE 'D'

PROFORMA : MALNUTRITION CASE

(Under Five Years Age)

A] General Information :

- i. Date of Examination: _____
- ii. Name of the informer and his/her relationship with the child (case) _____
1. Name of the child: _____
2. Date of birth: _____ 3. Age: _____ 4. Sex : Male /Female
5. Caste /Religion: _____
6. Address: _____
7. Whether the child is attending Balwadi/Nursery etc.: _____
8. Father _____ Mother _____
 - I. Name: _____
 - II. Age: _____
 - III. Education: _____
 - IV. Occupation: _____
 - V. Income: _____
9. I. Total number of family members and family composition.
 - II. Total family income _____ Rupees per month
 - III. Per Capita Income _____ Rupees per month
 - IV. Socio economic Status _____ as per _____ classification

B] Complaints (if any): _____

C] History of Present illness: _____

D] History of Past illness (if any): _____

E] Family history: _____

F] Birth history of the case: _____

- i. Place of delivery : Home/ Hospital / Other (Specify) _____
- ii. Delivery conducted by : Untrained or trained Dai / Nurse / Doctor etc. _____
- iii. Type of delivery : FTND/ Premature/SFD/Assisted delivery etc. _____
- iv. Congenital anomaly : if any give details. _____

G] Anthropometry

- i. Weight : _____ Kgs.
- ii. Height _____ Cms.
- iii. Chest Circumference _____ Cms.
- iv. Head Circumference _____ Cms.
- iii. Midarm Circumference _____ Cms.

H] Immunization History

- i. B.C.G./ OPV/ DPT/Measles/Any other give details _____
- ii. Immunization card available : Yes / No.

I] Dietary History

- i. Breast feeding : Yes / No
 - a. If yes : Only breast feed or weaning started
 - b. If weaned : Age at weaning, type of weaning foods etc.
 - c. If not breast feed : At what age breast feeding stopped?
(give reason if any)
- ii. a. Total calorie intake _____ Calorie/day
- b. Total Protein intake _____ gram/day
- iii. Calorie / Protein deficient if any :Yes/No.
 If yes mention percent of deficient _____
- iv. Any other nutritional deficiency(Specify) _____

J] General Examination :

- 1) Built, nourishment and general appearance 2) TPR 3) Pallor 4) Icterus
- 5) Cyanosis 6) Lymphadenopathy 7) Oedema 8) Dehydration 9) Eyes 10) Ears 11) Face, Nose, Lips and Tongue 12) Teeth gums oral cavity
- 13) Skin, nails hair 14) Rachitic changes 15) Any other (specify).

K] Systemic Examination : RS / CVS / PA / CNS / Gonads

L] Milestones of growth and development

Physical / Psychological/ Motor / intellectual / behavioral/ Social
Milestones : Normal/ Augmented / Delayed

M] Provisional diagnosis / Differential Diagnosis : _____

N] Investigations: _____

O] Diagnosis: _____

P] Management, Advise and Comments : _____

Sign. of Student

Date :-

Sign. of Guide

ANNEXURE 'E'

PROFORMA :

Pathya Apathya, Rutu Shodhan, Yoga and Nisargopachar Advice to Patients of Attached Hospital.

A) General Information:-

- 1) Sr. No.: _____
- 2) Name of the Patient: _____
- 3) Address: _____
- 4) OPDNo.: _____ IPD NO. _____
- 5) Diagnosis: _____
- 6) Date of Advice: _____

B) Advice given

a) Pathya - Apathya

- i. Ahar: _____
- ii. Vihar: _____

b) Rutu Shodhan Upakrama: _____

Yogopachar: _____

c) Nisargopachar: _____

C) Date of follow up: _____

Remarks: _____

Sign. of Student

Sign. of Guide

Date :-

ANNEXURE 'F'
HEALTH SURVEY

Name and address of the family head -

Telephone no. -

Family profile -

Family Structure :

Age (incompleted years)	Male	Female	Total
<1yr (in fants)			
1 - 5yrs			
6 - 15yrs			
16 - 64yrs			
> 65 yrs			

Family Composition

Family type: Nuclear/Joint/Three generation

Total members:

Sr. no	Name	Age in years	Sex	Marital status	Education	Occupation	Income	Medico social status

Immunization status (if relevant)

Per capita monthly income=Total family income/no. of members

Socioeconomic Class

Medico Social Status :

Infant	Leprosy	Disability
Children under 5yrs	HIV/STD	Mental retardation
Pregnancy	Cancer	Psychiatric
Lactation	Diabetes	problem Alcohol
Old age	BP/Cardiac problem	addition
		Social evils

Living Conditions (Housing)

Sr. No.	Housing standards	Score : 1 for Satisfactory Criteria 0 for poor criteria
1.	Construction : Locality, Safety, Protection	
2.	Space: Spatial sufficiency to prevent overcrowding	
3.	Light and Ventilation	
4.	Water: Adequacy, accessibility and safe storage of water	
5.	Sanitation: Washing, bathing, toilet facilities, sanitary disposal of kitchen waste, garbage and excreta	
6.	Kitchen: Facilities for hygienic cooking and storage of food, smoke outlet	
7.	Environment Disturbances: Noise, air pollution, weather Inclemency toxic fumes, dust, odour, moisture, open drain etc. Vector like fly, mosquito, rodent and other nuisance	
8.	Animals: Pet, cattle, poultry keeping	
9.	Cleanliness of persons and premises	
10.	Connectivity: Road, transportation, communication, schools, hospital cultural, social, recreational, fire, police, etc	

Assessment of living condition: Score: 6-10 Satisfactory, 0-5 Poor

Vital Events in the Family in last 1 year

Birth:

Adoption:

Marriage / Divorce:

Death with cause:

Social status of the Family Education:

Occupation:

Living condition:

Social relationship:

Socioeconomic status:

Health Status of the Family – Good / Average / Poor

Which pathy family members prefer for treatment- Allopathy / Ayurvedic / Homeopathy

Epidemiological History for Communicable Diseases

- 1 Name of disease:
- 2 Any similar case in the family : Yes/No
- 3 Any similar case in neighborhood : Yes/No
- 4 Any contact with similar case : Yes/No

Family (Hereditary) History For Non-communicable Diseases Non - communicable disease: Present/Absent

If yes, specify:

Sign of Student

Sign of Guide

Date :-

PRACTICAL VIVA-VOCE**Marks – 200**

Sr. No.	Heading of Practicals	Marks
1	Daily workbook-Log book	10
2	Case Record Sheets	20
3	One Long Case (Pathya-Apathya advice)	20
4	One Short Case (Yoga and naturopathy advice)	10
5	Yoga Demonstration	20
6	Microteaching/Topic presentation	10
7	Thesis Presentation	50
8	Viva Voce	60

LIST OF RECOMMENDED BOOKS AND REFERENCE BOOKS:

Sr. No.	Reference Book	Author
1	Relevant portions of Charak, Sushruta, Vagbhata (Ashtang Hrudaya), Ashtang Samgraha, Sarangadhara, Bhavaprakasha, Madhavanidan and Yogaratnakara, Bhela Samhita with the respective commentaries	-
2	Swasthavritta Samuchaya	Vaidya Pt Rajesvar Dutta Shastri
3	Swasthya Vignyana	Dr. B. G. Ghanekarshastri
4	Swasthavritta Vigyan	Dr. Ramharsha Singh
5	Swasthvrittam	Dr. Bramhanand Tripathi
6	Ayurvediya Swasthvrittam	Vd. Jalukar
7	Swastha Vigyan	Dr. Mukundswaroop Verm
8	Swasthavritta	Dr. Shivkumar Gaud
9	Swasthavritta – Part – I and II	Vd. Mhaiskar, Vd. Vatve
10	Ayurvediya Hitopdesh	Vd. Ranjit Rai Desai
11	Preventive and Social Medicine	J. K. Park
12	Preventive and Social Medicine	Mahajan
13	Preventive and Social Medicine	B. N. Ghosh
14	Community Medicine	Baride and Kulkarni
15	Preventive and Social Medicine	Gupta
16	Patanjal Yoga Sutra Maharshi Patanjali, Karambelkar	-
17	Hatha Pradipika Swatmaram Yogendra	-
18	Gherand Samhita Gherand Muni	-
19	Shiva samhita Kaivalyadhama	-
20	Yoga and Ayurveda	Dr. Rajkumar Jain

Sr. No.	Reference Book	Author
21	Yogik Yog Padhati Bharatiyaprakrutik Chikitsa Padhat	-
22	Yogik Chikitsa	Shri Kedarnath Gupta
23	Sachitra Yogasan Darshika	Dr. Indramohan Jha
24	Yoga and Yogikchikitsa	Ramharsha Singh
25	The Foundation of Contemporary Yoga	R. H. Singh
26	Yogadeepika	Shri. B. K. S. Iyengar
27	Yoga sidhanta evum Sadhna	H. S. Datar
28	Prakritika Chikitsa	Kedarnath Gupta
29	Prakrutik Chikitsa Vigyan	Verma
30	Prakrutik Chikitsa Vidhi	Sharan Prasad
31	Light on Yoga, Light on Pranayama	Shri. B.K.S.Iyengar
32	Light on Patanjala yogasutra	Shri. B.K.S.Iyengar
33	Janasankhya shiksha sidhanta evam Upadeysa	S. C. Seel
34	Health and Family welfare	T. L. Devraj
35	Bio-Statistics	B. K. Mahajan
36	Swasthavritta	Vd. Sakad
37	Reddy's Comprehensive Guide to Swasthavritta	Dr.P.Sudhakar Reddy
38	Swasthavritta	Vd. Yeshwant Patil and Vd.Vhawal
39	Swasthavritta	Vd. Patrikar Vijay
40	Swasthavritta vidnyan	Dr. Mangala Gowri
41	Positive Health	Dr. L. P. Gupta
42	Biogenic Secretes of Food In Ayurveda	Dr. L. P. Gupta
43	Text book of Swasthavritta	Dr. Ranade, Dr. Bobade, Dr. Deshpande
44	Food and nutrition	Swaminathan
45	Dr. Me kay khau?	Dr. M. S. Kulkarni
46	Food for life Food for disease	Dr. M. S. Kulkarni
47	Swayampak Gharatil Aushadhopachar	Dr.Yogesh Shinde
48	Yoga and Nisargopachar	Vd. PramaJoshi
49	Yogic sukshnavyayam	Swami Dheerendra Brahmachari
50	Integrated approach of Yoga therapy for Positive Health	Dr. R. Nagarathna and Dr. H. R. Nagendra
51	Yogavasistha	-



**PRASUTI TANTRA
STREE ROGA**

TITLE OF THE PROGRAM - PRASUTI TANTRA- STREE ROGA
PROGRAM CODE - AVF309
MARKS:- THEORY - 400 PRACTICAL – 200, TOTAL - 600

GOAL :

To impart the knowledge of basic ayurvedic principles in streerog-prasuti. To impart the knowledge of modern Obstetrics and Gynecology to learn integrated approach towards the subject. The student will be able to learn, innovate and perform research in subject. To teach specialized ayurveda care in Stree-prasuti.

EDUCATIONAL OBJECTIVES

• **Cognitive**

Knowledge at the end of Program the students will,

1. Have a applied knowledge of anatomy and physiology of female genital system.
2. Explain management of pregnancy, labour, puerperium.
3. Be able to learn the basic treatments of gynecological disorders ,
4. Be able to plan Research programme

• **Psychomotor**

At the end of Program the students will develop the skill ,

1. Of handling the cases of labor, progress.
2. pre-operative and post-operative care of patients,
3. Learn to observe puerperal changes, disorders and complications
4. To diagnose emergences at proper time and referral.
5. To practice local treatments of Streerog
6. To diagnose the case with ayurvedic concepts and integrated approach with help of investigations.

• **Affective Domain**

1. Develop good communication skills with patients .
2. Develop high moral and ethical standards to behave with patient and their examination.

• **Integration**

Streerog-Prasutitantra department is currently doing integration with, Obstetrics-Gynaecology department of Dr.D.Y.Patil Medical College for Theory and Practical, surgery part related to modern science.

- **Inter-departmental Integration**

1. Rognidan department –For laboratory tests,X-ray,Ultrasonography
2. Rasashastra department –For Preparation of ayurvedic medicine
3. Research department – Research activities of PG students
4. Panchakarma department –For Panchakarma treatments of patients and Learning for PG students.

PROGRAM DESCRIPTION :

PAPER-I (CODE NO : AVF3091) FUNDAMETALS OF PRASUTI AVUM STRI ROGA	100 Marks
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Sr. No.	Topics	Description	Weight age (Marks)	No of Lectures (Hrs.)
Part-A				
1	Applied anatomy of female genitalia	Genitor-urinary system, pelvis and pelvic floor, pelvic assessment and foetal skull.	10	10
2	Physiology and pathology	Physiology of neuro endocrinology and pathology of puberty and neuro endocrine control of menstrual cycle, artava and Rutuchakra and streebeej, pubeeja.	10	10
3	Fundamental of reproduction	Garbh sambhav samagri, garbha dhan, preconceptional counselling and care garbhasya shaddhatvatmakta matruyadi bhav, garbha vriddhi, role of panchmahabhuta formation and development of fetus, garbhasya avayava utpatti, gamatogenesis, fertilization, implantation and early development of human embryo.	10	10
4	Garbha vidnyanam	Garbhavkranti garbhposhan, garbhasya masanumasic vriddhi, apara, jarayu, nabhi nadi.	10	30

Sr. No.	Topics	Description	Weight age (Marks)	No of Lectures (Hrs.)
		Foetal physiology, circulation, foetal growth and development placenta membranes, umbilical cord, garbha lingotpatti, garbha sharer kriya vaishishtam, amniotic fluid.		
5	Bija	Bijabhaga, bijabhagavayava janya garbhanga vikruti, genetics, birth defects and other teratologic abnormalities.	5	10
6	Garbhagarb hini nidan DAUHRID AYA	Garbhini nidan, garbhakalina, martrugata parivartan, lakshana, dauhrudaya, diagnosis of pregnancy, anatomy physiology changes in pregnancy, endocrinology changes in pregnancy, immunology of pregnancy.	10	20
7	Concept of Pathya-Apathya	Concept of Pathya-Apathya in Prasuti, garbhini paricharya, masanumasic pathya apathya kalpana garbha upaghatakar bhava, Ante natal care, examination, investigations and management.	02	10
8	Garbhinivid nyan	Prenatal Ayurvedic concepts	5	10
9	Garbhvyapad	Garbhastrav, pat, Upvishtak, Nagodar Abortion – types, clinical features, management. APH, IUD, IUGR	15	30
10	Garbhini vyapad	Nidan panchak and chikitsa of garbhini vyapad, early recognition differentian diagnosis and prompt management of pregnancy complications, emesis, hyperemesis gravidarum,	15	30

Sr. No.	Topics	Description	Weight age (Marks)	No of Lectures (Hrs.)
		anaemia, PIH, APH, pre-clampsia, eclampsia, antepartum haemorrhage, Rh-incompatibility, management of pregnancies complication by medical, surgical, or gynaecological disorders in consultation with the concerned specialities by team approach a) Pyrexia, heart diseases, DM, liver diseases, respiratory diseases, renal diseases, epilepsy, hypertensive disorders. b) Fibroids, ovarian tumors, genital prolapsed. c) infections in pregnancy- TORCH, HIV, Sexually Transmitted diseases, Herpes, Urinary tract Infections, Tuberculosis.		
11	Jataharini	Jataharini related to garbhini avastha	01	05
12	Evaluation	Evaluation of fetal and maternal health in complicated pregnancies by making use of diagnostic modalities.	01	05
13	PNDT Act	Prenatal diagnosis of fetal abnormalities and appropriate care, PNDT Act and its implications	01	10
14	Vishesh adhyayan of	1. – Ashtanghriday sharira - Adhyay - 1st – Garbhavkranti 2. Sushrutasamhita sharira - Adhyay - 3rd – Garbhavkranti 3. Charak Samhita sharira - Adhyaya - 8th Jatisutriya	5	10

PAPER II (CODE NO : AVF3092) PRASAV VIDNYAN				100 Marks
Sr. No.	Title	Description	Weightage (Marks)	No. of lectures (in hrs)
Part A				
1.	Prakrit prasav	1. Prasav paribhasha, prasav kal, prasav prarambh karana, prasav kalin garbhssthi, Aavi, Sutikagar a) Initiation and onset of parturition b) Examination and Evaluation of patient in labour. c) Physiology of labour d) Mechanism of labour e) Selection of place of delivery and labour room. 2. Prasav avastha evum paricharya a) Stages of normal labour b) Intrapartum maternal and foetal monitoring c) Management of normal labour.	20	15
2.	Prasav vyapad	1. Etiopathogenesis, clinical features, prevention and management of Garbhasang, Vilambit prasava, Mudh-garbha and Aparasanga. a) Prolonged labour b) Cephalo-pelvic disproportions c) Malpresentation d) Obstructed labour e) Methods of induction and Augmentation of labour. 2. Complications of different stages of labour 3. Obstetric management of high risk, pregnancies-Pre	30	15

