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SYLLABUS OF BNYS COURSE

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xv) Spa Therapy

xvi) Nutrition,Dieteics and Medicinal Herbs

xvii) Diagnostic Methods (I and II) Naturopathy and Conventional Medicine

xviii) Psychology and Basic Psychiatry

xix) Fasting therapy and Dietetics

xx) Obstetrics and Gynecology

xxi) *Yoga* therapy

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xxiii) Physical Medicine and Rehabilitation

xxiv) Clinical Naturopathy & Yoga

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INTRODUCTION

National Institute of Naturopathy (NIN), Pune, revised the BNYS syllabus, with a view of standardizing BNYS syllabi with uniform durations and course contents across the country in 2012.

First year BNYS is of 1 year duration, and consists of pre-clinical subjects and subjects describing Yoga and Naturopathy principles, Anatomy, Physiology, Biochemistry, Philosophy of Naturopathy, Principles of Yoga, Sanskrit and English Communication Skills Second year BNYS is of 1 year duration, and consists of Para-clinical subjects and subjects describing philosophies of Yoga and Naturopathy clinical subjects, Pathology, Microbiology, Community Medicine, *Yoga* Philosophy, and Colour therapy & Magnetotherapy. Third year BNYS is of 1 year duration, and consists of Para-clinical subjects and Yoga and Naturopathy clinical subjects, , Manipulative Therapies, Acupuncture and Acupressure, *Yoga* and its applications, Diagnostic Methods (I and II) Naturopathy and Conventional Medicine, and Fasting therapy. Final year BNYS is of 1-½ years duration, and consists of clinical subjects and Yoga and Naturopathy clinical subjects Nutrition & Dietetics, Obstetrics and Gynecology, *Yoga* therapy, Hydrotherapy and Mud therapy, Physical Medicine and Rehabilitation, , Clinical Naturopathy & Yoga, Forensic Medicine & Toxicology, Hospital Management and Research Methodology and Recent Advances, Psychology and Basic Psychiatry,Physiotherapy

In Section I, goals of BNYS course are given. Section II gives general objectives. Section III gives duration of the course, recommendations regarding attendance, internal assessment, distribution of marks for various subjects in professional examinations and criteria for pass.

SECTION I

1 Goals of BNYS Course

1.1 Recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy;

1.2 Develop the skills in most of the competencies, and training that are required to deliver the Naturopathy and Yoga health care system;

1.3 Become aware of the contemporary advances and developments in the discipline concerned;

1.4 Acquire a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology;

1.5 Become proficient in their profession by developing scientific temper and improve educational experience;

1.6 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 promotive measures/strategies;

1.7 Plan and devise measures in Naturopathy and Yoga for the prevention and rehabilitation of patients suffering from disease and disability ;

1.8 Demonstrate skills in documentation of individual case details as well as morbidity data relevant to the assigned situation;

1.9 Demonstrate empathy and humane approach towards patients and their families and exhibit interpersonal behavior in accordance with the societal norms and expectations;

1.10 Play the assigned role in the implementation of national health programs, effectively and responsibly;

1.11 Organize and supervise the chosen/assigned health care services Demonstrating adequate managerial skills in the clinic/hospital or the field Situation;

1.12 Develop skills as a self-directed learner; recognize continuing educational needs, select and use appropriate learning resources;

1.13 Demonstrate competence in basic concepts of research methodology and epidemiology, and be able to critically analyze relevant published research literature;

1.14 To implement all National health policies ;

1.15 Work towards realization of 'Health for all', as a national goal through naturopathy and yoga;

1.16 To follow the medical ethics and to fulfill thesocial and professional responsibilities as a Naturopathy and Yoga Physician through drugless therapies;

1.17 Be competent in the practice of holistic medicine with expert knowledge and experience in promotive, preventive, curative and rehabilitative aspects of diseases;

1.18 Become proficient in their profession by developingscientific temper and improve educational experience;

2 Institutional Goals

After the medical undergraduate program, the students must:

2.1 Be able to expertly diagnose and manage common diseases and health problems of individuals as well as community, work with the health team as a fully qualified doctor at primary, secondary or tertiary levels, with his/her clinical experience and skills in history, physical examination and relevant investigations;

2.2 Be proficient in promotive, preventive, curative and rehabilitative medicine and therapy for common health issues;

2.3 Be adept in different therapeutic modalities and their administration;

2.4 Develop a humane attitude towards one's clients and understand economic, environmental, social, psychological and cultural factors that influence health;

2.5 Enjoy an urge for self-improvement, directed towards advanced expertise or research in any chosen area of health care;

2.6 Have enough knowledge about implementation of National Health Programs and the basic factors required for the same, which are as follows;

2.6.3 Family Welfare and Maternal and Child Health (MCH);

2.6.4 Sanitation and Water Supply;

2.6.5 Prevention and Control of communicable and non-communicable diseases;

2.6.6 Immunization;

2.6.7 Health education;

2.7 Possess management skills in human resources, materials and resource management in health care delivery;

2.8 Be competent in recognizing community health issues and design, institute curative and preventive measures and evaluate the outcome of these measures, thus working towards resolving these issues;

2.9 Be able to work successfully in a variety of health care settings;

2.10 Develop integrity, responsibility, reliability, dependability and compassion, which are characteristics required for successful professional life;

2.11 Develop leadership and communication skills to work as leading investigator or clinician in health care teams;

SECTION II

1. Objectives of Medical Graduate Training Programme

1.1. To effectively integrate the conventional basic sciences (e.g. human physiology) with the traditional medical systems and to enhance the understanding of their effects and therapeutic potential;

1.2 To provide state of the art learning facilities (e.g. audio visual aids, interactive learning systems) to conceptualize the ancient medical system;

1.3 To run advanced laboratories under each department (basic and clinical sciences) for effective experimental training and research;

1.4 To explore the possibilities of promoting effective integrated medical practice at conventional medical facilities attached to the institute;

1.5 To provide the best possible clinical setting for clinical training and research;

1.6 To prepare every Yoga and Naturopathic physician with an in depth understanding of Basic sciences, superior clinical training and with an outlook for research and development;

SECTION III

1 Course of Study:

The duration of the course shall be 5 ½ years (Five and half years). The course shall include a period of regular study of four and a half (4 ½) years, followed by a compulsory rotatory internship of one year.

The period of regular study shall be divided into four phases – First, Second, Third and Final years of one and half (1- ½) years of the B.N.Y.S. Medical Degree Course respectively.

2 Attendance:

A candidate shall be considered to have satisfied the requirement of attendance for each Part/Phase if he /she attends not less than 75 per cent of the theory and practical classes actually conducted up to the end of the Phase in that subject.

Such a candidate having shortage of attendance shall be required to attend 80 per cent of the theory and practical classes actually held up to the end of the term by repeating that subject of that Part/Phase during a subsequent term.

