



# MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

**(From Academic Year 2012-13 & onwards)**

**Duration of course-Total 2 years (1st Year –one year, 2<sup>nd</sup> Year-One year)**

## **Syllabus for Diploma Course in Ayurved**

### **Syllabus for Ayurvedic Dietetics** **Diploma in Nutrition – Ay. [D.N. (Ay.)]**

#### **First Year**

<b>Theory exam marks</b>	1st year- 100 marks each
<b>Practical Marks</b>	1st year- 100 marks
<b>Number of Theory Question Papers</b>	1st year- 2 Papers (Paper-A, Paper-B)

#### **Paper I**

#### **Maulika Siddhanta**

#### **Part – A**

Ahara : (आहार)

1. Its व्युत्पत्ति (etymology), and निरुक्ति, परिभाषाश्च
2. History of the evolution of the Ahara Shastra from primitive times to today's era – From the use of uncooked food in the primitive times to the gradual change in the dietary habits according to time, and invention of various Ahara Kalpana. The relevant references of Ahara dravyas and its kalpanas in the ancient texts that is Vedas, Upanishadas etc.
3. Vaidyakiya Subhashita Sahityam (वैद्यकीय सुभाषित साहित्य) – Chapters 13, 14 and 36
4. Understanding the Ahara and Shareera relationship based on-
  - a) Loka-Purusha Samya Siddhanta (लोकपुरुषसाम्यसिद्धान्त)
  - b) Samanya Vishesh Siddhanta (सामान्यविशेषसिद्धान्त) with examples.
  - c) Panchamahabhuta Siddhanta (पंचमहाभूतासिद्धान्त)
  - d) Tridosha Siddhant (त्रिदोष सिद्धान्त)
5. Classification of Ahara based on its Prabhava :
  - (a) Sukhakara (सुखकर) – Dukhakara (दुःखकर) – Psychological concept
  - (b) Satmya (सात्म्य) – Asatmya (आसात्म्य) – Physiological concept
  - (c) Pathya (पथ्य) – Apathya (अपथ्य) – Physio-pathological concept
  - (d) Hitkara (हितकर) – Ahitkara (अहितकर) – (Ekanitka Hitakar, Ekantika Ahitakar)
6. Role of Avastha-
7. Classification of Ahara according to its mode of intake-Bhakhshya (भक्ष्य), Bhojya (भोज्य), Lehya (लेह्य), Chooshya (चूष्य)etc.
8. Classification of Ahara based on Source (Yoni) – Sthavara, jangama, Khanija.
9. Classification of Ahara as Samisha (समिष) and Niramisha (निरमिष), and their individual properties and effect on the body.
10. Understanding of this classification in context with social and health status, Opinion of contemporary medicine for this classification.