Sr. No.	Title	Description	Weightage (Marks)	No. of lectures (in hrs)
		eclampsia, Eclampsia, Diabetes, Cardiac diseases, Asthama, Epilepsy, APH, preturm and premature ruptured of membranes, Preterm and Post term delivery, multiple pregnancy, IUGR and HIV-AIDS 4. Still birth, diagnosis, complications and management. 5. Foetal distress.		
Part B				
3.	Jatamatra / navjaat shishu paricharya	Examination and management of newborn, birth asphyxia, detection of congenital malformations.	10	15
4.	Sutika vigyan	Sutika paribhasha, kala maryada, paricharya, sutika vyadhi and chikitsa, stana sampat, stanya utpatti, stanya pariksha , stanya vriddhi, kshya and dushti karan, lakshan and chikitsa, stan shotha, vidradhi. Lactational disorders, fibroadenoma. Normal and abnormal pueperium.	20	15
5.	Obstetric shock and management	Raktadhana , bloodtrans fusion and replacement of blood constituents Management of fluid and electrolyte imbalance in obstetrics. Drugs used in obstetrics practice, indications, contraindications, dose, side effects (allupathic and ayurvedic)	20	15

PAPER III (CODE NO : AVF3093) STREEROGA VIGYANA				100 Marks
Sr. No.	Title	Description	No of lectures (in hrs)	Weight age (marks)
Part A				
1	Disorders of menstruation and female reproductive system	Congenital disorders of female genitals, artava dushti, artava vriddhi, artava kshaya, ashrigdhara, anartava, kashtartava. Sexually transmitted diseases, infections, abnormal vaginal disorders, yoniarsha, yonikanda, granthi, arbuda, abnormal uterine bleeding, endometriosis, fibroid uterus, adenomyosis, PCOS, neoplasia of female genitals, endocrinological disorders affecting female reproductive system, soma roga.	05	15
2	Yonivyapad	Detailed description by different acharya's and possible co-relations with modern gynaecological diseases.	15	15
3	Vandhyatva	Hetu, bheda, pariksha and chikitsa Detailed study of causative factors, investigations with recent advances in management of infertility, adoption law.	15	15
Part B				
4	Stanaroga	Study of stana shoth, stana kilaka, stana vidradhi, stana granthi, stana arbuda Fibroadenoma, fibroadenosis breast, aberration in normal development and involution of breast (ANDI)	10	15

Sr. No.	Title	Description	No of lectures (in hrs)	Weight age (marks)
		Examination of breast, diagnosis and differential diagnosis of breast lump.		
5	Measures of contraception	Ayurvedic view of garbha nirodha and garbha patakar yoga, temporary contraception, national health program to improve maternal and child health and social obstetrics and vital statistics (maternal and perinatal morbidity)	10	15
6	Sthanik chikitsa	Detailed study of pichu, varti, dhoopan, dhavana, pariseka, lepa, kalka dharan, uttarbasti, agnikarma and ksharakarma.	05	15
7	Rajo nivrutti	Climacteric and menopause Geriatric healthcare	10	15
8	Investigations	Study of modern diagnostic techniques and investigation	10	15
9	Panchakarma	Study of panchakarma and yoga in streeroga	10	15
10	Studies in streeroga	Recent study and advancement in field of streeroga	10	15

PAPER IV : (CODE NO: AVF3094) PRASUTITANTRA - STREEROGA AND SHALYAKARMA				100 Marks
Sr. No.	Title	Description	No of lectures (in hrs)	Weight age (marks)
Part A				
1	Introduction to surgeries in gynaecology	General principles of surgeries in gynaecology and obstetrics, suturing, sututre materials, sterilization, autoclaving etc. Analgesic and anaestetia in obstetrics and gynacological operative preocedures	20	15
2	Operative obstetrics	Decision making, techniques, diagnosis, management of surgical complications, dilatation and evacuation, hysterotomy, provision of safe abortion services - selection of cases, techniques and management of complications, septic abortion, criminal abortion, MTP act. Cervical encirelage - instrumental delivery (forceps, vaccum extraction) episiotomy, perineal tear repair, caesarean section, manual removal of placenta, ceasearean hysterectomy.	20	15
3	Operative gynaecology	Selection of cases, techniques and management of complications of minor and major procedures Dilatation and curettage, cervical cauterization, polypectomy, mtomectomy, cystectomy, oophorectomy, marsupilization, punch biopsy, endometrial biopsy.	20	15
Part B				
4	Surgical procedures	Hysterectomy, genital prolapse, benign genital neoplasm.	20	15
5	Recent	Diagnostic and therapeutics	20	15

Sr. No.	Title	Description	No of lectures (in hrs)	Weight age (marks)
	advances in field of gynaecology and obstetrics	Shock and its management, blood transfusion, fluid and electrolyte imbalance, fluid therapy Record keeping, ethical and legal issues involved in obstetrics and gynaecology Medico legal aspects-ethics, communication and counseling in obstetrics and gynaecology Emergency care in obstetrics and gynaecology.		

PRACTICAL EXAM – Marks 200

DISTRIBUTION OF MARKS (PRACTICAL) :

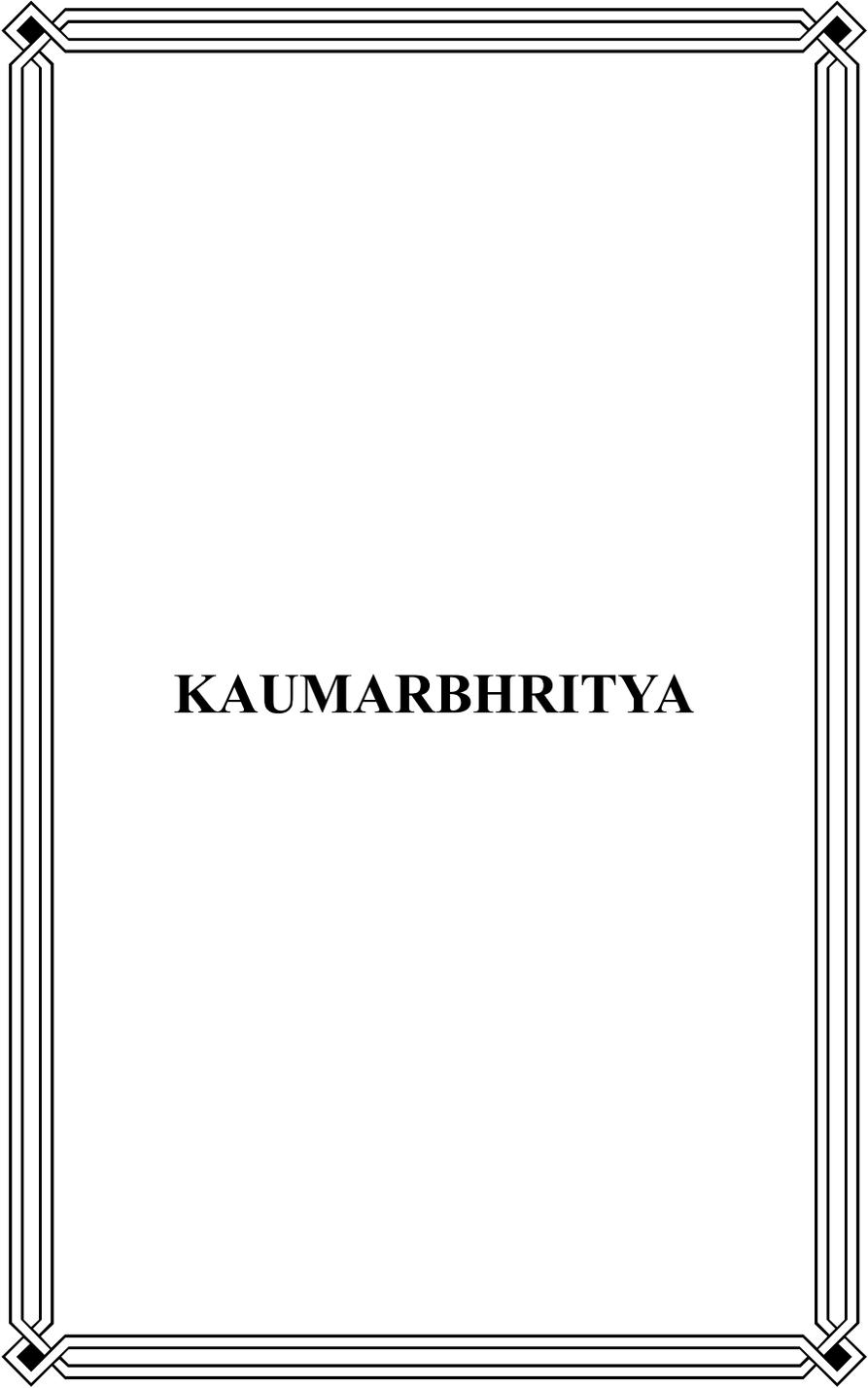
1. Hospital duties in OPD, IPD, labor room, OT and casualty
2. Case taking and counselling - 30 cases
3. Labor cases – observation / performing - 10 cases
4. Knowledge of instruments required in gynaecology and obstetrics practices.
5. Ayurvedic diagnostic and therapeutic procedures
6. Fluid therapy and blood transfusion
7. Contraception and sterilizations
8. Pre-operative, operative and post-operative procedures

PATTERN OF PRACTICAL EXAMINATION :

Sr. No.	Practical	Marks
1	Practical Record Book	20
2	Bed side examination	
	Short Case -	20
	Long Case	40
3	Identification of the Instruments/ x-ray/USG plate	20
4	Thesis Presentation	50
5	Viva-Voce	50

REFERENCE BOOKS:

Sr. no.	Name of the book	Author	Publication Name, Year, Edition
1	Charak samhita	Brahmanand tripathi	Chaukhamba surbharti – 2015 revised
2	Shushrut samhita – part I/ II/ III	Murti	Chaukhamba orientalia - 2014 revised
3	Ashtang hrudaya	Moreshwar kunte	Hemadri arundatta tika - chaukhamba orientalia - 2014 – 10 th edition
4	Kashyap samhita sanskrit -	Hemraj sharma	Chaukhamba 2010 reprint
5	Prasuti tantra evum stree roga.	Prof tewari p v	Chaukhamba orientalia – 2014 revised
6	Concepts of gynecology	Dr Nirmala G Joshi.	Chaukhamba sanskrit – 2000 revised
7	Prasuti tantra	Prof. M. Dwivedi	Chaukhamba bharti varanasi – 2011 revised
8	Textbook of gynaecology	Berek and novak.	Wolter and klaver – 2012 – 15 th edition
9	Textbook of obstetrics	Williums	mc graw hill publication – 2014 – 24 th edition
10	Textbook of obstetrics-	D C Dutta	Dutta – jaypee publica – 2013 – 7 th edition
11	Textbook of gynaecology	D C Dutta	Jaypee publication – 2013 – 7 th edition
12	Gabbe's normal and problem pregnancies.	Steven g gabbe	Elesuier publication – 2016 - 7 th edition
13	Human embryology	Saddler	Langman's publication – 12 th edition
14	Jeffcoat's principles of gynaecology	Jeffcoat	Jaypee publications - 2018 – 9 th edition
15	Te linde's gynecological surgery	Te linde	Wolter and klaver 2015 – 11 th edition
16	Prasutitantra	Dr. Jayashree Patil	Jayraj Publications 2014 – 1 st edition
17	Stree roga vigyan	Dr. VNK Usha	



KAUMARBHRITYA

TITLE OF THE PROGRAM : KAUMARBHRITYA
PROGRAM CODE : AVF310
MARKS: THEORY – 400, PRACTICAL – 100 = TOTAL 500

GOALS

- The goal of Ayurvedic Pediatrics is to see that every child grows and develops into a healthy, happy and useful citizen.
- To promote the simple herbal medicines for the healthy growth and development of children.
- To promote the preventive measures like suvarnaprashana for improvement of child immunity and prevent malnutrition.
- The main objective is to impart the innovations in Teaching, Learning and Evaluation method to make this institute centre of excellence in the field of Ayurveda.

LEARNING OUTCOMES

- Assist in performing various techniques and develop skills of NICU procedures, vaccination and other national health programmes.
- Carry out both Ayurvedic and modern clinical methods of examination of healthy and diseased newborn and children.
- Prepare and deliver the lectures on various topics of Kaumarbhritya (Ayurvedic and modern concepts) with guidance.
- Identify various research topics, prepare to carryout research and prepare a outlineof the dissertation on a topic.

LEARNING OBJECTIVES

A. COGNITIVE DOMAIN:

1. Explain the general principles of Ayurveda and its application for promotion of health and cure of the diseases of children.
2. Identify various diseases as per disease classifications and acquire the knowledge of fundamental principles related to Kaumarbhritya.
4. Gain the concept of Pediatric diseases with respect to their prevention and cure.

B. PSYCHOMOTOR DOMAIN :

1. Manage Pediatric patients according to the principles of Ayurvedic and modern treatment.
2. Promote child health of the society according to these principles.
3. Perform various Bal-Panchkarma procedures under supervision.

C. AFFECTIVE DOMAIN

1. Guide and communicate with the patients empathetically.
2. Co-operate, react and respond in a cordial manner in his /her interaction with peers, superiors and subordinates.
3. Support the students in their learning.
4. Comprehend the diagnosis of a disease in Ayurveda and its management.

PROGRAM DESCRIPTION :

PAPER - I (CODE - AVF3101)				100
BIJA, GARBHA VIGYANIYA				
(HUMAN GENETICS, EMBRYOLOGY)				Marks
Sr. No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
Part-A				
1	Ayurvedic genetics with modern interpretations	Shukra, Shonita, Shukra Shonita Doshas, Bija-Bijabhaga-Bijabhagavayava Vikriti, Matrija and Pitraja Bhavas, Yajjah Purushiya and Atulyagotriya; Measures for obtaining good progeny.	2	5
2	Modern genetics Basic concepts	Cell, cell division, nucleus, DNA, chromosomes, classification, karyotype, molecular and cytogenetics, structure of gene, and molecular Screening.	2	5
3	Human Chromosomes	Structure, number and classification, methods of chromosome preparation, banding patterns.	2	10
4	Single gene pattern inheritance	Autosomal and Sex chromosomal pattern of inheritance, Intermediate pattern and multiple alleles, Mutations, Non Mendelian inheritance, mitochondrial inheritance, Genomic imprinting, parental disomy.	3	10
5	Criteria for multi-factorial inheritance	1. Pathogenesis of chromosomal aberrations and their effects, recombinant DNA, genetic inheritance, inborn errors of metabolism 2. Chromosomal	3	10

Sr. No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
		abnormalities: Autosomal and Sex chromosomal abnormalities, syndromes		
		3. Multifactorial pattern of inheritance: Teratology, Cancer Genetics – Haematological malignancies, Pharmacogenetics. 4. Chromosomal disorders 5. Chromosomal aberration (Klinefelter, Turner and Down's syndrome 6. Genetic Counseling, Ethics and Genetics	3	10
Part-B				
1	Basics of Beejbhaga	1. Garbha (embryo), Garbhawastha (gestation period), sperm, ovum; spermatogenesis; oogenesis; structure of ovum 2. Sperm in the male genital tract; sperm in the female genital tract, activation and capacitation of sperm.	5	5
2	Garbha Masanumasika Vriddhi evam Vikasa (Ayurvedic and modern concepts of Embryo and Fetal development)	1. First week of development 2. Second week of development 3. Third week of development 4. Fourth to eighth week of development (Embryonic period) 5. Development from 3 rd month till birth (Fetal period)	10	10

Sr. No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
3	Prakruti Nirman	Formation of Prakriti, their assessment in children viz. Bala, Kumara, Yauvana; Pathya-Apathya according to Prakruti	5	5
4	Apara (Placenta)	1. Apara (Placenta) Apara Nirmana (Formation of placenta), Apara Karya (Functions of placenta); Apara Vikara (Placental abnormalities) 2. Nabhinadi (Umbilical Cord) Formation and features of umbilical cord.	5	5
5	Garbha Poshan	1. Garbha Poshana (Nutrition- from conception to birth) 2. Yamala Garbha (twins) 3. Garbha Vriddhikara Bhavas, Garbhopaghatkara Bhavas.	5	5
6	Teratology	1. Effect of maternal medication, diet and illness over fetus. 2. Teratology including defects of bija, atma karma, kal, ashaya etc. 3. causative factors for teratogenecity, mode of actions of teratogenes, critical periods	10	10
7	Prenatal and Perinatal Care	1. Perinatal Care and Perinatal complications 2. Scientific study of Jataharini specific to children. 3. Prenatal diagnosis	5	5