3 Teaching Hours:

The allotment of time (in number of hours) to teach Theory and to conduct Practical/Clinical and Tutorial /Demonstration, Seminar in each subject shall be:

I YEAR B.N.Y.S. (12 months)

No. of Subjects	**No. of Papers**	**SUBJECTS**	**TOTAL HOURS**
I	01.	Anatomy – I	550hrs
	02.	Anatomy – II	
II	03.	Physiology – I	500hrs
	04	Physiology – II	
III	05.	Biochemistry	300hrs
IV	06.	Philosophy of Naturopathy	325hrs
V	07.	Principles of *Yoga*	400hrs
VI	08.	Sanskrit & English Communication Skills (NE)	100hrs
		Total Hours	**2175hrs**

II YEAR - B.N.Y.S. (12 Months)

No. of Subjects	No. of papers	SUBJECTS	TOTAL HOURS
I	01.	Pathology	300
II	02.	Microbiology	200
III	03.	Community Medicine	250
IV	04.	*Yoga* Philosophy	350
V	05.	Colour Therapy and Magneto biology	200
		Total Hours	**1300**

III YEAR B.N.Y.S. (12 months)

No. of Subjects	No. of Papers	SUBJECTS	TOTAL HOURS
I	01.	Manipulative Therapies	200
II	02.	Acupuncture & Acupressure	200
III	03.	*Yoga*& Its Applications	250
IV	04.	Diagnostic Methods - I (Naturopathy)	200
V	05.	Diagnostic Methods -II (Conventional Medicine)	200
VI	06	Fasting Therapy	200
VII	07.	Spa Therapy (NE)	100
		Total Hours	**1350**

IV YEAR B.N.Y.S. (18 months)

No. of Subjects	No. of Papers	SUBJECTS	TOTAL HOURS
I	01.	Nutrition, Dietetics & Herbs	300
II	02.	Obstetrics & Gynecology	200
III	03.	*Yoga* Therapy	250
IV	04.	Hydrotherapy & Mud Therapy	250
V	05.	Physical Medicine & Rehabilitation (Physiotherapy)	200
VI	06.	Psychology & Basic Psychiatry	200
VII	07.	Clinical Naturopathy & Yoga	200
VIII	08.	Forensic Medicine & Toxicology, Hosp Management, Research Methodology & Recent Advances	300
IX	09.	Spa Management (NE)	100
		Total Hours	**2000**

GRAND TOTAL FOR 4 ½ YEARS IS 6775 hours.

Internship program:

A candidate after passing final B.N.Y.S. Medical Degree Examination shall undergo the compulsory rotatory internship of one year duration, which shall consist of work/duty postings in the following sections/departments for the period specified against them.

S.No.	Department	Duration
1.	Philosophy of *Yoga* and Naturopathy	1 Month
2.	*Yoga* and Mind-Body Medicine	1 Month
3.	Pathology and Microbiology	1 Month
4.	Community Medicine	1 Month
5.	Energy Medicine	1 Month
6.	Manipulative Therapies, Physical Medicine & Rehabilitation	1 Month
7.	Fasting, Dietetics, Nutrition, & Medicinal Herbs	1 Month
8.	Diagnostic Methods	1 Month
9.	Obstetrics & Gynecology	1 Month
10.	Hydrotherapy & Mud Therapy	1 Month
11.	Naturopathic Medicine	1 Month
12.	Allied Health Sciences	1 Month
	TOTAL	**12 Months**

4 Scheme of Examination:

The examination/s shall be held as per the date of Examination notified by the University.

There should be one Internal & One External Examiner for all practical &Viva exams for each subject.A candidate shall register for all the subjects of a term/year, when he/she appears for the first time to the examination of that Part.

4.1 Internal Assessment: Scheme of Examination:

There shall be an internal assessment which follows broadly the principles enunciated by the University in each subject for which 30 per cent of the marks are set apart and these will be added in the final grade in the University examinations. There shall be a minimum of two assignments and two periodical tests in every subjects of each year to assess the progress of the candidate.

If a candidate fails in an Examination, his/her internal assessment shall be assessed again as if he/she is a regular student for the second attempt only.

Theory

Minimum of 3 examinations is recommended. The examination preceding the university examination may be similar to the University Examination. Average marks of the better of the two notified internal examinations should be reduced to the marks allotted for internal assessment for each subject and should be sent to the university.

Practical

A minimum of one clinical test may be conducted at the end of each ward postings in all the clinical subjects.

Assistant professor and above or lecturer with five years of teaching experience can conduct internal assessment examination. Average of best two examination marks should be taken into consideration while calculating the marks of internal assessment.

The internal assessment marks of both theory and practical obtained by the candidates should be sent to the University at least 15 days prior to the commencement of the theory examination.

4.2 University Examination – Subjects And Distribution Of Marks

I YEAR BNYS (12 Months)

S.No	Subject	Theo -ry	Intern-al Assmt	Viva-Voce	Total	Practi-cals	Inter-nal Assmt	Total Marks	Grand Total Marks
01.	Anatomy - I	70	30	30	130	60	10	70	200
02.	Anatomy – II	70	30	30	130	60	10	70	200
03.	Physiology - I	70	30	30	130	60	10	70	200
04.	Physiology – II	70	30	30	130	60	10	70	200
05.	Biochemistry	70	30	30	130	60	10	70	200
06.	Philosophy of Naturopathy	70	30	30	130	60	10	70	200
07.	Principles of *Yoga*	35	15	15	65	30	05	35	100
								Total	**1300**

II YEAR BNYS (12 Months)

S.No	Subject	Theory	Inter-nal Assmt	ViveVoce	Total	Practi-cals	Inter-nal Assmt	Total Marks	Grand Total Mark
01.	Pathology	70	30	30	130	60	10	70	200
02.	Microbiology	70	30	30	130	60	10	70	200
03.	Community Medicine	70	30	30	130	60	10	70	200
04.	*Yoga* Philosophy	70	30	30	130	60	10	70	200
05.	ColourTherapy and Magnetotherapy	70	30	30	130	60	10	70	200
								Total	**1000**

III YEAR BNYS (12 Months)

S.No	Subject	Theo -ry	Inter-nal Assmt	Viva-Voce	Total	Practi-cals	Inter-nal Assmt	Total Marks	Grand Total Mark
01.	Manipulative Therapies	70	30	30	130	60	10	70	200
02.	Acupuncture & Acupressure	70	30	30	130	60	10	70	200
03.	*Yoga*& its Applications	70	30	30	130	60	10	70	200
04.	Fasting Therapy	70	30	30	150	60	10	70	200
05.	DiagnosticMethods - I (Naturopathy)	70	30	30	130	60	10	70	200
06.	Diagnostic Methods – II (Conventional)	70	30	30	130	60	10	70	200
								Total	1200

IV YEAR BNYS (18 Months)