## Part- B

### Ahara and Physiological Study (आहार और शारीर क्रिया)

1. Detailed understanding of Ahara Dravyas on the basis of Shadrasas (6 tastes)
2. Effect of Desha on Ahara
3. Effect of Kala on Ahara
4. Effect of Ahara on self- आत्म विज्ञानम्
5. Ahara and Shareern Sambandha :( आहार-शरीर संबंध)
  - a) The concept of Panchabhautikatva of Ahara as well as Shareera
  - b) Dosha, Dhatu, mala and Ojovigyana, (Prakrita Sthana, Guna, Karma, Prakara, Vriddhi, Kshaya, Pradoshaja Vikara, Sama, Nirama and Dhatu Sara Lakshanani)
  - c) Effect of Ahara Dravya on Tridosha and Trigunas
  - d) Inter relation between Ahara and Agni. Agnivigyana (अग्नि विज्ञान) – Types of Agni, Prakrita Agni (प्राकृत अग्नि) and vikrit agni (विकृत अग्नि)
  - e) Inter relation between Ahara and Srotas, Srotasvigyana (स्रोतस् विज्ञान) – Description of the Srotas according Charaka and Sushruta Samhita. Effect of Ahara Dravyas on these Srotas.
6. Prakriti Vigyana (प्रकृति विज्ञान) : Understanding of Prakrityadi Dasha Pariksha Vidhi.
  - Body constitution, mental constitution, the dominant Gunas and the status appropriate Ahara.
  - Understanding of the Manashika Prakriti of a person on the bases of the diet preferred by person. (Bhagvat Gita)
7. Pachanakriya and Dhatu Poshana:
  - Pachana Samsthana – A brief review of the organs which take part in the process of Ahara Pachana - Amashaya, Grahani, Pakwashaya, Yakrita, Agnyashaya etc.
  - Trividha Awasthapaka (विविध अवस्थापाक)-
  - Aharaparinamakara Bhava (आहारपरिणामकरभाव)
  - Dhatu Poshankrama (धातु पोषणक्रम)- Trividha Nyaya (त्रिविध न्याय)- Kshiradadhinyaya (क्षीरदधिन्याय), Kedarikulyanyaya (केदारीकुल्यान्याय), Khalekapotanyaya (खलेकपोतन्याय)
  - Effect of Dravya, Matra and kala on Annapachana Kriya (अन्नपाचनक्रिया)
  - The role of the three Doshas along with thir subtypes in the process of Ahara-
  - Parinamana or Pachana-
  - Sarakitta Vibhajana (सारकित् विभजन)-
  - Samyaka Pachana Lakshan (सम्यक पचन लक्षणनि)-
  - Dhatu Utpatti Krama (धातु उत्पत्ति क्रम)-
  - Sarata Nirmana (सारता निर्माण)
  - Oja Utpatti (ओजोत्पत्ति)

## Paper II

### Ahara- Dravya – Guna Kalpana Evam Sanskara Gyana

(आहार द्रव्यगुण कल्पना एवं संस्कार ज्ञान)

## Part – A

- Classification of the Ahara dravyas on the basis of Gurvadi (गुर्वादि) and Paradi (परदिगुण) Guna and of Rasa pachaka and their utility particularly of Paradi Guna in the preparation and Gurvadi Gunas in the selection and administration of Ahara Dravya.
- Prakritisamasamaveta Dravya (प्रकृतिसमसमवेतद्रव्य)- Vikritivishamasamaveta Dravya (विकृतिविषमसमवेतद्रव्य)
- Samanapratyarthabha Dravya(समानप्रत्यारब्धद्रव्य)- vichitrapratyarthabha Dravya (विचित्रप्रत्यारब्धद्रव्य)
- Study of a single dravyas-
- Ahara Dravyas – 14 Ahara Varga (आहार वर्ग)-

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|----------------------|--------------------|
| १) शुक्रधान्यवर्ग    | ८) तैलवर्ग         |
| २) शिबीधान्यवर्ग     | ९) फलवर्ग          |
| ३) शाकवर्ग / पत्रशाक | १०) इक्षुवर्ग      |
| ४) हरितवर्ग          | ११) मधुवर्ग        |
| ५) लवणवर्ग           | १२) मद्यवर्ग       |
| ६) गोरसवर्ग          | १३) जलवर्ग         |
| ७) मांसवर्ग          | १४) आहार योगि वर्ग |

- All the classifications of Ahariya and Paniya Dravyas in Brihatrayi (Varga jnana)