Sr. No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
8	Samanya Janmajata Vikara (Common congenital anomalies of different systems)	Sahaja Hridaya Vikara (Congenital Cardiac Disorders), Jalashirshaka (Hydrocephalus), Khandaoushtha (cleft lip), Khanda-Talu (cleft palate), Sanniruddha Guda (Anal stricture / imperforated anus), Pada-Vikriti (Talipes equinovarus and valgus), Tracheoesophageal Fistula (TOF), Spina bifida, Meningocele, Meningomyelocele, Pyloric Stenosis.	10	10

PAPER-II (CODE - AVF3102)				100
NAVAJATA SHISHU VIGYAN EVAM POSHANA				Marks
Sr. No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
Part-A				
1	Definitions and classification related to neonates	1. Navajata Shishu Paribhasha, Vargikarana (Important definitions and classification related to neonates.)	5	5
2	Navajata Shishu Paricharya evam Prana-Pratyagamana	Navajata Shishu Paricharya evam Prana-Pratyagamana (Care of the newborn including recent methodology for the resuscitation)	10	10
3	Samanya Navjat Shishu Paricharya	Samanya Navajata Shishu Paricharya (General Neonatal Care –Labour room onwards)	5	5
4	Preterm and Post term Management	Samaya purva evam Samaya pashchat Jata Shishu Paricharya (Management of preterm, post term and IUGR newborn)	5	5
5	Prasavakalin Vyadhi	Prasava Kalina Abhighataja Vyadhi (Birth injuries): Upashirshaka (Caput , cephalohematoma), Bhagna (Fractures), Mastishkantargata Raktasrava (ICH, IVH, Subdural hemorrhage)	10	10
6	Neonatal Examination	Navajata Shishu Parikshana (Examination of new born): Ayu Parikshana (including Lakshanadhyaya) Modern approach of Neonatal Examination including gestational age assessment	10	10

Sr. No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
7	Kumaragara	Kumaragara: Navajata Shishu Kaksha Prabandhana (Nursery management), NICU, Nursery plan, staff pattern, medical records, Visankramnikarana (sterlization), Knowledge of equipments used in nursery.	5	5
Part –B				
1	Navajata Shishu Vyadhi	Navajata Shishu Vyadhi (Early neonatal disorders): Hypothermia, Shvasavarodha (Asphyxia Neonatorum /Respiratory distress), Ulvaka (Aspiration pneumonia), Rakta Vishamayata (Neonatal septicemia), Kamala (Neonatal Jaundice), Akshepaka (Neonatal convulsion), Pandu (Anemia), Atisara (Diarrhea), Asamyaka Nabhinal kartanjanya vyadhi.	10	10
2	Navjata Kshudra Vikara (Minor neonatal ailments)	Chhardi (Vomiting), Vibandha (constipation), Udara shul (Infantile colic), Puya Sphota (Pyoderma), Shishu Netrabhishyanda (Ophthalmia neonatorum).	5	5
3	Sadyojatasya Atyayayika Chikitsa (Management of neonatal emergencies)	Shock, Fluid and electrolyte imbalance, Convulsion, Hemorrhagic diseases of Newborn etc.	5	5
4	Procedures	Shiro-Pichu, Abhyanga, Parisheka, Pralepa, Garbhodaka Vamana (Stomach wash), Ashchyotana Neonatal	5	5

Sr. No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
		resuscitation techniques, Blood sampling, Intravenous canulation, Umbilical vein catheterization, Bone marrow aspiration, Phototherapy, Naso-Gastric tube insertion, Urethral catheterization, Exchange blood transfusion, Thoracocentesis, Bone marrow infusion, Lumbar puncture.		
5	Nutrition: Navjat Shishu Ahara (Neonatal feeding):	Specific Feeding methodology as per Ayurveda and recent advances; Day to day fluid, milk, caloric requirement for the newborn, feeding technique for the preterm baby.	5	5
6	Physiology of Lactation and Breast feeding, Stanyadosha and Stanya shodhana	Stanyotpatti and Prasruti (Lactation physiology), Stanya Samghatana (Composition of breast milk), Stana Sampat (Characteristics of normal breast), Stanya Sampata evam Mahatva (Properties and importance of pure milk), Stanya-Piyusha (Colostrum); Stanya-Pana-Vidhi (Method for breast milk feeding), Stanyakshaya / Stanyanasha (Inadequate production and absence of breast milk), Stanya parikshana (Examination of breast milk), Stanyabhava Pathya Vyavastha	10	10

Sr. No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
		(Alternative feeding methods in absence of breast milk), Various feeding methods, TPN(Total Parenteral Nutrition) Stanyadosha (Vitiation of Breast milk), Stanya Shodhana (Purification of breast milk), Stanya Janana and Vardhanopakrama (Methods to enhance breast milk formation)		
7	Dhatri and Lehana	1. Dhatri Guna and Dosha (Characteristics of Wet nurse), Concept of Breast Milk Banking. 2. Lehana (Elucturies)	5	5
8	Bala-Poshana (Child Nutrition)	1. Daily requirements of nutrients for infant and children 2. Common food sources 3. Satmya and Asatmya Ahara (Compatible and incompatible diet) 4. Pathya evam Apathya Ahara (Congenial and non-congenial diet) 5. Stanyapanayana (Weaning)	5	5

PAPER - III (CODE - AVF3103)				100
BALROG (PEDIATRIC DISORDERS)				Marks
Sr No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
Part-A				
1	Pranvaha Srotasjanya Vyadhi (Respiratory disorders)	Kasa (Cough), Shvasa (Respiratory distress Syndrome), Tamaka Shwasa (Childhood Asthma), Bronchiolitis, Shvasanaka Jwara (Pneumonia- bacterial, viral etc) Rajyakshma (tuberculosis), Vaksha-Puyata (Pyothorax), Vaksha Vata-Purnata (Pneumothorax)	10	10
2	Annavaha Srotasjanya Vyadhi (Gastrointestinal disorders)	Jwar (Fever), Chhardi (Vomiting) Ajirna (Indigestion), Kshiralsaka, Atisara (Diarrhea), Pravahika, Vibandha (Constipation, Udarshula (Pain in abdomen), Guda bhramsh (Rectal prolapse)	10	10
3	Rasa evam Raktavaha Srotasjanya Vyadhi (Hematological and circulatory disorders)	Pandu (Anemia and its various types like Nutritional, haemolytic etc.) and , Raktapitta (Bleeding disorders), Vishishta Hridrog (Specific cardiac diseases- RHD etc), Hypertension, Leukemia.	5	5
4	Mansavaha Srotasjanya Vyadhi evam Mutravaha srotasjanya Vyadhi	Myopathies, Vrikkashotha (Glomerulonephritis and nephrotic syndrome), Mutrakriccha (Dysuria), Mutraghata (Anuria).	5	5

Sr No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
5	Vatavaha Sansthanjanya Vyadhi (Nervous system disorders)	Apasmara (Epilepsy), Mastulunga-Kshaya, Mastishka-Shotha (Encephalitis), Mastishkavrana-Shotha (Meningitis)	5	5
6	Pediatric disabilities and Rehabilitation	Cerebral palsy, Ardita (Facial paralysis), Pakshavadha (Hemiplegia), Ekangaghata (Monoplegia), Adharanga Vayu (diplegia), Amavata (Juvenile Rheumatoid arthritis)	10	10
7	Manovaha Srotasa Vyadhi	Breath holding spell, Shayya mutra (Bed wetting), Autism, ADHD (Attention Deficit and hyperactive disorders), Learning Disability, Mental retardation, Temper tantrum, Pica.	5	5
Part-B				
1	Antahsravi evam Chayapachayajanya Rog, Kuposhanjanya Vyadhi (Nutritional disorders)	Endocrine and Metabolic disorders, Karshya-Phakka-Balshosha-Parigarbhika (PEM and allied disorders), Vitamin-mineral and trace elements deficiency disorders, Hypervitaminosis.	10	10
2	Krimi evam Aupsargika Rog (Infestations and Infections)	Krimi (Giardiasis and intestinal helminthiasis, Amoebiasis) Common bacterial, viral infections with special reference to vaccine-preventable diseases Rohini (Diphtheria), Whooping cough, Aptanaka	10	10

Sr No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
		(Tetanus including neonatal tetanus), Romantika (Measles), Karnamula Shotha (Mumps), Rubella and Masurika (Chickenpox), Anrika Jwar (Typhoid and Paratyphoid), Viral Hepatitis, Vishama Jwar (Malaria) and Kala-azar, Dengu fever, HIV (AIDS), Poliomyelitis, Mastishkavaran Shotha (Meningitis), Mastishka Shotha (Encephalitis), Chickengunia.		
3	Tvaka Vikara (Skin disorders)	Ahiputana (Napkin Rashes), Shakuni (Impetigo), Sidhma, Pama, Vicharchika, Charmadal (Infantile atopic dermatitis), Gudakutta.)	5	5
4	Anya Vyadhyi (Miscellaneous disorders)	Jalodar (Ascites), Gandamala, Apachi (Cervical lymphadenitis), Kukunakadi Akshi Rog, Hodgkin and non-Hodgkin Lymphoma, Abnormal growth patterns, Short stature , Niruddha prakash (Phimosis), Paridagdha Chhavi, Utpullika.	5	5
5	Samghata- Bala Pravrita Rog (damstra) Vyadhi evam Atyayika Balarog Prabandhana (Pediatric emergency)	Dog bite. Snake bite, Scorpion bite etc. Shock and Anaphylaxis, Fluid and electrolyte management, Drowning, Foreign body aspiration, Status epilepticus, Acute hemorrhage, Acute renal	10	10

Sr No.	Topics	Description	No of lectures (Hours)	Weightage (Marks)
	management)	failure, Febrile convulsion, Status asthmaticus, Burn, Acute Poisoning		
6	Balgraha evam Life style disorder	Scientific study of Graha Rogs Life Style disorders	10	10

PAPER-IV- (CODE - AVF3104) BALROG (PEDIATRIC DISORDERS)				100 Marks
Sr No.	Topics	Description	No Of lectures (Hours)	Weightage (Marks)
Part A				
1	Significant contributions of samhita in Kaumarbhritya	Significant contributions of Kashyapa samhita, Arogya raksha Kalpadrum and other texts / treatises of Ayurveda such as Harita Samhitain the field of Kaumarbhritya including relevant parts from Brihatrai	50	50
2	Panchakarma in Pediatrics	Principles of Panchakarma [Swedan–Hasta–Pata sweda etc], and their application in pediatric practice in detail.	25	25
Part B				
3	Research in Pediatrics	Update knowledge of clinical pediatrics including recent researches in Kaumarbhritya.	15	15
4	Fundamentals of Hospital management	Fundamentals of Hospital management with special emphases on Pediatric Ward.	10	10

PRACTICALS

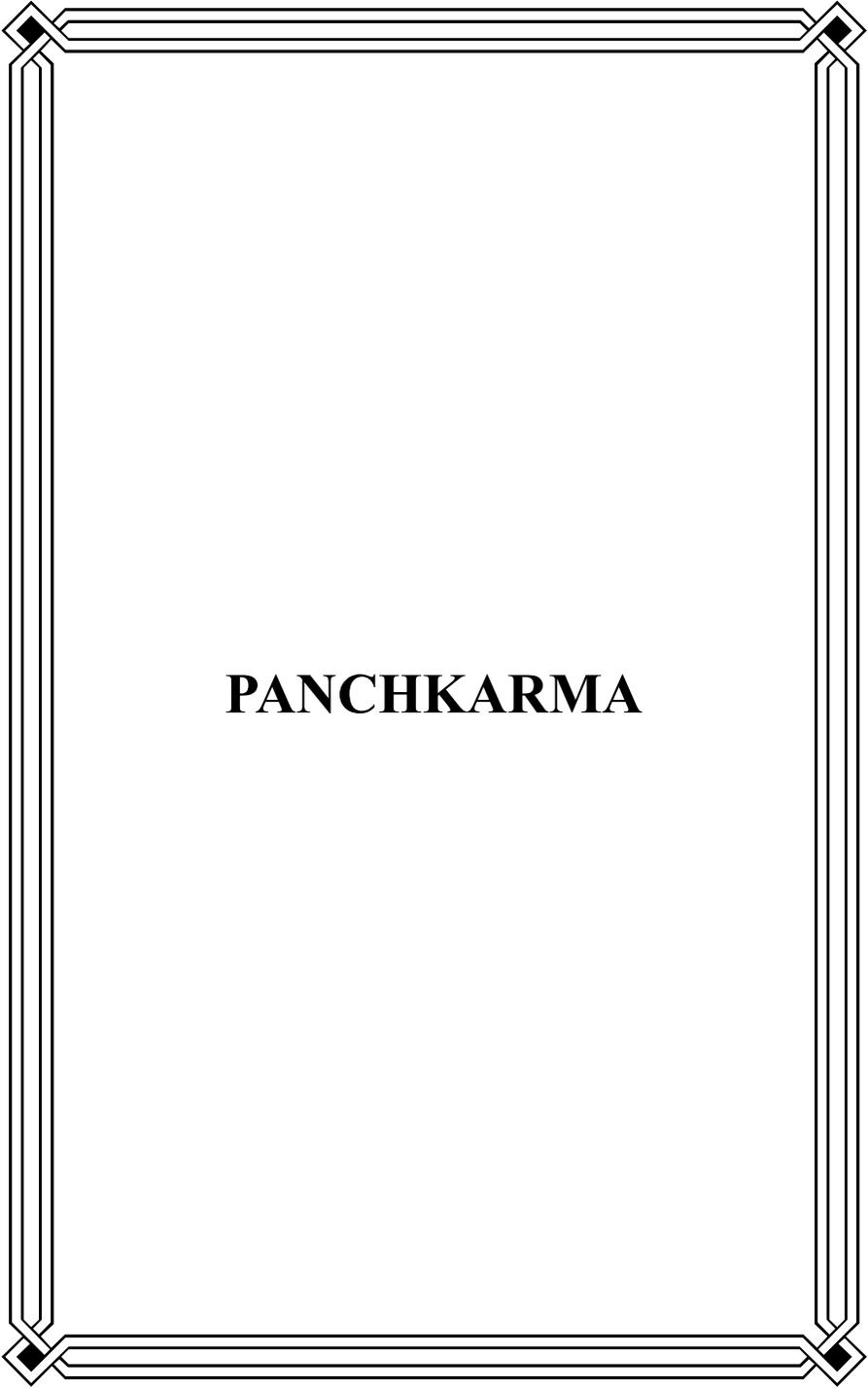
Marks : 100

Practicals shall be held to evaluate the patient care, diagnostic and treatment expertise of the student. It should also be taken as a chance to evaluate the clinical skills. Clinical Ability Evaluation-60 marks and Academic Competence evaluation- 40 marks

Sr. No.	Practical	Marks
1	Case records of 40 IPD Patients in Detail	10
2	Long case History-1:	20
3	Short Case history-1:	10
4	Medical procedures demonstration/ Panchakarma procedure	20
5	Viva	30
6	Teaching and communication skills :	10

REFERENCE BOOKS:

Sr. No.	Book Name	Author Name	Edition
1	Kashyapa Samhita Complete Hindi translation and English translations	SatyapalVidhyalankara Prof. Premvati Tiwari	2013
2	Principles and practice of Pediatrics in Ayurveda	CHS Shastri	Latest Edition
3	Child Health Care in Ayurveda	Abhimanyu Kumar	1999
4	Ayurvedic Concepts of Human Embryology	Abhimanyu Kumar	2000
5	Kaumarbhritya	Prof. D.N. Mishra	2016
6	Kaumarbhritya Ke Antargata Balgraho kramika EvamVaigyanika	Prof. Chanchal Sharma	Latest Edition
7	Notes on Kaumarbhritya	Dr. Dinesh K S	2017
8	Pran - Pratyagamanam	Dr. B.M. Singh	Latest Edition
9	Ayurveda Dwara Matra Evam Shishu Paricharya	Dr. K. S Patel, V.K. Kori andRajgopal S.	
10	Kaumarbhritya related references from Charaka Samhita, Sushruta Samhita Vagbhata etc.		Latest Edition
11	Clinical Methods in Paediatrics	MeharbanSingh	2016
12	Pediatrics Emergencies	MeharbanSingh	2016
13	Essential Pediatrics	O.P. Ghai	8 TH edition.
14	Text Book of Pediatrics	Nelson	20 TH edition
15	Care of New Born	Meharban Singh	8 th edition.