S.No	Subject	Theo -ry	Inter-nal Assmt	Viva-Voce	Total	Practi-cals	Inter-nal Assmt	Total Marks	Grand Total Mark
01.	Nutrition, Dietetics & herbs	70	30	30	130	60	10	70	200
02.	Obstetrics & Gynaecology	70	30	30	130	60	10	70	200
03.	*Yoga* Therapy	70	30	30	130	60	10	70	200
04.	Hydrotherapy & Mud Therapy	70	30	30	130	60	10	70	200
05.	Physical Medicine & Rehabilitation	70	30	30	130	60	10	70	200
07.	Psychology & Basic Psychiatry	70	30	30	130	60	10	70	200
06.	Clinical Naturopathy	70	30	30	130	60	10	70	200
08.	Forensic medicine & Toxicology, Hosp Mngmt, Research Methodology & Recent Advances	70	30	30	130	60	10	70	200
								Total	**1600**

NOTE:

01.
- All question papers shall have 2 Sections – namely Section A (30 Marks) & Section –B (40 Marks).
- Section A will contain Part -1 of 10 Multiple Choice Questions – 1 marks each. And Part2 of 10 very short answers of 2 mark each with no choice provision is allowed in Section A.
- Section B will contain 2 Parts. Part – 1 will have 2 Long Essays of 10 marks each with provision of 2 choice. Part – 2 will have 4 Short Essays of 5 marks each with provision of 2 choices.

02. There should be one Internal & one External examiner for all, practical & viva exams for each subject.

03. All Theory Papers are for 3 hours duration.

4.2 Eligibility for examination:

A candidate who has passed in all the subjects of First B.N.Y.S. Medical Degree examination shall be eligible to be promoted to Second B.N.Y.S. Medical Degree course.

A candidate is eligible for carry over facility only if he/she has appeared for all the subjects of that particular examination.

First year to Second Year – 2 subjects carry over

Second year to Third year - 2 subjects carry over

Third Year to Final year – 2 subject carry over

Completion of the degree should not go beyond 11 years from the date of admission.

4.3 Criteria for Pass

To be eligible for promotion to the II, III & IV years, the candidate has to complete and pass in all the subjects of I, II & III years with an exemption of one subject in each year.

The candidate is declared to have been successful provided he/she secures minimum 40% and above in theory, 50% and above in oral/practical/clinical separately each subjects, but should get 50% in aggregate in all.

4.4 Declaration of Class:

A candidate who passes all the subjects of one examination in the first attempt only be eligible for a class.

No class or rank shall be declared for candidate who does not pass any examination in the first attempt, and such a candidate shall be eligible only for a pass class.

The percentage of marks for declaring pass/Second/First Class and First class with Distinction shall be as follows:

Distinction	Not less than 75 percent of the Aggregate Marks
First class	Not less than 65 percent of the Aggregate Marks
Second class	Not less than 50 percent of the Aggregate Marks
Pass class	Candidate who passes the examination in more than one attempt

Note: - A candidate who passes in all the subjects of any Examination only in first attempt shall be eligible for First class with Distinction /First/Second Class

FIRST YEAR

1. HUMANANATOMY

Course type- Core Course

Course code – BNY 101, BNY 102, BNY 103P

Credits- 4

Objectives

It aims at giving inclusive knowledge of the gross and microscopic structure and development of human body to provide a basis for assessing the correlation of organs and structures and anatomical basis for disease presentations.

Theory

1. General anatomy in brief:
   -basic tissues of body .
   -terminology and nomenclature
2. Elements of anatomy in brief:
   -osteology
   -arthrology
   -myology
   -neurology
3. Regional anatomy:
   -upper limb, lower limb
   -thorax - including diaphrag
   -head, neck -brain and spinal cord in brief
4. Embryology (gen.embryology) inbrief:
   - development of individual organs andsystems
5. Histology:
   - general histology, micro-anatomy of individual organs andsystem.
6. Applied anatomy

Anatomy Paper-1 .

Course content (related regional anatomy, histology, embryology , myology, arthrology & osteology of upper limb, head, neck & brain and microanatomy)

Theory

I. General anatomy:
   Introduction of anatomy, anatomical terms, different branches of anatomy , introduction of bones, its classification, functions,applied

anatomy; joints-types, actions, applied anatomy; cartilage-types, action, applied anatomy, basics of all the tissues and systems of the humanbody
.

II. Osteology :(bones of skull & upperlimb)
Names of the bones and their positions; general features, skull - all normal and interior of skull & mandible.

III. Muscular system :(head & neck and upperlimb)
Origin, insertion, nerve supply and action of the muscles with the applied anatomy and clinical testing.

IV. Arthrology: (head & neck, upperlimb)
General features of different types of joints. Brief study of the following joints of the body with movements.Shoulder, elbow, wrist and other smaller joints of head & neck, upper limb.

V. Head, neck and brain
Head and neck- introduction, scalp, face and lacrimal apparatus, sides of the neck, sub occipital triangle, contents of vertebral canal (brief), meningeal layer, cavernous sinuses and other sinuses in brief, hypophysis cerebri, trigeminal ganglion, middle meningeal artery, contents of the orbit, triangles of the neck, ansa cervicalis, parotid gland, otic ganglion, submandibular gland, sublingual gland, thyroid gland, parathyroid gland, thymus, blood supply of deep structure, cervical ganglion, cervical plexus, styloid apparatus, oral cavity, palate, pharynx, auditory tube, nasal septum, paranasal sinuses, cartilage oflarynx
Parts of nervous system, meninges, ventricles , motor and sensory pathways, cranial nerve, motor and sensory cortex and their blood supply with cross sectional studies in brief morphology of spinal cord. Section of medulla - pyramidal decussation, sensory decussation, upper part of medulla, pons -mid level, midbrain-mid superior colliculus, inferior colliculus, cerebellum-horizontal- mid saggital section, horizontal section at interventicular formation, coronal section at anterior commissure, coronal section at mammillary body. Sensory organs (regionwise)-gross anatomy of eyeball, ear, nose and tongue in brief, blood brainbarrier.

VI. Upper limb
An introduction, breast, clavipectrol fascia, axilla, lumbar triangle, triangle of auscultation, bursa of upper limb, musculotendinouscuff,

intermuscular spaces, cubital fossa, synovial sheath, retinaculum of hand, palmar aponeurosis, spaces of hand, anatomical snuffbox.

Vii. Micro anatomy- 12 general topics, 15 systemic topics (separate list attached)

1. Study of microscopes andartifacts.
2. General histology, study of the basic tissues of the body, functional correlation ofthestructural components of theorgans.
3. Systemic histology of concernedorgans.