## Part – B

### Ahara Kalpana (आहार कल्पना)

- Introduction and Importance of Ahara Kalpana.
- Use of Paradi-gunas in Ahara Kalpana, Methods of processing of various Ahara Dravyas including water. (both in the ancient times and present era) with respect to following Processes with examples-
- Types of Samsakaras (Processes)-
  1. Roasting – भूनना / भर्जित
  2. Boiling – उबालना
  3. Baking
  4. Fermenting – सन्धान
  5. Mixing – मिश्रण
  6. Wet Mixing – घोल
  7. Dry Mixing – शुष्क मिश्रण
  8. Churning – मंथन
  9. Preserving / Pickling – संरक्षण उपाय / अचार
  10. Smoking – धूपन
  11. Frying – तलना
  12. Rubbing – घिसना/पीसना/मसलना
  13. Heating –गर्म करना
  14. Soaking – भिगोना
  15. Pounding / Crushing – कूटना
  16. Garnishing –प्रक्षेप
  17. Temperature regulation –ताप नियन्त्रण
  18. Washing –धोना
  19. Doughing –पीडन एवं पिण्डीकरण
  20. Chopping –काटना
  21. Sprouting –विरुद्ध
- Understanding the action of samskaras individually and also in combination
- Indications, contraindications and role of each samskara during preparation of recipe
- Alterations in Gunas of krita and Akrita Kalpanas of Dravyas with examples
- Kritanna Vargas – Manda, Peya, Vilepi, yusha (Krita and Akrita), Yavangu, Odana, Siddhodana, Mantha (Khada, Kambalika, Kulmasha, Ladduka, Apupa, Modaka, Veshavara, Parpat, Dugdha Vikriti, Payasam, Lapsika, Takra Kalpana, Vatakam, Shadava, Saktu, Ghritapura, Phenika, Samyava (गुण्डिया), Shulyadi mansa parkara alongwith other sneha pravicharnas, their use and effect on body.
- The Samisha and Niramisha Kalpanas and their comparative effect on the body.
- The Gunas of the Ahara Dravyas traditionally used in everyday diet e.g. Rotis of the various cereals available (Wheat, Maida, etc.) Dals, vegetable preparations, Chutneys, Pickles, Papad, salad etc.
- Food value of Virudha Ahara Prevailing in the society traditionally.
- Ahara Drava, Dravyas and Kalpanas commonly used in the present era e.g. Bread, pizzas, burgers, chats, cold drinks, coffee, tea, canned food etc. and their effect of the

body.

- The Bhakshya, Lehya, Chushya and other Kalpanas with their criteria of selection and effect on the body.
- Ancient system and Contemporary Sanskaras and the effect of the Ancient and Modern tools used for various Ahara kalpanas on the Ahara Dravyas e.g. kandookadi (तन्दूर), Cookers, mixers, gas stoves, ovens, Microwave, Choolah etc.
- Preservation techniques of the various Krita as well as Akrita Ahara Dravyas (both ancient and modern kriyas) and their effect on the Guna and karma of the Ahara Dravyas.
- Samyogkarna, Sayogvidhi and Sayogakala of Ahara yogi Dravyas-
- The Dravyas used as flavouring agents in the Ahara recipes eg. Haridra, Sarshapa, Methika, jeeraka, Hingu, Maricha etc. Changes in the Gunas of the Kalpana by their addition and manner and time of addition during the preparation of the Kalpana (e.g. addition of Haridra during the time of boiling of the uncooked Dal or after it is properly cooked changes the properties of the Kalpana) and their effect on the body.-
- Paryushita Ahara (पर्युषित आहार)- Definition, Gunas and its effects on the body. The specific time after which that particular Kalpana can be called as Paryushita e.g. mamsa, Odana, Dugdha etc. kalpanas have shorter time span but pickles, fried or dried foods have a longer time span.
- Savishakta lakshanani (सविषाक्त लक्षणानि) – Garavisha Lakshanani (गरविष लक्षणानि) – The factors like the nature of the Dravyas, their specific samyoga with other substances, their kalpanas, specific patra, Kala and Agni Samskara which add to the Vishaktata of the Ahara Dravya.
- Siddha Annapariksha (सिद्धान्नपरीक्षा) – (पक्व अपक्व अन्न परीक्षा) Ancient methodology of cooked food
- Viruddha Ahara – 18 types
- Modern food analysis methods – Adulteration, Pesticides, insecticide, Fertilizers and soil therapy, understanding of organic and non organic food items.
- PFA (Prevention of food adulteration act)

### Practical's

1. Practical of Dashvidha Pariksha Vidhi – 10 case studies
2. koshta Pariksha, Agni bala pariksha – Abhyavaharan, jarana, Samyaka Pachana Lakshanani – Models by Vaidya prof. B.V. Sathye (At Potdar, Mumbai), Vaidya Prof. M.S. baghel (at Jamnagar)
3. Ayurvedic Cooking/ Recipes

स्वरस - Juice e.g. गृजनक

फांट - चाय, कॉफी

सिद्धजल - षडंगोदक (Medicated Water)