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PANCHKARMA

TITLE OF THE PROGRAM : PANCHAKARMA
PROGRAM CODE : AVF311
MARKS : THEORY- 400 PRACTICAL-100, TOTAL- 500

GOALS -

1. The goal of Curriculum is to produce Competent, Confident, Concerned humane who can provide ethical medical care.
2. Maintenance of Health and relief from ailments are two basic principles of Ayurvedic treatment, which can be easily achieved by Panchakarma.
3. Acquire knowledge regarding the fundamentals of Ayurveda
4. Acquire knowledge regarding the fundamentals of Panchakarma
5. Learning the clinical skills for diagnosis and treatment modalities as per principles of Ayurveda
6. Students should be able to perform All Panchakarma procedures
7. Acquire the knowledge about the methods and techniques of Research methodology and Biostatistics
8. Learn different teaching technologies.
9. Create first line Ayurved Physician, Consultant and Researchers.

LEARNING OBJECTIVE:

1. Treating the patient successfully with the application of Panchakarma.
2. Ability to prepare plan for clinical research or synopsis.
3. Ability to do counselling for prevention of diseases through health maintenance.

LEARNING OUTCOME-

Student should be able to learn or perform in following domains.

- **COGNITIVE DOMAIN**

After the completion of 3 year PG Program, the student should be able to:

1. PG scholar will gain and enhance competent knowledge of Panchakarma.
2. Explain general principles of Ayurveda and its application for promotion of health and cure diseases.
3. Prepare and conduct a Research protocol for Panchakarma

- **PSYCHOMOTOR DOMAIN**

At the end of the training, the student should be able to:

- 1) Identify various research topics, carry out research and prepare dissertation on topic.
- 2) Promote and uphold the health of society according to principles.
- 3) Prepare and deliver lectures on various topics of Panchakarma.

- **AFFECTIVE DOMAIN**

At the end of the training, the student should be able to:

- 1) Communicate with patients empathetically and co-operate with peers and subordinates
- 2) PG scholar should be able to treat the patients through an interactive and healthy counselling.

PROGRAM DESCRIPTION

PAPER - I (CODE NO. - AVF3111)				100
PURVA KARMA – SNEHANA AND SWEDANA				Marks
Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
Part A				
1	Introduction	<ol style="list-style-type: none">1. Detail knowledge of Shadupakram and relation of Shodhan with it2. Panchkarma in Ashtanga Ayurved and Significance of Shodhana3. Ama and Shodhana, benefits of Shodhana, Samikshya Bhavas in Shodhana4. Importance of Pachana prior to Snehana, methods, drugs, duration and dose for Pachana, samyak Lakshana of Pachana	10	10
2	Snehana	<ol style="list-style-type: none">1. Etymology and definition of Sneha and Snehana2. General considerations about Snehana3. Classifications of Sneha, Sneha-Yoni, detailed knowledge of four types main Sneha-Ghrita, Taila, Vasa and Majja with their characteristics, importance and utility, various aspects of Uttama Sneha4. Properties of Snehana	40	40

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		Dravya and their interpretation 5. Effects of Snehana 6. Sneha Kalpana, various types of Sneha Paka with their utility 7. Indications and contraindications of Snehana 8. Classification of Snehana: Bahya and Abhyantara Snehana 9. Bahya Snehana and Bahir-Parimarjana, utility and importance of Bahya Snehana 10. Classification of Bahya Snehana Methods, indications, contraindications, specific utility of the followings Abhyanga, Mardana, unmardana, Padaghata, Samvahana, Udvartana / Utsadana, Udgharshana, Avagaha, Pariseka, Lepa, Pralepa, upadeha etc. various types of lepa having cosmetic values along with the drugs and methods; Ayurveda face pack; lepa for cosmetic problems such as tilakalk, neelika, nyaccha, mukha dushika etc with drugs and methods. Gandusha, Kavala; Karna and Nasa Purna,		

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		<p>Akshi Tarpana; Murdhni Taila: Shiro-abhyanga, Shirodhara, Siro Pichu and Siro Basti, Shiro Lepa (Talapotchil), Talam and Takradhara, etc.</p> <p>11. Knowledge of digestion and metabolism of fat: absorption of fatty substances through skin; types of skin like dry, moist etc and their Ayurvedic management</p> <p>12. Karmukata of Abhyantara and Bahya Snehan</p> <p>13. Knowledge of different contemporary massage techniques</p> <p>14. Abhyantra Snehana: Definition of Brimhnartha, Shamanartha and Shodhanartha, method and utility of Brimhanartha and shamanartha Snehana; difference between Shamanartha and Shodhanartha Snehana</p> <p>15. Methods of Abhyantara Snehana</p> <p>16. Shodhanartha Snehana: Acchapana and Vicharana, Utility and various methods of Sadyasnehana, Avapidaka Sneha</p> <p>17. Matra of Sneha :</p>		

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		<p>Hrasiyasi, Hrasva, Madhyama and Uttama Matra with their indications, specific utility of Ghrita, taila, Vasa and majja; Anupana of Sneha along with justification and their role in the drug action.</p> <p>18. Need and method of Rukshana before performing Snehana in specific conditions and Samyak Rukshana Lakshana</p> <p>19. Shodhananga Snehana Vidhi and methods of fixation of dose</p> <p>20. Diet and Pathya during Snehana</p> <p>21. Observation of sneha Jiryamana, Jirna and Ajirna Lakshana</p> <p>22. Samyak, Asnigdha and Atisnigdha Lakshana of Snehana</p> <p>23. Sneha vyapat and their management</p> <p>24. Pariharya vishaya and Parihara Kala</p>		
Part B				
3	Svedana	<p>1. Etymology and definition of Svedana</p> <p>2. General considerations about Svedana</p> <p>3. Properties of Svedan and Svedopaga Dravya</p> <p>4. Indications and</p>	50	50

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		<p>contraindications of Svedana</p> <p>5. Various Classifications of Sveda and Svedna</p> <p>6. Detailed knowledge of four types of Sveda of Sushruta with their utility</p> <p>7. Hina, Mridu, Madhya and Mhana Sveda; Ekanga and Sarvanga sveda with their utility</p> <p>8. Utility and method of each of 13 types of Sagni and 10 types of Niragni Sveda</p> <p>9. Shodhannga and Samshamaniya Sveda</p> <p>10. Methods to protect the vital organs (varjya anga) during Svedan Procedure</p> <p>11. Detailed Knowledge about Utility of below mentioned Svedan procedures:- Patrapinda Sveda, Shashtika Shalipinda Sveda, Churna Pinda Sveda, Jambira Pinda Sveda, Dhanya Pinda Sveda, Kukkutanda Sveda, Anna lepa, Valuka Sveda, Ishtika Sveda, Nadi Sveda, Bashpa Sveda, Kshira bashpa Sveda, Avagaha Sveda, Parisheka Sveda, Pizichil, Dhanyamla</p>		

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		<p>Dhara, Kashaya Dhara, Kshira Dhara and Upanaha Sveda.</p> <p>12. Avasthanusari Svedana in various disorders</p> <p>13. Samyak, Ayoga and Atiyoga Lakshana, Sveda Vyapat and their management</p> <p>14. Diet and regimens during and after Svedana</p> <p>15. Karmukata of Svedana</p> <p>16. Current sudation modalities like Sauna bath, Steam Bath, Infrared, etc.</p> <p>17. Svedana with Kati Basti, Janu Basti and Griva Basti</p> <p>18. Study of Snehana and Svedana related portions in classics with commentaries</p>		

PAPER - II (CODE NO. - AVF3112) VAMANA AND VIRECHANA KARMA				100 Marks
Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
Part - A				
1	Vamana Karma	<ol style="list-style-type: none"> 1. Etymology, definition and general considerations of vamana 2. Properties of Vamaka and Vamanopaga drugs 3. Knowledge and utility of important Vamaka drugs and their preparations (Vamana Yoga) 4. Avasthanusara Vamana and its utility. 5. Indications of Vamana 6. Contraindications of Vamana with reasons 7. Pachana prior to Snehana 8. Detailed knowledge and method of preparation of patient with Snehana 9. Abhyanga and Svedana as Purvakarma of Vamana 10. Diet and management of gap day 11. Need of increasing of Kapha for proper Vamana, Kapha increasing diet 12. Preparation and management of Patients on the morning of Vamana 13. Administration of food articles prior to Vamana 14. Selection of Drug, time, Anupana, Sahapana, dose and method of administration of Vamana and Vamanopaga preparations 15. Method of Vamana 	50	50

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		<p>Karma, waiting period for automatic Vamana Vega and manipulation in its absence</p> <p>16. Observations prior to beginning of Vamana such as sweat on forehead, horripilation, fullness of stomach and nausea</p> <p>17. Observation and assistance of the patient during Vamana</p> <p>18. Vega and Upavega of Vamaana and its counting, observations and preservation of vomitus matter and its weighing</p> <p>19. Samyak, Ayoga and Atiyoga of Vamana</p> <p>20. Laingiki, Vaigiki, Manaki and Antiki Shuddhi,</p> <p>21. Hina, Madhya and Pravara Shddhi and Samsajana Krama accordingly</p> <p>22. Detail knowledge of methods of Samsarjana Krama and its importance</p> <p>23. Kavala and Dhumapana after vamana</p> <p>24. Management of Ayoga, Atiyog and Vyapat of Vamana with Ayurveda and modern drugs</p> <p>25. Parihara Vishaya and Kala for Vamana</p> <p>26. Vamana Karmukata with Pharmaco-dynamics of Vamana</p> <p>27. Study of Vamana related portions in classics with</p>		

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		commentaries 28. Recent advances of researches on the effect of Vamana 29. Scope of research in vamana. 30. Role of Vamana in promotion of health, prevention and treatment of diseases		
Part B				
2	Virechana Karma	1. Etymology, definition and general considerations of Virechana 2. Importance of Vamana and Virechana as shodhana, Virechana better than Vamana 3. Necessity of Vamana prior to Virechana 4. Preparation of patients for Virechana after Vamana 5. Preparation of patients directly for Virechana 6. Properties of main Virechaka and Virechanopaga drugs, Classifications of Virechana drugs with definition, example and utility of each type 7. Indications of Vamana Karma 8. Contraindications of Virechana with reasons 9. Utility of Virechana for the specific conditions and stages of the disease 10. Internal Snehana for	50	50

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		<p>Virechana with diet</p> <ol style="list-style-type: none"> 11. Management of 3 gap day with diet and importance of low Kapha for proper Virechana 12. Abhyanga and Svednana as Purvakarma of Virechana 13. Preparation and management of Patients on the morning of Virechana 14. Reason for performing Virechana on empty stomach 15. Selection of virechana Drug and time of administration; Anupana, sahapana and method of administration of Virechana and Virechanopaga preparations 16. Method of performing of Virechana Karma 17. Observations during Virechana, Vega and Upavega of Virechana and its counting, observations and preservation of feces and its weighing 18. Samyak, Ayoga and Atiyoga of Virechana 19. Laingiki, Vaigiki, Manaki and Antiki Shuddhi of Virechana 20. Hina, Madhya and Pravara Shddhi and Samsajana Krama accordingly 21. Detail knowledge of methods of Samsarjana 		

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		<p>Krama and its importance, and Tarpana krama and its importance</p> <p>22. Management of Ayoga, Atiyog and Vyapat of Virechana with Ayurveda and modern drugs</p> <p>23. Parihara Vishaya and Kala for Virechana</p> <p>24. Virechana a Karmukata along with its Pharmacodynamics</p> <p>25. Applied anatomy and physiology of Gastrointestinal system related with Vamana and Virechana</p> <p>26. Study of Virechana related portions in classics with commentaries</p> <p>27. Recent advances of researches on the effect of Virechana</p> <p>28. Scope of research in Virechana.</p> <p>29. Role of Virechana in promotion of health prevention and treatment of diseases</p>		

Paper - III (CODE NO. - AVF3113) BASTI KARMA AND NASYA KARMA			100 Marks	
Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
Part A				
1	Basti Karma	<ol style="list-style-type: none"> 1. Etymology, definition and general considerations of Basti 2. Importance of Basti in Kayachikitsa and other branches of Ayurveda 3. Classifications of Basti 4. Drugs useful in Basti 5. Indications of Basti, its role at the various stages of diseases 6. Contraindications of Basti with reasons 7. Description of Basti yantras, Basti netra and Basti putaka and their Doshas. Modified Basti Yantra, their merits and demerits 8. Dose schedules of Niruha and Anuvasana basti 9. Niruha basti <ol style="list-style-type: none"> a. Etymology, synonyms, definition and classifications and subclassifications of Niruha Basti and detailed knowledge of each type of Niruha Basti along with indications and contraindications and benefits b. Contents of various types of Niruha Basti, their proportions, methods of mixing basti Dravya, Niruha Basti and its relation with other Shodhan therapies, Relation of Niruha Basti with 	50	50

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		<p>Anuvasana basti</p> <p>c. Purvakarma for Niruha Basti; Pathya before, during and after Niruha Basti; all the aspects of administration of various Niruha Basti. .Method of preparation of various Niruha vasti dravya; rationale behind use of various ingredients, sequential mixing and position of patient.</p> <p>d. Observations during and after Niruha Basti.</p> <p>e. Basti Pratyagamana, Samyakyoga, Ayoga and Atiyoga Lakshana and Various Vyapat of Niruha Basti and their management according to Ayurved and Modern Systems of Medicines. Management during and after Niruha Basti.</p> <p>f. Pariharya vishaya and pariharakala.</p> <p>10. Anuvasana basti</p> <p>a. Etymology, synonyms, definition and classifications of Anuvasana Basti and detailed knowledge of each type of Anuvasana Basti along with indications and contraindications and benefits Various types of Ghrita and Taila useful in Anuvasana Basti; Anuvasana Basti with Vasa and Majja along with their merits and demerits.</p> <p>b. Relation of Virechana, Shodhana, Niruha Basti,</p>		

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		<p>Snehana with Anuvasana Basti.</p> <p>c. Purvakarma for Anuvasana Basti; Pathya before, during and after Anuvasana Basti;all the aspects of administration of Anuvasana Basti including Kala</p> <p>d. Observations during and after Anuvasana Basti</p> <p>e. Anuvasana Basti Pratyagamana, Samyakyoga, Ayoga and Atiyoga Lakshana and Various Vyapat of Anuvasana Basti and their management.</p> <p>f. Management during and after Anuvasana Basti</p> <p>g. Pariharya vishaya, Pathya and pariharakala for Anuvasana</p> <p>11. Various combined basti schedules such as Karma, Kala, yoga Basti etc.</p> <p>12. Detailed knowledge of Sneha Basti and Matra Basti.</p> <p>13. Detailed Knowledge of different basti formulations like Piccha Basti, Kshira Basti, Yapana Bastis, Madhutilika Basti, Erandamuladi Niruha Basti, Panchaprasrutika Basti, Kshara Basti, Vaitarana Basti, Krimighna Basti, Lekhana Basti, Vrishya Bsti, Manjishtadi Niruha Basti, Dashamula Basti, Ardhamatrika Basti, Sarva roghara Niruha Basti,</p>		

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		<p>Brimhana Basti, Vataghna Basti, Pittaghna Basti and Kaphaghna Basti etc, and their practical utility.</p> <p>14. Karmukata of Basti. Applied anatomy and physiology of colon, Pharmaco-dynamics of Basti.</p> <p>15. Concept of 'Gut Brain' and its relevance to Basti Therapy.</p> <p>16. Study of relevant portions of Basti in classics with commentaries.</p> <p>17. Recent advances of researches on the effect of Basti.</p> <p>18. Scope of research in Basti.</p> <p>19. Role of Basti in promotion of health, prevention and treatment of diseases</p>		
Part B				
1	Uttara basti	<p>1. Definition and Classification of Uttara Basti, its Netra and Putaka. Dose of Uttara Basti Sneha and Kashaya Basti. Different Uttara Basti Kalpanas in various diseases</p> <p>2. Detailed knowledge of Purvakarma and Administration of Uttara Basti in male and female; precautions, aseptic measures, complications and their management</p> <p>3. Karmukata of Uttara Basti. Applied anatomy and physiology of urethra and related female genitalia, Pharmaco-dynamics of</p>	20	10

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		uttara Basti.		
4	Nasya Karma	<ol style="list-style-type: none"> 1. Etymology, synonyms, importance and definition of Nasya 2. Nasya drugs according to various Samhita 3. Classifications and sub-classifications of Nasya with detailed knowledge of each type 4. Indications and contraindications of each type of Nasya with reasons 5. Drugs useful for Nasya with Dose and methods of preparations and their doses 6. Nasya Kala and Pathya before, during and after Nasya; Duration of different Nasyas 7. Purvakarma of each type of Nasya 8. Detailed knowledge of administration of each type of Nasya with management during and after Nasya. 9. Detailed knowledge of common Nasya formulations such as Shadbindu Taila, Anu taila, Kshirabala Taila, Karpasastyadi Taila, Bramhi Ghrita etc. 10. Samyak yoga, Ayoga and Atiyoga of each types of Nasya, its Vyapat and their management 11. Pashchat Karma; Role of Dhumapana, Kavala after Nasya. 	30	40

Sr. No.	Topics	Description	No. of Lectures in Hours	Weightage
		12. Diet and Pathya before, during and after Nasya Karma 13. Pariharya vishaya, Parihara Kala, 14. Nasya Karmukata, Applied anatomy and physiology related to Nasa hi Siraso Dvaram, blood and nerve supply to nose, Shringataka marma, olfactory nerve and centers, aroma therapy, trans nasal administration of drug, recent advances in nasal drug delivery 15. Study of relevant portion in classics with commentaries 16. Recent advances of researches on the effect of Nasya 17. Scope of research in Nasya. 18. Role of Nasya in promotion of health, prevention and treatment of diseases.		