Course outcome

After completion of the program, the student must be able to:

1. Illustrate normal human anatomy clinically important inter-relationship and functional anatomy of bodilystructures;
2. Understand histological structures of various tissues and organs and co-relate structure and function in order to understand diseasedstates;
3. Correlate basic structure and connections of the central nervoussystem,
4. Explain developmental basis of variations and abnormalities with respect to sequential development of organs and systems, teratogens, genetic mutations and environmentalhazards.
5. Demonstrate and identify body structures including topography of living body;
6. **AssessmentScheme:**

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

Anatomy Paper – 2

Course content (related regional anatomy, histology, embryology , myology, arthrology & osteology of upper limb, head, neck & brain and microanatomy)

I. Thorax

General introduction

Pericardium, thorax wall, position and parts of the heart, conducting system, blood supply and nerve supply of the heart , names of the blood vessels and their distribution in the body , lungs & pleura-general features, surface markings, broncho pulmonary segments , applied anatomy , mediastinum , diaphragm, oesophagus, thoracic duct.

II. Abdomen and Pelvis

Peritoneum- general disposition - horizontal and vertical , parts relation, blood supply, nerve supply of abdominal organs. Pelvic organs-parts position, relation, blood supply, nerve supply.

III. Lower Limb

Deep fascia-modifications, saphaneous veins, lymph nodes, adductor canal muscles-nerve supply, blood supply, action, joints, arches of foot, joints of lower limb.

IV. Embryology in brief:

Definition of embryology , brief account of male and female, ovary; definition of gamete; sperm, ovum, gametogenesis, migration of primordial germ cells into gonadal ridge; structure of sperms growth of ovarian follicles, ovarian and uterine cycles. Principle of family planning (contraception),in-vitro fertilization (for integrated teaching). Systemic embryology(brief): development of the individual organ of digestive system, genital system, urinary system, respiratory system, cardiovascular system, nervous system, special sensory organs (in brief) endocrine glands and mammary gland. Development abnormalities inbrief.

Course outcome-

After completion of the program, the student must be able to:

1. Illustrate normal human anatomy clinically important inter-relationship and functional anatomy of bodilystructures;
2. Correlate histological structures of various tissues and organs and co- relate structure and function in order to understand diseasedstates;
3. Deduce basic structure and connections of the abdomen, thorax, lowerlimb
4. Describe developmental basis of variations and abnormalities with respect to sequential development of organs and systems, teratogens, genetic mutations and environmentalhazards.
5. Identify gross congenital anomalies and be familiar with the principles of karyotyping;

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

Anatomy Practical

Total time: 32-34 weeks.

Gross anatomy: (dissection / demonstration of following parts of body)

Upper limb: dissection: pectoral, scapular, shoulder, arm, forearm (5 wks
Prosected parts: joints, palm and dorsum of hand.
Thorax: disssection: chest wall, mediastinum, lungs and heart.
Abdomen: dissection: anterior abdominal wall and inguinal region, viscera and posterior abdominalwall.
Pelvis: dissection: pelvic viscera and blood vessels and nerve saggital section (m &f) (2 wks) prosected parts: sole of the foot andjoints.
Head and neck: dissection: scalp, superficial and dissection of face and neck (8 wks to 10 wks). Prosected parts: orbit, eyeball, submandibular region, temporal and infra temporal fossa, cranial cavity, naso and oropharyngeal regions, ear, larynx and pharynx. Cross sections at c-4, c-6 levels.Sagittal section of head and neck.
Nervous system: section of brain and prosected specimens and major functional areas, gross structure of brain and spinal cord and study of gross sections as mentioned earlier (in brief).
Demonstrations:
- bones-as described in osteologysection.
- brain and spinalcord.

Specific skills: students should learn the following skills
1. To localize important pulsations and the structure against which pressure can be applied in case of bleeding & trauma of particularartery.
2. To elicit superficial and deepreflexes.
3. To demonstrate muscle testing and movements atjoints.
4. To locate for: lumbar puncture , sternal puncture , pericardial tapping , and liver biopsy.
5. To locate veins for venouspuncture.
6. To locate the site for emergency such astracheotomy.

Histology

General histology

1. Microscope
2. Cell
3. Epithelial tissue i
4. Epithelial tissue ii
5. Connective tissue-bones andcartilages
6. Musculartissues
7. Nerve tissues (ts & ls of peripheral nerve, sensory & sympathetic ganglion,optic Nerve)

8. Epithelial glands (serous, mucous and mixed salivary gland) 9. Circulatory system (large artery, medium sized artery, largervein)
10. Lymphatic system (lymph nodes, thymus , tonsils ,spleen)
11. Skin &appendages.
12. Placenta & umbilicalcord.

Systemic histology

1. Respiratorysystem.
2. Oesophagus &stomach.
3. Liver , gall bladder ,pancreas.
4. Urinary system i(kidney)
5. Urinary system ii (ureter , bladder ,urethra).
6. Small & largeintestine
7. Reproductivesystem-female
8. Reproductivesystem-male
9. Upper git (lip, tongue)
10. Hypophysis cerebri, thyroid and suprarenal glands.
11. Eye - cornea and retina.

Course Outcome

After completion of the program, the student must be able to:

1. Illustrate histological structures of various tissues and organs and co- relate structure and function in order to understand diseasedstates;
2. Deduce basic structure and connections of the central nervous system, understand the regulation and integration of various organs and systems and be skilled in locating lesion sites according to deficits in diseasedstates;
3. Describe developmental basis of variations and abnormalities with respect to sequential development of organs and systems, teratogens, genetic mutations and environmentalhazards.
4. Identify body structures including topography of livingbody;

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30marks
Practicalinternalassessment	-	10Marks

Text books

1. Text Book Of Anatomy (Vo L-I,Ii,Iii) - ByB.D.Chaurasia
2. Text BookOfAnatomy - ByHamilton

3. Practical Anatomy -By Cunningham
4. Human Embryology - By Inderbir Singh

Reference Books

1. Text Book Of Anatomy - By Gray
2. Atlas Of Histology - By Diforie
3. Atlas Of Histology - By Poddar
4. Text Book Of Human Histology - By Dr. Veena Bharihoke
5. Cannigham's Text Book Of Anatomy - ByCunningham
6. Balley's Text Book Of Histology - ByBalley
7. Medical Embryology - By Langman
5. A Color Atlas Of Human Anatomy - By Mcminn
6. Grant's Method Of Anatomy - By Grant
7. Regional & Applied Anatomy - By R.J.Last

2. PHYSIOLOGY

Course type- Core Course

Course code – BNY 104, BNY 105, BNY 106P

Credits- 4

Objective

The objective of teaching Physiology to undergraduate students is aimed at giving the student comprehensive knowledge of the normal functions of the organ systems of the body to facilitate comprehension of the physiological basis of health and disease.