क्षीरपाक (Medicated Milk)

सिद्धघृत (medicated Ghee)

सिद्धतैल (Medicated Oil)

अरिष्ट, आसव - e.g. द्राक्षा, खर्जूर

प्राश / अवलेह - e.g. वासा

खण्डपाक - e.g. नारीकेलखण्ड

कल्क - e.g. आर्द्रक

हिम - e.g. धान्यक

चूर्ण - e.g. मेथिका

सिद्धतक्र - e.g. आमलकी

षट्कुर्चिका - e.g. Paneer

यवागू - e.g. क्वाथसिद्ध, कल्कसिद्ध

यूष - e.g. कृत/अकृत

सूप - e.g. मसूर, मुद्ग

मण्ड, विलेपी

मंथ

ओदन

वाट्योदन

तण्डुलोदक

कृशरा - मुद्ग

पाडव

कांजी

रसाला

वेसवार

कांबलिक

शार्कर

शोधन - e.g. लहसुन, हिंगु

पेया

अवलोह - e.g. दाडिम

पाक - e.g. शूठीपाक, कूष्माण्डपाक

राग - लिंबू, केरी

धान्याम्ल  
मांसरस  
प्रमथ्या  
मोदक

पानक - आम्र  
सुरा  
अर्क - e.g. गुलाब  
अपूप

4. Weights and measures
5. Finding of Nutritive values of food stuffs
6. Regional meal pattern – प्रादेशिक / क्षेत्रीय आहार कल्पनाएं

## Second Year

**Theory exam marks**

IIIInd year- 100 marks each

**Practical Marks**

IIInd year- 100 marks

**Number of Theory Question Papers**

IIInd year- 2 Papers (Paper-A, Paper-B)

### Paper – I

Health promotive Dietetics

(स्वास्थ्यवर्धक आहार विहार)

#### Part – A

Swathya (स्वास्थ्य):

- Swastha Paribhasha, Vyutpatti.
- Trayopasthambha (त्रयोपस्तम्भ) – Ahara, Nidra and Brahmacharya
- The preventive and promotive aspect of Ahara. The same Ahara which is responsible for the Shareera Poshana, if used against the rules and regulations of Ahara Vidhi is the cause of Vyadhi.
- Ahara and its selection according to the norms of Dinacharya, Ritucharya, Desha, Prakriti, kala, Vaya, Agni etc.
- Ahara Vidhivisheshayatanani (आहार विधिविशेषयतनानि), Aharamana Vikalpa Vishesha (Kashyapa – Khilasthana), Ahara Vidhi vidhana (Ch. Vi. 1) Dwadasha Ashana Pravicharana.
- Concept of Trividha Kukshi. (च.वि.२).
- Concepts of Samashana, Adhyashana, Atyashana, Anashana, Vishamashana. Samkirna Bhojana and their effect on health
- Method of serving Ahara Dravyas – Ancient and Modern methodology
- Ahara Vidhi (आहार विधि) – bhojana Vidhi (प्रधानकर्म), Bhojana Purva (पूर्वकर्म) and Paschata Karma (पश्चात्कर्म) e.g. use of Lavana and Ardraka before meal, walking of a hundred steps after meals (शतपदचक्रमणं), sleeping on the left side (वामपार्श्व शयन) etc.
- Tambula seva its utility and its unhealthy aspect.
- Changes in the Bhojana Vidhi in today's era and its effects on the body e.g. watching television during eating, standing during eating, sleeping or performing excessive work or soon after eating meals.
- Effect of disturbed meal and sleeping timings (Working in shifts) on health and its dietary management.
- Use of liquids in the diet – analysis based on their quantity, quality and mode of administration (Sahapana – Anupana)
- The various types of the vessels or utensils used for cooking, storing, serving and eating and their effects on the Ahara components – (ancient as well as modern aspect)

## Part – B

### Pathya –

- The definition of Pathya, Apathya, Upashaya and Anupashaya
- Pathyapathya according to Prakriti, Desha, Kala and Agni.
- Ekantatah Ahita and Hita Ahara
- Abhyasa Yogya Ahara Dravyaani, Abhyasa Ayogya Ahara Dravyani.
- Concept of Satmya and Asatmya. Methodology of leaving Asatmya Ahara and adapting Satmya Ahara in one fourth parts of the total Ahara quantity.  
(पादांश परित्यागतः आहार त्याग विधि)
- Study of Desha Satmya, Deha Satmya
- As per Ayurveda and modern dietetics – signs and symptoms of optimum, under and over nutrition. Balanced Diet Food counselling and Budgeting, Meal planning.