PAPER - IV (CODE NO. - AVF3114) RAKTAMOKSHANA, PHYSIOTHERAPY AND DISEASEWISE PANCHAKARMA	100 Marks
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Sr. No.	Topics	Description	No. of lectures in hours	Weightage
Part A				
1	Raktamokshana	1. Definition, importance, classifications and detailed knowledge of each type of Raktamokshana with their methods of performance 2. General principles, indications, contraindications of Raktamokshana 3. Detailed knowledge of Jalaukavacharana: Indications and contraindications of Jalaukavacharana, various tyoes of Jalauka with their beneficial and harmful effects. 4. Purvakarma and method of Jalaukavacharana, observations and Pathya before, during and after Jalaukavacharana 5. Management during and after Jalaukavacharana 6. Symptoms of Samyak, Ayoga and Atiyoga and Vyapat of Raktamokshana	20	15

Sr. No.	Topics	Description	No. of lectures in hours	Weightage
		<p>and their management with Ayurveda and Modern medicines.</p> <p>7. Pariharya vishaya and Parihara kala 8. Karmukata of different types of Raktamokshana</p>		
2	Clinical Physical Medicine	<p>1. Definitions and terminology</p> <p>2. Biomechanics of human movements; Physiology of exercise</p> <p>3. Treatment modalities used in Physical Medicine- general properties and detailed clinical use of each</p> <p>a. Heat – general physiological properties and mode of action as a treatment agent, Forms of heat therapy – superficial and deep heating. General knowledge of Infrared, Paraffin Wax bath, short wave diathermy, electro magnetic therapy, ultra sound therapy, convection heating devices,</p>	30	45

Sr. No.	Topics	Description	No. of lectures in hours	Weightage
		b. Cold as a therapeutic agent c. Prescription of physical modalities and their applications in medicine. 4. Clinical use of massage, manipulation, stretching 5. Principles of occupational therapy, training in activities of daily living for rehabilitation, self-help devices (walking aids, wheelchairs, tricycles and modified vehicles), instrumental activities of daily living, 6. Physiotherapy exercises for Paralytical disorders, cervical spondylosis, frozen shoulder and slip disc.		
Part B				
3	Disease-wise Panchakarma	1. Role of Panchakarma in Different Stages of the following Diseases: Jvara, Raktapitta, Madhumeha, Kushtha, Shvitra, Unmada, Apasmara, Shotha, Plihodara, Yakridaluodara, jalodara,, Arsha,	50	35

Sr. No.	Topics	Description	No. of lectures in hours	Weightage
		<p>Grahani, Kasa, Tamaka Shwasa, Vatarakta, Vatavyadhi, Amlapitta, Parinama Shula, Ardhavabhedaka, Ananta Vata,, Amavata, Sheetapitta, Shleepada, Mutrakruichra, Mutrashmari, Mutraghata, Hrudroga, Pinasa, Drushtimandya, Pandu, Kamala, Sthaulya, Krimi, Madatyaya, Moorchcha, Padadari, Mukhadushika, Khalitya, Palitya.</p> <p>2. Use of Various panchakarma Procedures in the following disorders - Migraine, Parkinson's Disease, trigeminal neuralgia, Bell's palsy, cerebral palsy, Muscular dystrophy, hemiplegia, paraplegia, Lumbar Disc disorders, Spondylolisthesis, Ankylosing spondylosis, Carpel Tunnel Syndrome, Calcaneal Spur, Plantar fasciitis, GB</p>		

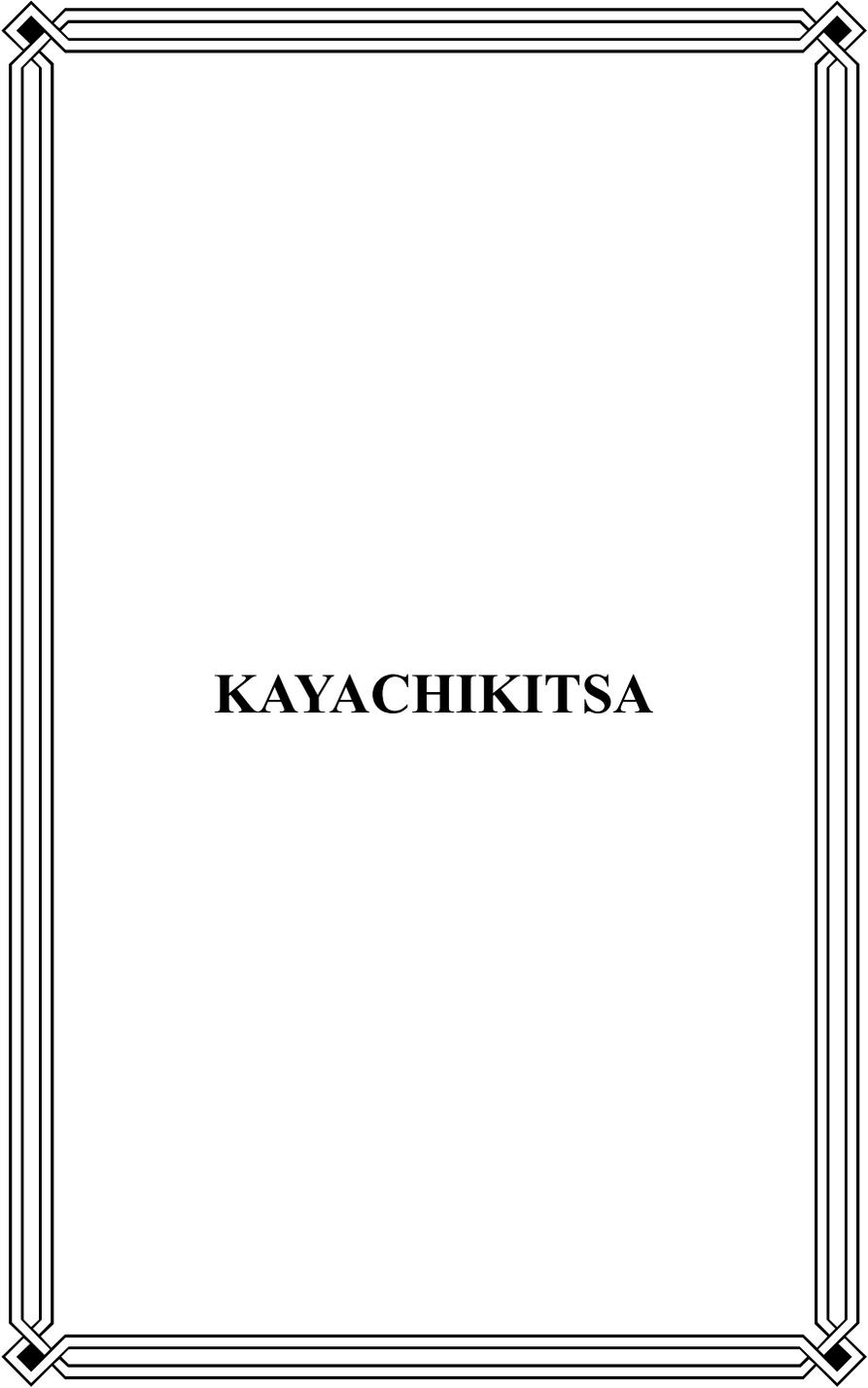
Sr. No.	Topics	Description	No. of lectures in hours	Weightage
		syndrome, Alzhiemer's disease, Irritable Bowel Syndrome, ulcerative colitis, psoriasis, hypothyroidism, hyperthyroidism, hypertension, allergic rhinitis, Eczema, diabetes mellitus, Chronic obstructive pulmonary Disease, Insomnia, Rheumatoid Arthritis, Gout, Osteoarthritis, multiple sclerosis, SLE, male and female infertility, cirrhosis of liver, Jaundice, General Anxiety Disorders.		

**EXAMINATION SCHEME :
PRACTICAL AND VIVA-VOCE (TOTAL -100 MARKS)**

Examination	Marks
Case presentation along with justification of Shodhana intervention	30
Preparation and execution of Shodhana therapy	30
Viva	30
Lecture / Presentation on given topic	10

REFERENCE BOOKS :

Sr. No.	Reference Book Name	Edition
1.	Charak Samhita with commentary of Ayurved Dipika by Chakrapanidatta and Jalpakalpataru by Gangadhara by Agnivesha	Reprint 2009
2.	Sushruta Samhita with the Nibandha Sangraha commentary of Dalhana and Nyayachandrika panjika of Gayadasa on nidansthana by Sushruta	Reprint 2010
3.	Ashtang Hridaya with Sarvanga sundara and Ayurved rasayana commentaries by Vagbhata	Reprint 2014
4.	Ayurvediya Panchkarma Chikitsa by Dr. Mukundilal Dwivedi	Edition 1
5.	Panchkarma Vigyan by Dr. Haridas Shreedhar Kasture	First Edition Reprint 2014
6.	Illustrated Panchkarma by Dr. G Srinivasa Acharya	2 nd Edition 2015
7.	Ayurveda-Principles and Practice of Panchakarma by Dr. Mandip and Dr. Gurdip Singh	First Edition
8.	The Panchkarma Treatment of Ayurved with Kerala Specialties by Dr. T. L. Devaraj	2 nd Edition 2006
9.	Panchkarma Therapy by Dr. R. H Singh	2 nd Edition
10.	Principles and practice of vasti by Dr. Vasudevan Nampoothiri and Dr. L. Mahadevan	Edition 2014
11.	Clayton's Physiotherapy	10 th Edition 1995
12.	Tidy's Physiotherapy	15 th Edition 2013
13.	Harrison's Principles of Internal Medicines	19 th Edition 2015
14.	Guyton's Physiology	13 th edition 2016
15.	Occupational therapy by Lorraire Williams Pedretti	4 th Edition 1996
16.	Short notes on Panchakarma:Vd. Prasad N Kulkarni	First Edition



KAYACHIKITSA

TITLE OF THE PROGRAM : KAYACHIKITSA
PROGRAM CODE : AVF312
MARKS: THEORY - 400 PRACTICAL - 100 TOTAL - 500

GOALS

1. Acquire knowledge in the applied aspect of fundamental of Ayurveda
2. Learning the clinical skill for diagnosis and treatment modalities as per principles of Ayurveda
3. Students should able to perform important procedures
4. Acquire the knowledge about the methods and techniques of Research and making use of information and technology
5. Learn different teaching technologies.
6. Acquire the knowledge of independent work as a specialist of Kayachikitsa.

LEARNING OBJECTIVE

1. Ability to treat patients successfully in day to day practice by applying the knowledge of basic principles of chikitsa.
2. Ability to prepare plan for clinical research or synopsis.
3. Ability to do health counseling for prevention of diseases.

LEARNING OUTCOME

Student should be able to learn or perform in following domains.

- **COGNITIVE DOMAIN**

After the completion of 3yrs. PG Program, the student should be able to:

1. Explain the general principles of Ayurveda and its application for preservation, promotion of health and to cure the diseases.
2. Plan clinical Research Programs.

- **PSYCHOMOTOR DOMAIN**

At the end of the training, the student should be able to:

1. Treat the patients according to the principles of treatment.
2. Promote the health of the society according to the principles of Ayurveda.
3. Prepare and deliver lectures on various topics of Kayachikitsa
4. Identify various research topics, carryout research and prepare a dissertation on a topic.

- **AFFECTIVE DOMAIN**

At the end of the training, the student should be able to:

1. Communicate with patients empathetically Co-operate, react and respond in a cordial manner in his /her interaction with peers, superiors and subordinates.

Sr. No.	Syllabus	No. of lectures (hrs.)	Weightage (marks)
PAPER- I (CODE NO. - AVF3121) FUNDAMENTALS OF KAYACHIKITSA		80	100
Part A			
1	Rogi-RogaPariksha: NidanPanchak, Trividhapariksha, Ashtavidhapariksha, Dashvidhapariksha in the light of recent advances. Clinical methods-Detailed history taking and patient examination, Systemic examination as per Ayurveda and recent advances	10	10
2	Interpretation of common investigations: ECG, Echo cardiography, TMT, Spirometry, X-ray, USG, CT-Scan, MRI, EEG, EMG, in different pathological conditions.	15	10
3	Detailed Knowledge of Principles of Chikitsa in Ayurveda. Types of Chikitsa. Principles and practices of Rasayana and Vajikarna	15	25
4	National Health Programmes and prospective role of Ayurveda services and therapeutics in them.	10	10
Part B			
5	Medical ethics, Common laws and regulations applicable to clinical practice	5	10
6	Elaborate knowledge of undertaking common medical procedures like Ryle's tube feeding, tapping, transfusions, catheterization and tractions.	10	10
7	Ayurveda Dietetics: Importance of Pathya, Apathya and Anupana	5	10
8	Drug-drug interactions and adverse drug reactions, Iatrogenic disorders	5	10
9	Anuktavyadhi Chikitsa: Ayurvedic Principals of management for the diseases which are not mentioned in Ayurveda	5	5

Sr. No.	Syllabus	No. of lectures (hrs.)	Weightage (marks)
PAPER – II (CODE NO. - AVF3122) SAMANYAROGA CHIKITSA		125	100
Nidana / Chikitsa including Nidana Parivarjana, Pathya, Apathaya, Chikitsasiddhanta, Shamana, Shodhana, Panchakarma, Rasayana and AtyayikaChikitsa (Anupana, Drug/Non-drug) as per Ayurvedic and conventional therapeutics of following Srotogatavyadhi:			
Part A			
1	Pranavahasrotas: Shwasa, Hikka, Kasa, Rajayakshma, Hridroga, Parshwashoola, Urakshata, Svarabheda Cardio-respiratory system: Bronchitis, Bronchiactasis, Bronchial asthma, COPD, Cor-pulmonale, Pneumonias, Occupational lung diseases, Pulmonary tuberculosis, Congenital Heart disorders, IHD, RHD-Valvular diseases, Cardiac failures, Cardiomyopathy, Pericarditis, Endocarditis, Hypertension,	33	25
2	Annavaahasrotas: Agnimandya, Ajirna, Aruchi, Amadosha, Amlapitta, Chhardhi, Shoola, Grahani. Gastrointestinal disorders: GERD, APD, Malabsorption Syndrome,	10	10
3	Udakavahasrotas: Trishna, Shotha, Udararoga, water and electrolyte imbalance	5	5
4	Rasavahasrotas: Jwara, Amavata, Pandu, Madatyaya, Anaemias, Rheumatoid arthritis, Substance abuse disorders.	20	10
5	Raktavahasrotas: Raktapitta, Kamala, Vatarakta, Kushtha, Kshudraroga, Sheetpitta, Udarda, Kotha, Visarpa, Shvitra. Haemopoeitic disorders, Bleeding and Coagulation disorders, Leukaemias, Thrombocytopenia, Disorders of Bone Marrow, Hepatobiliary disorders, Hepatitis,	32	20