THEORY
Physiology paper - 1

I. GENERALPHYSIOLOGY

1. Cell structure
2. Sub-cellularunits
3. Cell membranes and theirproperties
4. Transport mechanisms
5. Bioelectrical potentials
6. Body fluids andhomeostasis

II. BLOOD – Physical properties, composition and functions ofblood.

1. Plasma proteins
   a) Normal values
   b) Origin and methods ofseparation
   c) Functions and variations in health anddisease.
2. Bonemarrow
   a) Formed elements
   b) Composition andfunctions
3. Erythrocytes
   a) Morphology and variations in health anddiseases
   b) Development of erythrocytes
   c) Site and stages indevelopment
   d) Necessaryfactors
   e) Regulation of development oferythrocytes
   f) Life-span and fate of erythrocytes
   g) Erythrocytes sedimentation rate (ESR)
4. Haemoglobin
   a) Structure, synthesis, function andmetabolism

b) Types ofhemoglobin

5. Anaemia – Definition andclassification
6. Jaundice – Definition andclassification
   a) Role and function ofspleen
7. Leucocytes
   a) Classification, morphology, development andfunctions
   b) Variation in health anddisease
8. Thrombocytes
   a) Origin, morphology andfunctions
   b) Variation in health anddisease
9. Haemostasis
   a) Mechanism of haemostasis, coagulation ofblood
   b) Fate of clot and disorders ofclotting
10. Anticoagulants
   a) Mechanism of action and clinicalapplications
11. Blood groups
   a) Classification
   b) ABO and RHsystem
   c) Blood transfusion, indication andhazards
12. Lymph and tissuefluids
   a) Lymph and reticularsystem
   b) Fluid compartments and WaterBalance
   c) Principles of immunesystem
   d) Cellular and humoralimmunity

III.- CARDIO-VASCULAR SYSTEM

Historical perspective and organization of cardiovascular system

1. Heart
   a) Structure and properties of cardiacmuscle
   b) Cardiacmetabolism
   c) Enervation of heart, junction tissue ofheart
   d) Regeneration and spread of cardiacimpulse
2. Electrocardiography
   a) Enthovan's Law
   b) Various ECG leads, normal ECG and itsinterpretation
   c) Cardiac arrhythmias and heart block
   d) Cardiacvector
3. Cardiaccycle
   a) Pressure and volume change (mechanicalevents)
   b)Heart sound andstethoscopy
   c) Principle ofecho-cardiography

d) Measurement and regulation of cardiacoutput.

4. Heart sounds
   a) Description, causation and relation to other events in cardiaccycle
   b) Clinical significance of heartsounds
5. Blood pressure
   a) Definition, regulation and factors influencingB.P.
   b) Measurement of bloodpressure
   c) Physiology of haemorrhage andshock
6. Circulation
   a) Blood vessels
   b) Physical principle of blood flow, regulation of bloodflow
   c) Jugular venous pulse tracing, radial pulsetracing
   d) Coronary, cerebral, renal and pulmonarycirculation
   e) Splanchnic, cutaneous and capillarycirculation

IV. RESPIRATORY SYSTEM

Introduction, internal and external respiration, physiological anatomy of respiratory system.

1. Mechanics ofrespiration
   a) Inspiration andexpiration
   b) Role of respiratory muscles and thorasiccage
   c) Pressure and volume change duringrespiration
   d) Work of breathing, lung compliance and its significance in health and diseases.
2. Lung volumes andcapacities
   a) Lung volumes and capacities and theirmeasurements
   b) Respiratory minute volume and maximum voluntaryventilation
3. Alveolar ventilation Composition of atmospheric, inspired, alveolar and expiredair
4. Pulmonarycirculation
   a) Pulmonary circulation, ventilation-perfusionrelationship
   b) Diffusion of gases across pulmonarymembrane
   c) Oxygen uptake, transport anddelivery
   d) Carbon-dioxide uptake, transport anddelivery
5. Organization of the respiratory centers
   a)Nervous and chemical regulation ofrespiration
   b)Classification and characterstics of hypoxia, cyanosis, asphyxia, hypercapnea, hypocapnea, dyspnoea, apnoea and orthopnea and periodicbreathing.
   c)Respiratory aspects of highaltitude
   d) Physiology of acclamatisation andhyperbarrism

e) Respiratory / pulmonary functiontests
f) Non-respiratory functions oflungs
g) Artificial respiration

V DIGESTIVE SYSTEM

1. Introduction, organization and plan of digestivesystem
2. Saliva
   a) Composition, functions, regulation ofsecretion
   b) Methods of study of above aspects ofsaliva
3. Stomach
   a) Functions ofstomach
   b) Composition and functions of gastricjuice
   c) Regulation of secretion and mechanism of HCLsecretion
   d) Gastric emptying time and itsregulation
   e) Methods of study of gastric function and its appliedaspect.
4. Pancreas
   a) Composition and functions of pancreaticjuice
   b) Regulation of pancreaticsecretion
   c) Methods of study of pancreaticsecretion
5. Liver
   a) Function, formation, storage and emptying ofbile
   b) Composition, function and regulation of release ofbile
   c) Entero-hepaticcirculation
   d) Tests for liver functions
6. Small intestine
   a) Succus entericus
   b) Composition, function and mechanism ofsecretions
7. Largeintestine
   a) Functions
8. Gastro-intestinal Hormones
   a) Release and functions
9. Gastro-intestinal movements
   a) Mastication, deglutition andvomiting
   b) Movements of stomach and smallintestines
   c) Movements of large intestine and defecation
   d) Regulation of movements and methods ofstudy
10. Digestion and adsorption of carbohydrates, fats, proteins and vitamins, minerals and water.

COURSE OUTCOME-

After completion of the program, the student will be able to:

1. Illustrate the normal functioning of all the organ systems and their interactions for well co- ordinated bodyfunction;
2. Correlate the relative contribution of each organ system to thehomeostasis;
3. Describe the physiological aspects of normal growth anddevelopment;
4. Analyze the physiological response and adaptations to environmental stresses;
5. Classify physiological principles underlying pathogenesis and disease management.

Assessment Scheme:

Theory – 70Marks
InternalAssessment – 30Marks

PHYSIOLOGY PAPER- 2

VI. EXCRETORY SYSTEM

1. General introduction organs of excretion with special emphasis on evolutionof excretorymechanisms
2. Renal system-functional anatomy and renalcirculation
3. Nephron
   a) Mechanism of urine formation, glomerular filtration, tubular function
   b) Concentration and acidification ofurine
   c) Composition of normal urine, and abnormal constituents ofurine
   d) Renal functiontests
4. Non-excretory functions ofkidney
   a) Physiology of micturition and itsabnormalities
5. Skin-Structure andfunctions

VII. ENDOCRINAL SYSTEM

1. Introduction-hormones, evolutionary back-ground and organization of endocrine controlsystems
2. Methods ofstudy
   a) Classification of hormones and mechanism of hormonalaction
   b) Regulation of hormone secretion and feed-backsystem
3. Hypothalamo- hypophyseal system
   Releasing hormones
4. Activeprinciples
   a) Chemical nature, biosynthesis, role ofaction
   b) Control of secretion , excretion and itsaspect.
   c) Clinical study of their hypo-and hyperfunction

d) Laboratory diagnosis of pituitary (anterior and posterior) gland, thyroid, parathyroid, adrenal cortex and medulla and islets of langerhans.