### Rasayana and Vajikarana: (रसायन-वाजीकरण)-

- Nitya Hita Rasayana Ahara Dravya
- Nitya Ahita Ahara Dravya
- Importance of Ahara in Apunarbhava Chikitsa
- Ahara Dravya and their kalpanas which aid in Vajikarana e.g. Dugdha, Masha, Modaka, Rasala etc.

### Modern approach:

#### Concepts in modern dietetics –

- Classification of dietary products as carbohydrates, proteins etc.
- Daily dietary chart.
- Rules and regulations followed during eating.
- Nutrition Education
  - I. Nutrition and Health Status of Community
  - II. Learning and working with Community
  - III. Factors influencing Community nutrition
  - IV. Themes and Messages in Nutrition Education
  - V. Method of Communication in nutrition Education
- Nutrition Programme
- Past and Present Programme – ICDS (Integrated Child Development Services) etc.
- Nutrition Education Programme-  
Planning, Implementation, Evaluation

## Paper II

### Therapeutic Dietetics

(रोगानुसार आहार)

## Part – A

### Ahara as a cause of disease-

1. Ahara Dravyas responsible for Agni dushti, Dosh dushti, Mano dushti, Indriya dushti, Dushya Daurbalyakar, Khavaigunya, Srotodushti, Amotpadaka and Ama Pradoshaja Vikara and Dhatu Pradoshaja Vikar
2. Ahara Kala Diseases – Akala Bhojana – Atitakala Bhojana
3. Avidhi Bhojana – Disease due to not following the code and conduct of food like dwadasha Anna pravicharana
4. Manoabhighatkara bhava and their effect on food intake, Digestion and diseases
5. Nutrition related disorders – Santarpanajanya and Aptarpanajanya Diseases
6. Food born diseases – Diseases due to sankramita, Vishakta, and paryushita Ahara
7. Food, Facts and misconceptions

## Part – B

Chikitsa :

Ahara as Maha Aushadha.

Shadavidhopakrama Anuroopa Ahara (षडविधोपक्रमानुरूप आहार),

Importance of pathyapathya in the treatment of following diseases-

१. प्राणवह स्रोतस – प्रतिश्याय, श्वास, कास, हिक्का, राजयक्ष्मा ।
२. अन्नवह स्रोतस – अम्लपित्त, अजीर्ण, ग्रहणी ।
३. उदकवह स्रोतस – उदर रोग, शोथ ।
४. रसवह स्रोतस – हृद्रोग, ज्वर, पांडु ।
५. रक्तवह स्रोतस – अर्श, कामला, रक्तपित्त, विसर्प ।
६. मांसवह स्रोतस – अर्बुद, ग्रन्थि, अपतर्पणोत्थ विकार-काश्यादि ।
७. मेदोवह स्रोतस – संतर्पणोत्थ विकार – स्थौल्य, प्रमेह ।
८. अस्थिवह स्रोतस – संधिगतवात, वातव्याधि ।
९. मज्जावह स्रोतस – भ्रम ।
१०. शुक्रवह स्रोतस – क्लैब्य, वंध्यत्व, गुह्यरोग ।
११. पुरीषवह स्रोतस – अतिसार, प्रवाहिका ।
१२. मूत्रवह स्रोतस – मूत्रकृच्छ्र ।
१३. स्वेदवह स्रोतस – कुष्ठ ।
१४. मनोवह स्रोतस – उन्माद, अपस्मार, अतत्वाभिनिवेश ।
१५. संज्ञावह स्रोतस – सन्यास, मूर्च्छा, मदात्यय ।