Sr. No.	Syllabus	No. of lectures (hrs.)	Weightage (marks)
	Cirrhosis, Cholecystitis, Liver abscess, Jaundice, Dermatological disorders, Parasitic, Infective, Allergic, Autoimmune skin disorders, Eczemas,		
Part B			
6	Mamsa-Medovahasrotas: Medoroga, Sthaulya, Prameha, Galaganda, Gandamala, Urustambha, Diabetes mellitus, over weight	8	5
7	Asthi-Majjhavahasrotas: Asthikshaya, Sandhigatavata, Osteoarthritis, Osteopenia	4	5
8	Shukravahasrotas: Such as Kalibya, Dwajabhanga. Impotence	2	5
9	Mutravahasrotas: Mutrakricchra, Mutraghata, Ashmari, Urinary disorders: UTI, Lithiasis, ARF, CRF, Uraemia, BPH	5	5
10	Purishvahasrotas: Atisara, Pravahika, Anaha, Adhamana, Krimi, Udavarta, Enteritis, Dysenteries, Ulcerative colitis, IBS, Worm infestation	6	10

Sr. No.	Syllabus	No. of lectures (hrs.)	Weightage (marks)
PAPER – III (CODE NO. - AVF3123) VISHISHTA ROGA CHIKITSA		80	100
Comprehensive knowledge of etiology, demography, pathogenesis, symptomatology, complications, investigations, diagnosis and drug / non-drug management of following diseases as per Ayurveda / Conventional therapeutics:			
Part A			
1	Vata-Vyadhi- Pakshavadha, AdharangaVata, SarvangaVata, Ananta Vata, GataVata, Gridhrasi, Ardita, Akshepaka, Apatantraka, Ekangvata, Vishvachi, Avabahuka, Avarana. Musculoskeletal disorders: Myopathies, G B Syndrome, Muscular dystrophies, Lumbago Neurological disorders: Neurodegenerative disorders like Alzeihmer's, Parkinsonism, CVA, Neuropathies, Facial palsy, Motor Neuron Diseases, Epilepsy, Sciatica.	20	25
2	Sankramakroga: Sheetala, Masoorika, Updansha, Phiranga, Gonorrhoea, Chancroids, Syphilis,	5	5
3	Manasavyadhi; Unmada, Apasmara, Atatvavinivesha, Mada, Moorcha, Sanyasa Common psychiatric disorders: Classification of psychiatric ailments. Disorders of thought like Schizophrenia. Disorders of Mood like Mania, Depression. Neurosis, personality disorders, psychosexual disorders.	10	20
4	Metabolic disorders: Gout, Dyslipidemia, Atherosclerosis, Obesity.	5	5
5	Endocrinal disorders; Disorders of Pituitary, Thyroid, Adrenal Medulla, Reproductive hormones	5	10
Part B			
6	Parasitic / Infective / Communicable disorders: Shlipada, Filariasis, Vishama Jvara, Malaria, Manthara Jwara, Enteric Fever, Dengue, Chickenpox, Measles, Influenza, Kalaazar,	15	15

Sr. No.	Syllabus	No. of lectures (hrs.)	Weightage (marks)
	Mumps, Rabies, Poliomyelitis, Plague, Meningitis, Encephalitis, Chickungunya, HIV/AIDs, Common worm infestations		
7	Common neoplastic disorders and their management strategies. Role of Ayurveda medicines in cancer care including palliative care	5	5
8	Autoimmune diseases: Myopathies, Rheumatic fever, SLE	5	5
9	Common poisonings and their management like Insecticide/Pesticide poisoning, Snake poisoning, Vegetable and chemical poisoning	5	5
10	JanapadodhvamsaVikara. Environmental diseases and their management	5	5

Sr. No.	Syllabus	No. of lectures (hrs.)	Weightage (marks)
PAPER – IV ADVANCES IN KAYACHIKITSA (Code No AVF3124)		115	100
Critical care medicine, Management of medical emergencies, ICU services, Field medical services			
Part A			
1	Hospital management strategies, Infrastructure, use of IT technology, essential manpower, equipment, Patient care, management and coordination with contemporary health institutions and field institutions	7	5
2	National Health Campaigns of AYUSH and components under NRHM.	10	10
3	Clinical Research in Kayachikitsa and its application in clinical medicine as per new evidence base in different systemic disorders	5	10
4	New emerging health challenges and Ayurvedic medicines: Chickangunya, HIV/AIDs, Swineflu, Chickenflu, Dengue, Restless leg syndrome, Sick building syndrome, Fibromyalgia	25	15
5	Role of Ayurveda in immune-protection, immuno-modulation and in management of other allergies and immunological disorders.	15	10
6	Indications and importance of Organ transplantation, Ethical and legal issues involved	2	5
7	Knowledge of Geriatric care and terminal care medicine.	10	10
Part B			
8	Basic knowledge of Gene therapy, Stem cell therapy, Genetic modeling and chromosomal disorders in different disease conditions	8	5

Sr. No.	Syllabus	No. of lectures (hrs.)	Weightage (marks)
9	Radio-isotopes, disease and tumor markers in diagnosis and assessment of therapy	2	5
10	Scope and methods of independent and collaborative research in Kayachikitsa	5	5
11	Disaster management strategies.	3	5
12	Application of advances in Rasayana and Vajikarana therapies	6	5
13	Application of emerging trends in Panchakarma in medical management	15	5
14	Physical medication and rehabilitation	5	5

PRACTICALS

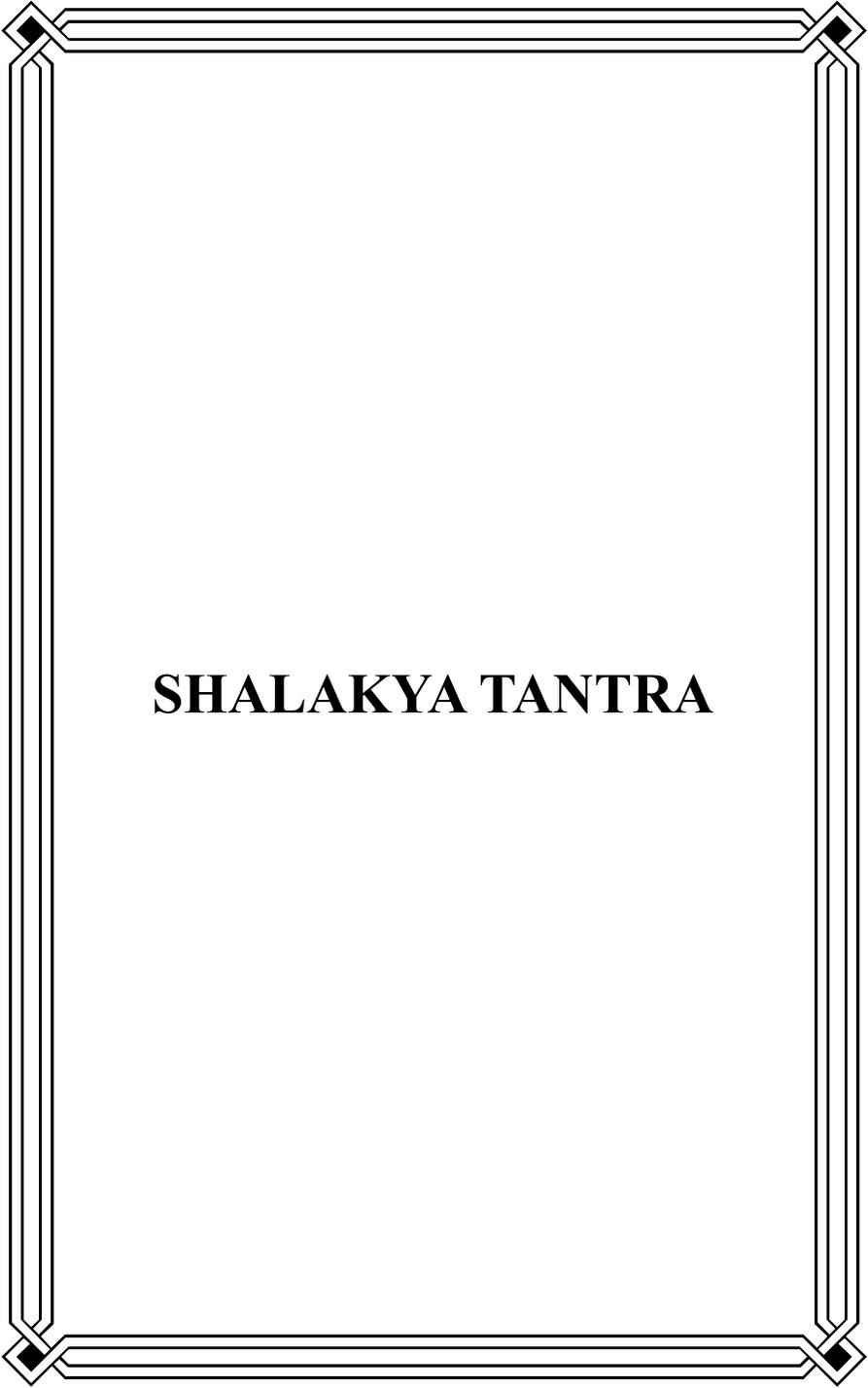
Marks - 100

Practicals shall be held to evaluate the patient care, diagnostic and treatment expertise of the student. It should also be taken as a chance to evaluate the clinical skills. Clinical Ability Evaluation and Academic Competence evaluation based on :-

Sr. No.	Practical	Marks
1	Case records of 40 IPD Patients in Detail	10
2	Long case History-1	20
3	Short Case history-1	10
4	Medical procedures demonstration/ Panchakarma procedure	20
5	Viva	30
6	Teaching and communication skills:	10

REFERENCE BOOKS :

Sr. No.	Name of Reference Books	Author
1	Relevant portions of Brihatrayi and Laghutrayi with commentaries	
2	Chikitsadarsha	Pandit Rajeshvar Dutta Shastri
3	Kayachikitsa	Ramaraksha Pathak
4	Rog Pariksha Vidhi	Priyavrat Sharma
5	Panchakarma Vigyan	Haridas Sridhar Kasture
6	Ayurvediya Nidana- Chikitsa Siddhanta	Prof. R. H. Singh.
7	Kayachikitsa Vol. 1 and 2	Prof. R. H. Singh.
8	The Holistic Principles of Ayurvedic Medicine	Prof. R. H. Singh.
9	Essentials of Kayachikitsa -II, Vol. 1	Dr. Aruna
10	Kayachikitsa Vol. I-IV.	Prof. Ajay Kumar
11	Panchakarma Therapy	Prof. R. H. Singh
12	Panchakarma Illustrated - Acharya	Prof. G. Shrinivasa
13	Practice of Ayurvedic Medicine (Kayachikitsa)	Prof. A. K. Tripathi
14	Nidanachikitsa Hastamalaka	Prof. R. R. Desai
15	Clinical Methods in Ayurveda	Prof. K. R. Srikantamurthy
16	Aushadhi Gunadharm Shastra – Gangadharshastri Gune Introduction to Kayachikitsa	Prof. C. Dwarakanath
17	Samprapti lakshnanayoh Sambandhah	Prof. Sadashiv Sharma
18	Nidana Panchak	Prof. S. C. Dhyani
19	Kayachikitsa	Prof. S. C. Dhyani
20	Davidson's Principles and Practice of Medicine.	-
21	API Textbook of Medicine.	-
22	Harrison's Textbook of Medicine.	-
23	Cecil Textbook of Medicine.	-
24	Relevant texts of concerned subjects.	-



SHALAKYA TANTRA

TITLE OF THE PROGRAM :- SHALAKYATANTRA
PROGRAM CODE :- AVF313
MARKS :- THEORY- 400 PRACTICAL – 100 TOTAL - 500

GOALS

1. Acquire knowledge in the applied aspect of fundamental of Ayurveda
2. Learning the clinical skill for diagnosis and treatment modalities as per principles of Ayurveda
3. Students should able to perform important procedures
4. Acquire the knowledge about the methods and techniques of Research and making use of information and technology
5. Learn different teaching technologies.
6. Acquire the knowledge of independent work as a specialist of Shalaky.

EDUCATIONAL OBJECTIVES

a. Cognitive domain:

After the completion of 3 year PG Program, the student should be able to:

1. Explain the general principles of Ayurveda and its application for preservation, promotion of health and to cure the diseases.
2. Plan clinical research Programmes

b. Psychomotor domain:

At the end of the training, the student should be able to:

1. Treat the patients according to the principles of treatment.
2. Promote the health of the society according to the principles.
3. Prepare and deliver lectures on various topics of Shalakyatantra.
4. Identify various research topics, carryout research and prepare a dissertation on a topic.

c. Affective domain

At the end of the training, the student should be able to:

1. Communicate with patients empathetically
2. Co-operate, react and respond in a cordial manner in his /her interaction with peers, superiors and subordinates.

PROGRAM DESCRIPTION :

PAPER- I (CODE NO. - AVF3131) SHALAKYA – NETRA ROGA		100 Marks	
Sr. No.	Description	No of lectures	Weightage
Part A			
1.	<ol style="list-style-type: none"> 1. Nidanapanchaka and samanyachikitsa of netrarogas. 2. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of sandhigata, vartmagata and pakshmagatarogas with their comparative knowledge of modern science. 3. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of shuklagata and krishnagatarogas with their comparative knowledge of modern science. 4. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of drishtigata and sarvagatarogas with their comparative knowledge of modern science. 5. Descriptive knowledge of Ashtavidhashastrakarma (eight types of surgical procedures) and Chaturvidhachikitsa (Bheshaja, kshar, agni and shastra) and post operative care of the patient with respect to Netrarogas. 6. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis, medical and surgical management of 	50	50

Sr. No.	Description	No of lectures	Weightage
	<p>diseases of the eyelids and lacrimal apparatus.</p> <p>7. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis, medical and surgical management of disorders of conjunctiva, cornea and sclera.</p>		
Part B			
	<p>8. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis, medical and surgical management of disorders of uveal tract and lens.</p> <p>9. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of disorders of vitreous, retina, optic nerve, visual pathway and visual cortex.</p> <p>10. Benign and malignant tumours of the eye.</p> <p>11. Study of nayanabhogatha, its prevention and management.</p> <p>12. Concept of congenital, developmental disorders of eye and prevention and management through Ayurveda and modern science.</p> <p>13. Ocular motility disorders and their management as per Ayurvedic and modern science.</p> <p>14. Neurological and systemic disorders affecting the eyes and their management.</p> <p>15. Ocular therapeutics and its importance</p>	50	

PAPER- II (CODE NO. - AVF3132) SHALAKYA – SHIRO – NASA - KARNA EVUM KANTHA ROGA			100 Marks
Sr. No.	Description	No of lectures	Weightage
Part A			
	<ol style="list-style-type: none"> 1. Nidanapanchaka and samanyachikitsa of shiro-nasa-karna andkantharogas. 2. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Shiro and kapalgatrogas with their comparative knowledge of modern science. 3. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Nasarogas with their comparative knowledge of modern science. 4. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Karna rogas with their comparative knowledge of modern science. 5. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Kantharogas with their comparative knowledge of modern science. 	50	50

Sr. No.	Description	No of lectures	Weightage
Part B			
	<p>6. Descriptive knowledge of Ashtavidhashastrakarma (eight types of surgical procedures) and Chaturvidhachikitsa (Bheshaja, kshara, Agniand Shastra) and post-operative care of the patient with respect to ENT disorders.</p> <p>7. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Headache.</p> <p>8. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis, medical and surgical management of diseases of the Nose and paranasal sinuses.</p> <p>9. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis, medical and surgical management of diseases of the Ear.</p> <p>10. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis, medical and surgical management of diseases of the Throat and Larynx.</p>	50	

PAPER III – (CODE NO. - AVF3133) SHALAKYA – MUKHA DANTA ROGA		100 Marks	
Part A (Marks – 50)			
1. Nidanapanchaka and samanyachikitsa of mukha-dantarogas.			
2. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Oshthagatarogas with their comparative knowledge of modern science.			
3. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Dantamulagatarogas with their comparative knowledge of modern science.			
4. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Danta rogas with their comparative knowledge of modern science.	50		50
5. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Jiwhagatarogas with their comparative knowledge of modern science.			
6. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Talugatarogas with their comparative knowledge of modern science.			