VIII. REPRODUCTIVE SYSTEM

1. Physiology ofreproduction
   a)Introduction to physiology ofreproduction
   b)Sex determination and sex differentiation and chromosomalstudy
2. Male reproductivesystem
   a) Growth, development and structure oftestes
   b)Gonadotropins and gonadalhormones
   c) Functions of testes and spermatogenesis
   d) Composition of semen
3. Female reproductivesystem
   a) Ovary,gonadotropins
   b) Structure of ovary and corpusluteum
   c) Function of ovary, ovarianhormones
   d) Physiology of menstruation cycle and physiology ofpregnancy
   e) Physiology of placenta, gestation andparturition
   f) Physiological basic of tests for ovulation andpregnancy
4. Physiology oflactation

IX NERVE MUSCLE PHYSIOLOGY

1. Neurons
   a) Morphology and measures ofexcitability
   b) Classification and properties of nervefibers
2. Muscle
   a) Types of muscles and their properties andmorphology
   b) Neuro-muscular junction, excitation-contractioncoupling
   c) Myastheniagravis
   d) Starlings law and its applications

X. CENTRAL NERVOUS SYSTEM

1. Structural and functional organization of central nervoussystem
2. Neuron
   a) Neuroglia, functional types ofneurons
3. Cerebro-spinal fluid
   a) Formation, circulation, functions ofCSF
   b) Methods of collection and clinical significance ofCSF
4. Synapse
   a) Types of synapses and theirstructure
   b) Sympathetic transmission
   c) General properties ofneuro-transmitters

5. Sensory Physiology
   a) Classification and general properties ofreceptors
   b) Sensory modalities andstereognosis
6. Reflexes
   a) Reflex and general properties of reflexes (withexamples)
7. Ascending tracts
   a) Origin, course, termination andfunctions
   b) Specific reference to pain pathway and physiology ofpain
8. Organisaton of motorsystems
   a) Pyramidal and extra-pyramidalsystem
   b) Upper and lower motor neurones and theirlesions
   c) Brown-sequard syndrome
   d) Syringomyelia
9 Cerebellum
   a) Functional anatomy, connections andfunctions
   b) Effects of lesions and tests for cerebellarfunction
10. Basal ganglion
   a) Functional anatomy, connections andfunctions
   b) Diseases of basal ganglion and its clinicalevaluation
11. Vestibular apparatus
   a) Functions anatomy, connections andfunctions
   b) Effects of lesions and theirassessment
   c) Physiology of maintenance and regulation of muscle tone, posture and equilibrium
   d) Decerebrated rigidity and rightingreflexes
12. Thalamus
   a) Functional anatomy, connections andfunctions
   b) Effects of lesions ofthalamus
13. Hypothalamus
   a) Functional anatomy, connections andfunctions
   b) Effects of lesions ofhypothalamus
14. Body temperatureregulation
   a) Normal body temperature, pyrexia andhypothermia
15. Cerebral cortex
   a) Functional anatomy
   b) Methods of study of corticalfunctions
16. Limbicsystem
   a) Functional anatomy, connections andfunctions
   b) EEG, Physiology of sleep andwakefulness
17. Higherfunctions

a) Learning, speech, memory, behaviour andemotions

XI. AUTONOMIC NERVOUSSYSTEM

1. Sympathetic nervoussystem
2. Parasympathetic nervoussystem

XII. SPECIAL SENSE

1. Smell
   a) Physiology of olfaction and olfactorydiscrimination
   b) Olfactory pathway and defects ofolfaction
2. Receptors, primary taste sensation and tastepathway
3. Vision
   a) Functional anatomy of eye, extra and intra-occularmuscles
   b) Errors of refraction and their correction, visualacuity
   c) Physiology of aqueoushumour
   d) Cornea, lens, intraoccular pressure,accommodation
   e) Retina, rhodopsin cycle, dark and light adaptation
   f) Visual pathway and effects of lesions in visualpathways
   g) Field of vision, perimetry, binocularvision
   h) Iris and papillaryreflexes
   i) Colour vision, colour blindness and tests for colourblindness
   j) Formation and circulation of tears, lacrimalglands
4. Hearing
   a) Functional anatomy of ear, function of externalear
   b) Physiological functions of middleear
   c) Impedence matching and tympanicreflex
   d) Functional anatomy of internal ear, cochlea, organ ofcorti
   e) Auditory pathway and auditorycortex
   f) Frequency analysis, sound localization, defects ofhearing
   g) Audiometry, tests for conduction defects,Aphasia

Note : For the purpose of written Theory examination, the syllabus is divided as follows :

Theory Paper-I

Section-A: Consisting of chapters on General physiology, Blood, Cardio-vascular system, Respiratory system and Digestive system.

Theory Paper- II

Section-B: Consisting of chapters on Excretory system, Endocrine system, Reproductive system (male and female), Nerve muscle physiology, Central nervous system, Autonomic nervous system and Specialsenses.

COURSE OUTCOME

After completion of the program, the student will be able to:

1. Explain the normal functioning of all the organ systems and their interactions for well co- ordinated bodyfunction;
2. Correlate the relative contribution of each organ system to thehomeostasis;
3. Describe the physiological aspects of normal growth anddevelopment;
4. Illustrate the physiological response and adaptations to environmental stresses;
5. Analyse physiological principles underlying pathogenesis and disease management.

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

PHYSIOLOGY PRACTICAL

I. HAEMATOLOGY EXPERIMENTS

1. Collection of blood, study of fresh drop of blood, effects of isotonic, hyper tonic and hypo tonic saline onRBCs
2. Enumeration of RBCs (RBScount)
3. Estimation ofhaemoglobin
4. Packed cell volume (PCV) and bloodindices
5. Determination of Erythrocyte sedimentation rate(ESR)
6. Enumeration of WBC (Totalcount)
7. Differential WBC count (Differentialcount)
8. Determination of clotting time and bleedingtime
9. Enumeration of platelets (Plateletcount)

II. HUMAN PHYSIOLOGYEXPERIMENTS

1. Recording of blood pressure in human beings and study the effects of exercise on bloodpressure
2. Electrocardiography(Demonstrations)
3 Clinical examination of CVS and radialpulse
4. Determination of tidal volume, inspiratory reserve volume, expiratory reserve volume, inspiratory capacity, expiratory volume (All experiments are to be arranged fordemonstration)
5. Stethoscopy, normal body temperature and its physiologicalvariation
6. Pulse, respiration and temperature chart withcorrelation
7. Clinical examination of respiratorysystem
8. Plethysmography(Demonstration)
9. Clinical examination ofCNS

a) Motorfunctions
b) Sensoryfunctions
c) Cranial nerves
d) Reflexes superficial anddeep

10. Determination of vital capacity and maximum ventilator volume with spirometry(Demonstration)

Note - The above 10 human physiology experiments are to be conducted with demonstration as a joint venture by physiologists and the clinical faculty, if necessary.