- Guidelines for Dietary causativity (आहार कारणता) and dietary treatment (आहार चिकित्सा) of contemporary prevalent Diseases – e.g. Hypertension, Angina, Diabetes mellitus, Obesity, HIV, Cancer, Liver disorders, Stress, Musculo-skeletal disorders, Arthirits, Polio, Auto immune disorders etc.
- Awastha Sapeksha Pathyapathya, Importance of Ahara before, during and after Shodhana Karma, Shodhana purva Karma and surgical procedures.
- Use of liquids in Chikitsa as Anupana – e.g. Jala (hot, warm and cold), Takra, Dugdha etc., their mode of action and specificity in relation to particular diseases and medicines.
- Conditions where liquids are prohibited in diet e.g. Udararoga, Shotha etc.
- Dietary Regimen according to medicine and Rasayanas.
- Ajirna nashaka Gana (Bhaishajya Ratnavali and yogaratnakara)

## Practicals

1. Selection of Ahara according to the occupation.
2. Selection of Ahara in specific conditions: (a) According to age – Bala (Infants, Preschool, Adolescent) Madhya, Vriddhavastha (Geriatric diet, Menopausal syndrome etc.)  
(b) As per the menstruation cycle-  
(c) In pregnancy (Antenatal, Post natal, for mother and child care etc.)  
(d) In the postpartum period
3. Effect of the changes in the method of Ahara intake in today's era.
4. Case studies – 25 cases. (Planning Dietary regimen for contemporary diseases mentioned in syllabus)

Institutional visits – Regional (One) and national – (one)

## **Reference Books:**

### **Charaka Samhita:**

Sutrasthana: Ca.su 1, Ca. Su.5, Ca. Su.6, Ca. Su.11, Ca. Su.13, Ca. Su.21, Ca. Su.22, Ca. Su.23, Ca. Su.25, Ca. Su.26, Ca. Su.27, Ca. Su.28, Ca. Su.30,  
Vimanashana: Ca. Vi.1, Ca. Vi.2, Ca. Vi.5, Ca. Vi.8,  
Shareerasthana: Ca. Sh.4, Ca. Sh.6  
Chikitsasthana : Ca.Ci.1, Ca.Ci.2, Ca.Ci.15, Ca.Ci.23,

### **Sushruta Samhita:**

Sutrasthana : Su. su. 14, Su. su. 15, Su. su. 21, Su. su. 40, Su. su. 42, Su. su. 45, Su. su. 46,  
Shareerasthana: Su.Sh.1, Su.Sh.4, Su.Sh.9  
Chikitsasthana: Su.Ci.26, Su.Ci.27, Su.Ci.28  
Kalpasthana : Su. Ka.1  
Uttarasthana : Su. Ut.64

### **Astanga Samgraha:**

Sutrasthana: As.Sa.Su.3, As.Sa.Su.4, As.Sa.Su.6, As.Sa.Su.7, As.Sa.Su.8, As.Sa.Su.9, As.Sa.Su.10,

### **Astanga Hridaya:**

Sutrasthana: Ah.Su.2, Ah.Su.3, Ah.Su.5, Ah.Su.6, Ah.Su.7, Ah.Su.8, Ah.Su.9, Ah.Su.10, Ah.Su.11, Ah.Su.13, Ah.Su.14, Ah.Su.18,

Shareerasthana: Ah.Sh.3

Uttarsthana : Ah.Ut. 39, Ah.Ut. 40

Triskandha Kosh – (Especially Hetu and Chikitsa Kosha, by Tialk Ayurveda Vidyapeeth, Pune MS)

Bhava Prakash -

Khemakutuhel – Endra Deva Tripathi.

Yogaratanakar – Sadashiva Sharstri

Chakradutta – Indradeva Tripathi

Siddha Bhaishajya Manimala

Bhojana Kutuhel – Raghunath Bhatta

kaideva Nighantu – Acharya Priyavrat Sharma

Aartha Shastra (Food poisoning)

Nighantu Ratnakara – Panshikar

Pathya Apathya Adhikar - Shivadas