Part B		
	<p>7. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of Sarvasaramukharogas with their comparative knowledge of modern science.</p> <p>8. Jalandhar bandha and its importance and application in painless tooth extraction.</p> <p>9. Detailed description of diagnostic technology in the establishment of oral and dental diseases.</p> <p>10. Descriptive knowledge of etiology, pathogenesis, prodromal symptoms, clinical features, complications, differential diagnosis, prognosis and management of various oral and dental diseases available in literature of Modern science. Detailed study of their management along with advanced techniques.</p> <p>11. Study of essential modern drugs, anaesthetic agents of diagnostic and surgical importance in oro-dentistry.</p> <p>12. Descriptive available update knowledge of modern instruments and their application in the management of oral, periodontal and dental disorders.</p>	50

PAPER – IV (CODE NO AVF3134) SHALAKYA – SHALAKYA VISHISHTHA CHIKITSA VIGYAN		100 Marks	
Part A			
	<ol style="list-style-type: none"> 1. Detailed study of Netra kriyakalpas and vishishtaushadhikalpas with its standard operative procedures and their critical analysis. 2. Critical analysis of classical treatment procedures and vishishtaushadhikalpas with their standard operative procedures and their critical analysis in the context of Urdhwajatrugatvikaras . 3. Descriptive knowledge of common ocular surgical procedures like DCT, DCR, Pterygium, Lid surgery, Chalazion surgery, Cataract surgery, Strabismus surgery, Evisceration, Enucleation, surgical procedures of glaucoma, etc. 4. Descriptive knowledge of common ENT surgical procedures like Tympanoplasty, Mastoidectomy, Stapedectomy, Myringotomy with grommet insertion, Septoplasty, Septorhinoplasty, antral puncture, Functional Endoscopic Sinus surgery, Turbinectomy, Polypectomy, Tonsillectomy, Adenoidectomy, surgical procedures for pharyngeal abscesses, etc. 5. Imaging in ENT and head disorders, detailed knowledge of LASERS, radiotherapy, chemotherapy and other recent advances in treatment modalities like speech therapy, cochlear implant, rehabilitation of the deaf and mute. 6. Advanced technologies and techniques in the medical and surgical management of Eye diseases. 	50	50

	<p>LASERS in Ophthalmology.</p> <p>7. Advanced Ayurvedic formulations and their efficacy in Shalakyatantra. Karna sandhana, Nasasandhana, Oshthasandhana, fundamental and applied aspects of Ayurveda.</p>		
Part B			
	<ol style="list-style-type: none"> 1. Ocular emergencies and their management. 2. Knowledge of preventive and community ophthalmology .WHO and National Programme for control of blindness and the role of Ayurveda. 3. Knowledge of National Programme for deafness and tinnitus and role of Ayurveda. 4. Knowledge of National Programme for prevention of oral cancer and role of Ayurveda. 5. Effects of environmental hazards, and lifestyle disorders and their preventive measures in Eye, ENT and Oro dental disorders. 6. Management of emergencies in ENT, Orodental and Head disorders. 7. Effects of systemic diseases on Eye, ENT, Head and Orodental diseases and their management. 8. Removal of foreign bodies from Eye, ENT and Orodental disorders. 9. Significance of Yogic kriyas in Shalakyatantra. 		

AYURVED DHANWANTARI – SHALAKYATANTRA
MS (AYU) - DISEASE OF EYE, EAR, NOSE, THROAT, HEAD, NECK, ORAL AND DENTISTRY

FINAL EXAM

METHODS OF TRAINING :

- Intensive integrative training would be imparted to scholars in understanding the classical Ayurvedic aspects with an emphasis of critical comparative interpretation.
- Mandatory participation of scholars in seminars, group discussions, clinical demonstrations, journal review meetings, casualty, continuing education activities and research clinical projects.
- During the first year Programme the emphasis would be laid to impart adequate knowledge on fundamental aspects and their applications, with a focus on latest diagnostic tools, instrumentation and laboratory procedures. Practical orientation and hospital based clinical training is an integral part of the curriculum all through and also to be involved in the dissertation work.
- In the second year, training would stress upon extending the knowledge on techniques and imparting skill for surgical performance, so that the scholar is able to perform Eye, Ear, Nose, Throat and Dental surgical procedures independently.
- In the third year the scholar should concentrate on the clinical work and research work based on the dissertation.
- The participation of the scholars in all the aspects of educational process is mandatory.
- Hospital postings - The student has to work for 6 terms (one term of 6 months each) of resident posting is compulsory out of which first 2 postings will be as a J R 1, the next two postings will be as a JR 2 and final two postings as JR 3.
- The student should also develop in the academic work of the department.

PATTERN OF PRACTICAL EXAMINATION:

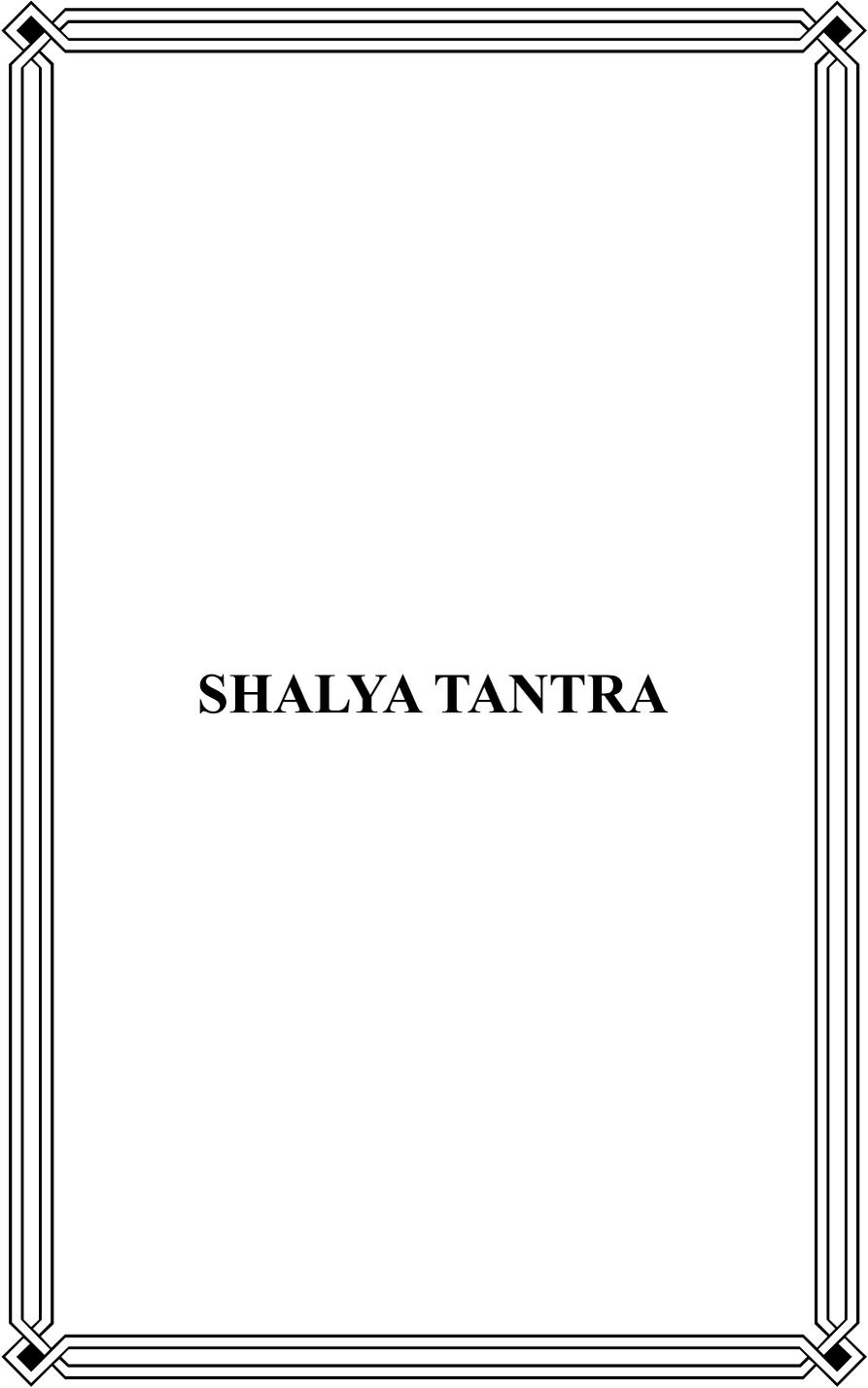
Sr. No.	Pattern of Practical Examination	Marks
1	Bed side examination	
	Short case 2 of 10 marks each	20 Marks
	Long case	20 Marks
2	Identification of specimen/Instrument/Radiograph	10 Marks
3	Thesis Presentation / Viva	10 Marks
4	Teaching Skill	10 Marks
5	Viva Voce	30 Marks

REFERENCE BOOKS:

Sr. No.	Books	Year	Author Name
1	Charka Samhita with commentaries	2009	Y. G. Joshi. commentry
2	Sushrut Samhita	2014	Acharya Priyavat Sharma Commentry.
3	AshtangSamgraha	2014	Prof K. R. Murti Indu commentary
4	AshtangHridaya	2014	Arundutta and HemadriCommentary
5	Madhava nidan	Reprint-2003	Dr. Bramhanand Tripathi
6	Bhavaprakasha with commentaries	2003	Pandit Shri Bramha Shankar Mishra 8 th edition.
7	Sarangadhara Samhita with commentaries	Reprint 1999	Dr. Bramhanand Tripathi
8	Sahstrayoga Sangraha	2016	Prabhakar rao
9	Shalakya Tantra	2009	Ramanath Dwivedi
10	Shalakya Tantra	2008	R. C. Chaudhary
11	The Actions and uses of Indigenous Ophthalmic Drugs	1 jan 2000	Chaukhamba
12	Clinical Examination of Ophthalmic Cases	Dec 2012	Agarwal and Gupta
13	Alder's Physiology of the Eye and Clinical Applications	10 th edition	Cotlier, St. Louis
14	Disease of the Lens and Vitrous, Glaucoma and Hypotony	2 nd edition	Duke Elder
15	A Textbook of Ophthalmology	3 rd edn 2013	Ahmed E.

Sr. No.	Books	Year	Author Name
16	A Textbook of clinical Ophthalmology	2014	Dhanda
17	Manual of the Diseases of the Eye	2009	May, C. and Worth, C.
18	Ophthalmology – Principles and Concepts	8 th edition	Newell, F. W., C. V.
19	Ocular Differential Diagnosis	9 th edition 2012	Roy Fedrick Hamptn
20	Clinical Ophthalmology	10 th edition	Smith, R. Verghese
21	Comprehensive Ophthalmology	7 th edition 2016	A. K. Khurana
22	Manual of Refraction	2015	P. K. Mukharji
23	Handbook of ophthalmology	6 th edition 2011	L. P. agarwal
24	Clinical Ophthalmology	9 th edition 2013	Kanski
25	Parsons Diseases of Eye	22 th edition 2012	Radhika tondan
26	Stallard's Eye Surgery	April 1989	Rooper Hall
27	Dental Anatomy Histology	2010 2 nd edition	Dr. S. I. Bhalajhi
28	Textbook of Pediatric Dentistry	2014	Nikhil Marwah
29	Orthodontics the Art and Science	2015	Dr. S.I. Bhalajhi
30	Essentials of Preventive and Community Dentistry	2012	Dr. Soben Peter
31	Complete Denture Prosthodontics	2012	Dr. J. J. Manappallil
32	Textbook of Oral and Maxillofacial surgery	2014	G E Ghai
33	Diseases of Nose Throat and Ear	2010	Bhargav Shah
34	A Textbook of otorhinolaryngology	2008 7 th edition	Scott Browns editions.
35	Textbook of Ear Nose Throat seases	6 th edition	L. P. Dhingra
36	Textbook on ENT – Mohd. Maqbool	2013	Mohammad Maqbool

Sr. No.	Books	Year	Author Name
37	Audiology Anirwan Biswas	5 th edn 2016	Anirban Biswas
38	Kurt's Audiology	2003	Kurt.
39.	Logan Turner's book on ENT	11 th edn. 2016	Logan
40.	Ballengers textbook of ENT	2009	Ballenger



SHALYA TANTRA

TITLE OF THE PROGRAM : SHALYATANTRA
PROGRAM CODE : AVF314
MARKS: THEORY - 400 PRACTICAL – 100 TOTAL - 500

GOALS

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

LEARNING OBJECTIVE

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

LEARNING OUTCOME

a. Cognitive domain:

1. Having an experienced knowledge of Shalyatantra.
2. Explain the universal principles of Shalyatantra and its application for endorsement of health and to treat the surgical diseases.
3. Sketch research Programs

b. Psychomotor domain:

At the end of the training the student should be able to:

1. Treat the patients according to the principles of surgery.
2. Uphold the health of the society.
3. Plan and issue lectures on various topics of Shalyatantra.
4. Identify various research topics, achieve research and prepare a thesis on a topic.

c. Affective domain

At the end of the preparation, the student should be able to:

- a) Co-operate and react to take action in a cordial manner in his /her interaction with peers, superiors and subordinates.
- b) Create an element of interest and hypothesize the minds of the students.
- c) Project a cheerful personality to the students.

PROGRAM DESCRIPTION :

PAPER- I (CODE : AVF3141) SHALYA SIDDHANT FUNDAMENTAL OF SURGERY			100 Marks
Sr. No.	Topics	Time	Weightage
Part - A			
1	Sushruta contributions in surgical concepts and practices.	1	5
2	Knowledge of Dosha, Dhatu and Mala Vigyan and their importance in surgical diseases.	2	5
3	Significance and importance of Rakta as the Chaturth Dosh.	4	5
4	Yantras and Shastras Surgical Instruments Ancient and recent advances	4	15
5	Trividha Karma Purva, Pradhana and Pashchat Karma and their importance.	4	5
6	Asepsis and Antisepsis.	4	10
7	Nirjalikaran Sterilization Various methods for surgical equipments, endoscopies, linen and Operation theatre	6	10
8	Surgical infections Sepsis, Tetanus and Gas gangrene.	4	5
9	Care of patients suffering from Hepatitis, HIV-AIDS, STD and other associated infectious diseases.	4	8
Part – B			
10	Ashtavidha Shastra Karma Critical knowledge and their application in surgical practice.	4	10
11	Suturing materials, appropriate use of sutures, drains, prosthetic, grafts and surgical implants	6	5
12	Concept of Karma and their clinical application.	6	8
13	Shock Its varieties and management.	4	10
14	Raktasrava / Haemorrhage Types, Clinical features and Management.	6	
15	Concept of RaktaStambhana - Haemostasis.	3	5
16	Blood Transfusion Blood groups, compatibility, Indications, Contraindications and complications with management.	6	5
17	Fluid, electrolyte, Acid Base Balance and Nutrition	6	10

	<ul style="list-style-type: none"> a. Introduction of physiology of fluids and electrolytes. b. Dehydration and over hydration. c. Specific electrolyte loss, Acidosis, Alkalosis, Symptomatology and Management d. Electrolyte changes in specific surgical conditions and their management. e. Plasma volume expanders and their use in surgical condition. f. Various replacement fluids in surgery, mode of administration and complications. g. Nutrition Indications, types, mode of administration and complications. 		
18	VranaSophia-Inflammation and Vidradhi Abscess	6	5
19	Granthi Cyst and Arbuda Benign and malignant Neoplasm Concept of Oncogenesis and genetics of cancer.	4	5
20	Gulma and Udara Roga.	4	5
21	Kshudra Roga.	4	3
22	Knowledge of antibiotics, analgesics, anti-inflammatory and emergency drugs in surgical Practice.	8	10

PAPER - II (CODE : AVF3142)		100	
VISHISHTA SHALYA VIGYAN - SHALYA TANTRA		Marks	
SPECIALITY			
Part- A			
1	1. YogyaVidhi Practical and Experimental training a. Practice of surgical procedures on different models. b. Training of Laparoscopic and Endoscopic procedures	20	25
2	2. Vrana Wound management a. Management of NijaVrana, AgantujaVrana, DushtaVrana and NadiVrana. b. VranaChikitsaShastiupakramas, Pathya-apathya Cement kramas, Pathya-apathy and c. Types and Management of DagdhaVrana Burns and scalds. d. Infection of hands and foot, Diabetic wound, PramehaPidaka Diabetic carbuncle and its management. e. Management of Pressure ulcers, Venous ulcers and other chronic non-healing ulcers. f. Gangrene and its management	25	40
Part B			
3	Mutra Roga – Urological diseases. i. Anatomical and physiological knowledge of kidney, ureter, urinary bladder, prostate, seminal vesicles, urethra and penis. ii. Investigations of Mutravaha Srotas – Urinary tract. iii. Aetiopathogenesis and surgical procedures of Ashmari – Urinary stone diseases.	30	30