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30marks

Practical internal assessment- 10 Marks

Recommended text books for physiology

1. Text book of Medical physiology by A.C.Guyton
2. Review of Medical physiology by W.F.Ganong
3. Concise text book of Medical physiology by S.K.Choudhary
4. Understanding Medical physiology byBijlani
5. Essentials of Medical Physiology bySembulingam

Reference books

1. Best and Taylor's physiology basis of Medicalpractice
2. Practical physiology byGhai
3. Practical physiology byRanade.

COURSE OUTCOME

After completion of the program, the student will be able to:

1. Conduct experiments designed to study physiologicalphenomena;
2. Interpret experimental/investigative data;
3. Differentiate between normal and abnormal data from results of tests, which he/she has done and observed in thelaboratory.
4. Demonstrate the practicalsefficiently.

3. BIOCHEMISTRY

Course type- Core Course

Course code – BNY 107,

BNY 108P

Credits- 4

Objective:

The objectives of introducing biochemistry to the undergraduate students is to make them understand the scientific basis of the life processes at the molecular level and to orient them towards the application of the knowledge in solving clinical problems.

BIOCHEMISTRY THEORY

1. Introduction and Prospects.
2. Hydrogen ion concentration, acids, bases, buffers, Hendarson - Haselbasch Equation.
3. Principles of calorimetry, Paper chromatography andElectrophoresis.
4. Amino Acids - Classification, structure, properties and side chains of amino acids.
5. Peptides - Biological importance of peptides structure ofInsulin.
6. Proteins - Definition, Biological importance, classification and properties, structure of proteins, coagulation and denaturation ofproteins,
7. Elementary aspects of the structure of collagen, Myoglobin andHemoglobin.
8. Enzymes - Definition, classification, specificity, coenzymes, co-factors and activators diagnostic importance of enzymes andiso-enzymes.
9. Carbohydrates - Definition, classification and biological importance of Monosaccharides-classfication, properties and stereoisomerism, oligosaccharides-importance ofDisaccharides.
10 Polysaccharides - Functions.
11. Lipids - Definition, classification and biologicalimportance.
    1. Simple lipids: Composition of triglycerol,Waxes.
    2. Compound lipids: Functions of fatty acids - Properties of saturated and unsaturated fattyacids.
12. Nucleic acids - Definition, classification, composition and biological importance of nucleic acids, purines and pyrimidine bases."Structure of DNA Structure, function and types of RNA..
13. Vitamins -Definition and classification. Brief account of source, biochemical

function deficiency diseases. Vitamin antagonistHypervitaminosis

14. Minerals - Calcium, Phosphorous, iron, copper, zinc, magnesium, manganese, lead, mercury arsenic and metal toxicity fluorine andiodine.

15. Cell and subcellular structures : Cell membrane, its composition, function of subcellular structures, transport across cell membrane, Active and facilitated diffusion.

16. Metabolism - Digestion and absorption of carbohydrates, lipids, proteins and nucleicacids.

17. Carbohydrate Metabolism- Glycogenesis, glycogenolysis and kreb"s cycle, glycolysis, pyruvate oxidation citric acid cycle, Gluconeogenesis, Metabolism of Fructose and Galactose, regulation of metabolic pathways, disorders of carbohydrate metabolism, regulation of blood sugar, glucose tolerance test, diabetes mellitus.

18. Biological oxidation - Oxidativephosphorylation.

19. Lipid Metabolism -Lipogenesis, synthesis of fatty acids, de-saturation, Phospholipids, Bio-synthesis of lecithine, Cephalin and utilisation of Ketone bodies, Ketosis, synthesis and utilisation of ketone bodies, Ketosis,synthesis and breakdown of cholesterol, disorders of lipid metabolism, outlines and formation and functions of prostaglandins and leucotrienes, fatty liver and lipotropicfactors.

20. Metabolism of proteins and amino acids - Breakdown of tissue proteins, amino acids pool, general metabolism of amino acids, disposal of ammonia, urea cycle formation of glutamate and glutamine,disorders of amino acidmetabolism.

21. Purine and Pyrimidine metabolism-Outline of synthesis and breakdown of purine and pyrimidine, Disorders of metabolism of purine andpyrimidine.

22. Biochemical genetics and protein synthesis - Replication, transcription, reverse transcription viruses, oncogenes, post transcriptionmodification.

23. Biochemistry of blood - Outline of synthesis and degradation of heme, Function of Haemoglobin, abnormal haemoglobin, Jaundice , importance , functions and separation of plasma proteins, Functions of immunoglobulins , regulation of PH of blood, role of kidney and lungs in maintaining PH of blood, acidosis and Alkalosis.

24. Liver function - Liver Function tests, Detoxificationmechanisms.

25. Kidney Function Tests - Composition of Urine, Urea clearance and creatinine clearance.

26. Energy metabolism (BMR) - Basal metabolic rate and its importance, calorific values of blood, unbalanced diet, protein energy malnutrition (PEM) , Essential fatty acids , dietary habits and diseases, biochemistry ofstarvation.

27. Electrolytes and watermetabolism

COURSE OUTCOME-

After completion of the course, the student shall be able to:

1. Explain the molecular and functional organization of a cell and list its sub cellularcomponents;
2. Correlate the fundamental aspects of enzymology and clinical application wherein regulation of enzymatic activity isaltered;
3. Illustrate digestion and assimilation of nutrients and consequences of malnutrition;
4. Explain biochemical basis of inherited disorders with their associated sequelae;
5. Describe mechanisms involved in maintenance of body fluid and pH homeostasis;
6. Analyse the molecular mechanisms of gene expression and regulation, the principles of genetic engineering and their application inmedicine

Assessment Scheme:

Theory – 70Marks
InternalAssessment – 30Marks

<u>Biochemistry Practicals</u>
SECTION – I

1. Indicators

2. Reactions of monosaccharides - Glucose andfructose
3. Reactions of disaccharides - Lactose, Maltose andSucrose
4. Reactions of polysaccharides - Starch anddextrin
5. Reactions of Proteins - albumin, casein,gelatin
6. Coagulation and Precipitation and reactions of Proteins.
7. Reactions of Non Protein Nitrogen (NPN) - Urea, Uric acid andcreatinine.
8. Analysis of Milk
9. Normal Constituents ofurine
10. Analysis of abnormalurine.

SECTION –II

1. Determination of a. Blood Sugar b. Blood urea c. Total serum protein d. Total serum calcium e. Total serum cholesterol f. Total serumbillirubin
2. Determinationof
   a. Sugar inCSF
   b. Proteins isCSF
   c. Chlorides inCSF
3. Determination of albumin and urea inurine
4. Determination of SGOT andSGPT
5. Demonstration of principlesof
   a. Calorimetry andcalorimeter
   b. Paperchromatography
   c. Electrophoresis
   d. Glucose Tolerance Test(GTT)
   e. Flamephotometry.