	<p>iv. Kidney and ureter – Clinical presentation, Investigations and Management of Congenital anomalies, Trauma, Infection, Neoplasm, Hydronephrosis, Hydroureter and Haematuria.</p> <p>v. Urinary bladder - Clinical presentation, Investigations and Management of Congenital anomalies, Trauma, Infection, Neoplasm, Diverticulum, Vesico-vaginal fistula, Atony, Schistosomiasis, Urinary diversions, Retention of urine – Mutraghata and Mutrakruccha.</p> <p>vi. Urethra - Clinical presentation, Investigations and Management of Congenital anomalies – Hypospadias, Epispadias, Posterior urethral valve, Trauma, Infection, and Neoplasm.</p> <p>vii. Prostate and seminal vesicles – Benign and malignant enlargement of prostate, Prostatitis, Prostatic abscess and Calculi.</p> <p>viii. Penis – Clinical presentation, Investigations and Management of Congenital anomalies , Trauma, Infection, Phimosis, Paraphimosis, Peyronie’s disease and Neoplasm.</p> <p>ix. Testis and scrotum - Clinical presentation, Investigations and Management of Congenital anomalies, Ectopic testis, Trauma, Infection, Neoplasm, Testicular torsion, Hydrocele, Varicocele, Spermatocele, Chylocele, Pyocele, Haematocele, Epididymal cyst and Fournier’s gangrene.</p>		
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	x. Renal failure – Causes, Diagnosis, Investigations and Management.		
4	Asthi roga and Marma Chikitsa - Orthopaedics i. Anatomy and physiology of bone. ii. Diseases of Asthi / Bone and Sandhi / Joints – Congenital, Degenerative, Infective, Metabolic and Neoplastic Disorders of Bones and Joints. iii. Aetiopathogenesis, treatment along with surgical procedures of Bhagna - Fracture, Sandimoksha - Dislocation and bone grafting. iv. Diseases of Spine, vertebral column and spinal cord.	25	30
PAPER - III (CODE : AVF3143) ADHUNIK SHALYA KARMA - MODERN SURGERY			100 Marks
Part - A			
1	Fundamentals of modern surgery and treatment of surgical disorders including surgical anatomy, physiology and pathology.	10	5
2	Diagnosis and Surgical treatment of head and spine injury, thoracic and abdominal trauma. Blast injuries and Management	10	10
3	Diagnosis and Surgical management of neck disorders e.g. salivary glands, thyroid, Thyroglossal cyst and Fistula, Branchial cyst and fistula, Cystic hygroma and Lymphadenopathies.	08	8
4	Diagnosis and Surgical management of breast diseases- Benign and Malignant breast tumours	06	5
5	Diagnosis and Surgical measures of diseases of Gastrointestinal system - i. Oral cavity - Oral ulcers, Oral cancer, Precancerous conditions, Submucosal fibrosis, Leukoplakia, Cleft lip and palate, Lip tumours, Mucosal cyst, Nasopharyngeal cancer, Tongue ulcer	20	30

	<p>and cancer.</p> <p>ii. Oesophagus - Oesophageal varices, Dysphagia, Neoplasm, Strictures and Gastro oesophageal reflux.</p> <p>iii. Stomach and duodenum –Congenital anomalies, Injuries, Inflammation, Ulcer, Neoplasm, Pyloric stenosis, Acute dilatation ,Hiatus hernia and Foreign bodies.</p> <p>iv. Pancreas - Congenital anomalies, Acute and Chronic pancreatitis, Calculi Neoplasm and Cysts of pancreas.</p> <p>v. Peritoneum, Omentum, Mesentery, Retroperitoneal Space – Peritonitis, Abscess, Neoplasm, Mesenteric cyst, Torsion of mesentery, Vascular thrombosis, Retroperitoneal cyst and Fibrosis.</p> <p>vi. Abdominal mass - Diagnosis and Management.</p> <p>vii. Small intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Peutz-jeghers syndrome, Chron’s disease, Carcinoid tumours, Enteric perforation and Intestinal fistula.</p> <p>viii. Large intestine - Congenital anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Injuries, Foreign bodies, Diverticuli, Faecal fistula, Amoebiasis and Familial polyposis coli.</p> <p>ix. Caecum and Vermiform appendix- Appendicitis, Appendicular abscess, Appendicular mass, Perforation, Carcinoid Tumor and other Neoplasm.</p>		
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	<p>x. Gastrointestinal bleeding – Haemetemesis, Malaena, Haemobilia, Bleeding per anum - Causes, Diagnosis and Management.</p> <p>xi. Rectum and anal canal - Diagnosis and Surgical management of Congenital Anomalies, Inflammation, Ulcer, Neoplasm, Stenosis, Prolapse, Haemorrhoids, Fistula-in-ano, Fissure-in-ano, Anorectal Abscess, Incontinence, Injuries, Foreign bodies, Sacrococcygeal Teratomas and Pilonidal sinus.</p>		
6	Umbilicus and abdominal wall congenital anomalies, umbilical infections, sinus Neoplasm abdominal dehiscence, divarication of recti, Desmoid tumor and meleneys gangrene	06	12
7	<p>Diagnosis and surgical measures of diseases of Hepatobiliary system -</p> <p>i. Liver – Abscess, Cyst - Hydatid cyst, Primary and Secondary malignant tumours, Portal Hypertension and Budd-Chiari Syndrome.</p> <p>ii. Gall bladder and Bile duct - Congenital anomalies, Acute and Chronic Cholecystitis, Cholelithiasis, Neoplasm, Cholangitis, Stenosis, Choledocholithiasis, Choledochal cyst and Cholangiocarcinoma.</p> <p>iii. Spleen – Splenomegaly and Splenic Injury.</p>	08	08
8	Diagnosis and surgical measures for disorders of Artery, Vein, Ligaments, Muscles and Tendons	5	10
9	Diagnosis and surgical management of Hernias - Inguinal, Femoral, Umbilical, Incisional, Abdominal wall and other hernias.	10	10

10	Endoscopic procedures Esophagogastroduodenoscopy, Sigmoidoscopy and Colonoscopy	5	10
11	Diagnostic and therapeutic laparoscopy.	6	10
12	Anesthesia Definition, Types, Anesthetic agents, Indications, Contraindications, Procedures, Complications and management.	6	10
PAPER - IV (CODE : AVF3144) SHALYA VANGMAY SHALYA LITERATURE RESEARCH AND DEVELOPMENT			100 Marks
Part A			
1	Critical study of the Sushruta Samhita and relevant portions of ShalyaTantra in Brihat Trayeen Laghu Trayee.	15	20
2	Knowledge and importance of Surgical Audit.	10	10
3	Medico legal issues Understanding the implications of acts of omission and commission in practice. Issues regarding Consumer Protection Act in medical profession, National Health Policy, Implications in medico-legal cases Ilke accidents, assaults etc.	15	20
Part B			
4	Surgical ethics including Informed consent.	10	10
5	Knowledge of different type of experimental Surgical Model for Research in Surgery.	10	05
6	Sandhana Karma – Plastic reconstructive and cosmetic surgery. Fundamentals of Sandhana Karma – i. Karna Sandhana – Auroplasty ii. Nasa Sandhana – Rhinoplasty iii. Ostasandhana – Cheiloplasty iv. Grafts and Flaps – Techniques and applications. v. Vascular anastomosis and grafts.	20	10
7	Anushalya Karma Parasurgical proceduressa. a. Kshara Karma, Kshara Sutra, Agnikarma and Raktamoskhana.	20	40

Sr. No.	Pattern of Practical examination	100 Marks
1.	Case record (25)	10 Marks
2.	Short case	10 Marks
3.	Long case	20 Marks
4.	Identification of specimen / radiograph and Instruments	20 Marks
5.	Thesis Presentation	20 Marks
6.	Viva-voce	20 Marks

METHODOLOGY

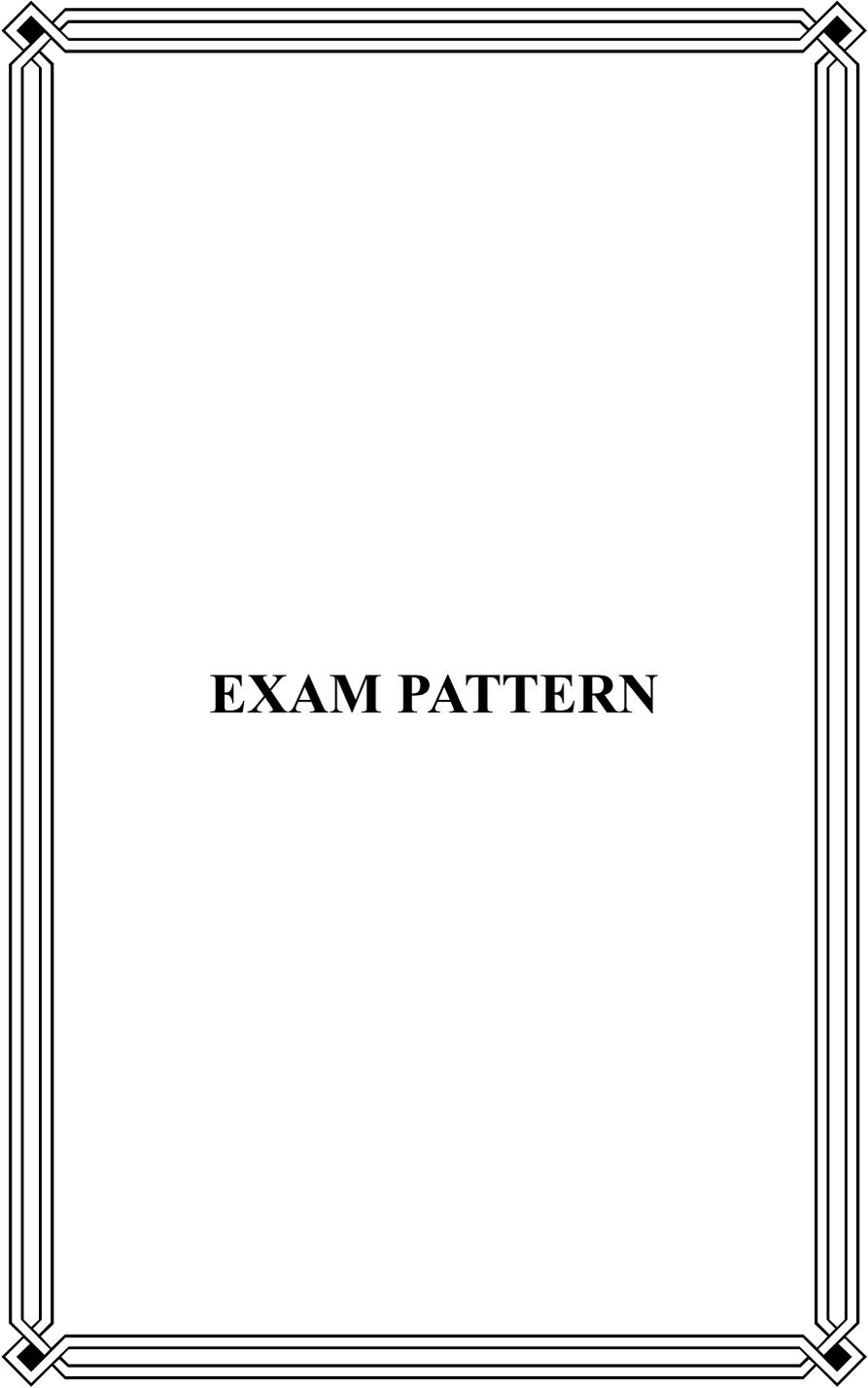
Classroom teaching, Bed Side Clinics, Journal Club, Seminar, Workshops, Case presentation, Wall Magazine, PBL,CBL,Horizontal Learning,and Vertical Learning

REFERENCE BOOKS :

Sr. No.	Name of Books	Author	Publication and Year Edition
1.	Sushruta Samhita	-	Chaukhaba Prakashan (1 st Edition)
2.	AshtangaSangraha	-	Chaukhaba Prakashan (1 st Edition)
3.	AshtangaHridaya	-	Chaukhaba Prakashan (1 st Edition)
4.	Charaka Samhita	-	Chaukhaba Prakashan (1 st Edition)
5.	Shalyatantravidnyan	Vd. Shi. Go. Joshi	1 st Edition
6.	The Surgical instruments of the Hindus	Girindranath Mukhopadhyaya	1 st Edition
7.	Shalya Tantra Samuchchaya	PanditRamadesh Sharma	1 st Edition
8.	Shalya Vigyan (Part 1-2)	Dr. Surendra Kumar Sharma	1 st Edition
9.	Shalya Samanvaya (Part 1-2)	Vd. Anantaram Sharma	1 st Edition
10.	Shalya Pradeepika	Dr.Mukund SwaroopVerma	1 st Edition
11.	Soushruti	Dr. Ram Nath Dwivedi	1 st Edition
12.	Clinical ShalyaVigyan	Dr. Akhilanand Sharma	1 st Edition

Sr. No.	Name of Books	Author	Publication and Year Edition
13.	Bhagna Chikitsa	Dr. Prabhakar Janardhan Deshpande	1 st Edition
14.	Kshara sutra management in anorectal ailments	Dr. S.K. Sharma, Dr. K.R.Sharma and Dr. Kulwant Singh.	1 st Edition
15.	Anorectal diseases in Ayurveda	Dr. Sizoria and Dr. Praveen Kumar Chowdary.	Chaukhaha Prakashan
16.	Adhunika Shalya Chikitsa Siddanta	Dr. Katil Narshingham Udupa	1 st Edition
17.	Agnikarma Technology Innovation	Dr. P. D. Gupta	Chaukhaha Prakashan
18.	Shalya Tantra Ke Siddhant	Dr. K.K.Takral	Chaukhaha Prakashan
19.	Recent advances in the management of Arshas / Haemorrhoids	Dr. P. Hemantha Kumar	Chaukhaha Prakashan
20.	Arsha Evum Bhagander Mein sutra Avacharan	Vd. Kanak Prasad Vyas	
21.	Recent advances in Kshara Sutra	Dr. M. Bhaskar Rao	Chaukhaha Prakashan
22.	Leech application in Ayurveda	Dr. M. Bhaskar Rao	Chaukhaha Prakashan
23.	Kshara Sutra	Dr. S. N. Pathak	Chaukhaha Prakashan
24.	Shalya Shalakyata Tantra	Vd. S. G. Joshi	
25.	Surgical ethics of Ayurveda	Dr. D. N. Pande	Chaukhaha Prakashan
26.	Textbook of Surgery	Sabistan	Modern Books 1 / E edition
27.	Operative Surgery	Rob and smith	Modern Books 4 th edition
28.	Ward procedure	Dr. Mansukh Patel	Modern Books 6 th edition

Sr. No.	Name of Books	Author	Publication and Year Edition
29.	A Manual of Clinical surgery	Dr. S. Das	Modern Books 12 th edition
30.	A concise Textbook of surgery	Dr. S. Das	Modern Books 8 th edition
31.	Bedside clinic in surgery	Dr. Makhanlal Saha	Modern Books 2 nd
32.	Farquharson's textbook of operative general surgery	Dr. Farquharson	Modern Books 10 th
33.	Maingot's abdominal operation	Dr. Michael zinner, Stanley Ashley	Modern Books 12 th



EXAM PATTERN

**PATTERN FOR (PAPER I, II, III, IV)
THEORY EXAMINATION (EACH PAPER 100 MARKS)**

INSTRUCTION :

- 1) Use blue / black ball point pen only.
- 2) Do not write anything on the blank portion of the question paper. If written anything such type of act will be considered as an attempt to resort to unfair means.
- 3) All question are compulsory.
- 4) The number to the right indicates full marks.
- 5) Draw diagrams wherever necessary.
- 6) Distribution of syllabus in question paper is only meant to cover entire syllabus within the stipulated frame. The question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the question is out of syllabus. As it is only for the placement sake, the distribution has been done.

THEORY EXAM PATTERN (FOR FOUR PAPERS)

Part -A		(50 Marks)	
Sr No.	Nature of Question	Division of Marks	Total Marks
1.	L.A.Q.	10 Marks x3 Questions	30
2.	S.A.Q.	05x04 (Any 4 out of 5)	20
Part -B		(50 Marks)	
1.	L.A.Q.	10 Marks x3 Questions	30
2.	S.A.Q.	05x04(Any 4 out of 5)	20
Total			100 Marks

DISTRIBUTION OF MARKS

Sr. No.	Subjects	Theory	Practical
1.	Ayurveda Samhita Siddhant	400	100
2.	Rachana Sharir	400	200
3.	Kriya Sharir	400	100
4.	Rasa Shastra and Bhaishajya Kalpana	400	100
5.	Dravyaguna Vidyan	400	200
6.	Agadtantra	400	100
7.	Roganidan Evum Vikriti Vigyan	400	200
8.	Swasthavritta	400	200
9.	Kaumarbhritya	400	100
10.	Panchkarma	400	100
11.	Kayachikitsa	400	100
12.	Shalakya Tantra	400	100
13.	Shalya Tantra	400	100
14.	Prasutitantra Evum Striroga	400	200