COURSE OUTCOME

At the end of the course, the student will be able to:

1. Demonstrate conventional techniques/instruments to perform biochemical analysis relevant to clinical screening anddiagnosis;
2. Analyse and interpret investigativedata;
3. Demonstrate the skills of solving scientific and clinical problems and decision making.
4. The integrated knowledge of biochemistry will help the students to integrate molecular events with the structure and function of the human body in health and disease.

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30marks
Practicalinternalassessment	-	10Marks

Note:

1. Section - I of practicals shall be conducted by students in biochemistry laboratory.
2. Section - II of practicals shall be conducted by teaching staff as a part of demonstration/ seminar in the laboratory.

RecommendedTextbooks For Biochemistry

1.Text bookofBiochemistry -By Ramkrishna, Prasanna andRajan
2. Biochemistry for medical students - By DebajyothiDas.
3. Text bookofBiochemistry -By Rama Rao.
4.Text BookofBiochemistry -By Sathyanarayan.

ReferenceBook

1. Harper‟sreviewofphysiologicalchemistry - ByHarper
2. Text BookofBiochemistry - By Lubert Stryer
3. Biochemistry - By AlbertLehninger.
4. Text bookofBiochemistry - By West & Todd
5. Laboratory manualofBiochemistry - By Pattabhiraman &Acharya
6. Laboratory manualofBiochemistry - By Rajgopal &Ramkrishanan

4.PHILOSOPHY OF NATURE CURE

Course type- Core Course

Course code – BNY 109, BNY110 ,BNY111P

Credits- 11

Objectives:

The objectives of introducing philosophy of Naturopathy to the undergraduate students is to make them understand philosophical basis of the system of Naturopathy, including concepts of health, causes and pathogenesis of disease and brief introduction to the various therapeutic modalities used inNaturopathy.

THEORY
PNC PAPER -1

1. The evolution of the human body.
2. Philosophy of the body , mind , soul , life , spirit and spiritual body.
3. (a) Composition of the human body, according to Ayurveda, Naturopathy, Yoga, Modern Medicine &Homeopathy.
   (b) History and Fundamental (Basic) principles of Naturopathy . 4. Comparative study of the Naturopathy with other systems of Medicine. 5.Ayurvedic Approach Towards Naturopathy.
6. Philosophy of Indian Naturopaths
   - Vegiraj Krishnamraju
   - Vinoba Bhave.
   - Mahatma Gandhi.
   - Dr. S.J.Singh
   - Dr.J.M.Jussawala
   - Dr. Vittal Das Modi
   - Dr.B.Venkat Rao
   - Dr. Dinsha K.Mehta
   - Dr.KulranjanMukherjee
   - Dr. K. LaxmanSharma

7 . Philosophy of Foreign Naturopaths

1. Aesculapius
2. The School ofSalerno.
3. Vincent Priessnitz.
4. ArnoldRickli.
5. AdolfJust.
6. SigmundFreud.
7. BernarrMacfadden
8. ArnoldEhret
9. Herbert M. Shelton
10. Benedict Lust
11. Hippocrates
12. Paracelsus
13. Sebastian Kneipp.
14. Louis Kuhne.
15. John H.Tilden.
16. Henry Lindlahr.
17. Bernard Jenson
18. Edwin Babbit
19. J.H. Kellog M.D.

8. Laws of Nature:
   - Pancha MahaBhutas.
   - Shareera Dharmas - Ahara, Nidra, Bhaya, Maithuna.
   - Inflammation and its differentstages.
   - Natural rejuvenations.
   - Violations of Laws of Nature resulting indiseases
   - Dictum of Cure i) Remove the root cause ii) Eliminate the toxin iii) Supplement of the vital Nutrients iv) Conservation of the vital energy or nerveenergy.
9. Catechism of NatureCure
10. Swasthya Vritam:
    a.Dinacharya. b.Ratricharya.
    c.Ritucharya. d.Vegadharanam
11. Unity of disease, unity of cure and way of treatment. 12. How NatureCures?
13. Foreign matter and Toxins accumulation in the body and its importance in elimination through different ways of channels. (Toxemia / Foreign Matter Theory).
14. How to acquire Natural immunity indiseases
15. Difference between functional and organicdiseases.
16. Materia Hygienica
    a) Importance of Physical & MentalHygiene
    b) Revolution & Evolution ofHygiene
    c) Hygiene not acure
    d) Hygienic care of the sick

e) Applications of Hygiene
f) Medicine & the Hygiene contrasted
g) Women & Hygiene
h) Hygienists
i) Future ofHygiene

17. The Philosophy of Life:-
    a) The Primordial Requisites of Life (Basic Needs ofLiving)
    b) The Laws oflife.
    c) Mystery oflife
    d) Life"sEngineering
    e) Safeguards oflife.
    f) How long can we live (Increase of average length of life), Are You Shortening Your Life? Why LiveLong?
18. The Philosophy ofHealth
    a) Health Standards
    b) Health & its Conditions
    c) Ancient Man Was Healthier Than WeAre.
    d) Positive Habits
    e) Vital Economy
    f) Divine science ofHealth.
    g) Nine Doctors at yourCommand.
    h) Health Destroyer (Tea, Coffee, Salt, Sugar, Tobacco Chewing,Smoking, Alcohol, Non-Veg(Animal Food), Excess Fat & Oil, Negative Thinking & attitudeetc.)
    i) The Secret of Health - Storing Energy &Enzymes
    j) Internal Symbiosis
    k) Your Body: Do- it Yourself RepairShop
19. The Philosophy of Disease in Nature Cure:
    a) The Essential Nature of Disease
    b) The Occasions for Disease
    c) The Suppression of Disease
    d) Is Disease Friend or Foe?
    e) The Rationale of Fever
    f) Disease has ManyFaces
    g) You under the Doctor"sEye
    h) Fallacy of Diagnosis
    i) Iatrogenic Diseases
    j) Physiological Compensation.
20. The Cure Core In Nature Cure:-
    a) Living Matter CuresItself.
    b) Reform Vs.Cure

c) The Delusion ofCure
d) To Cure The Incurable.
e) Rest Cure

COURSE OUTCOME-

After completion of the course, the student shall be able to:

1. Illustrate the history of Naturopathy including major contributors to the field and their work;
2. Correlate the evolution and composition of the human body according to different schools of medicine such as Naturopathy, *Yoga*, *Ayurveda*, Homeopathy, Modern Medicine,etc.
3. Concepts of health and disease according toNaturopathy
4. Classify and Correlate Ten basic principles ofNaturopathy
5. Describe Foreign matter, toxin accumulation, theory of Toxemia, Unity of disease and Unity ofCure.

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

PNC PAPER –II

1. Properties of Water, Mud, Air and Sunlight.
2. Health is positive and disease is Negative.
3. Basic concepts in Nutrition and balanceddiet.
4. Role of diet in nature cure and yoga(Satvic, Tamsic,Rajsic)
5. Outlines on a) Regular Habits for health b) Rest and Relaxation c) Live Food- Natural Raw diet d) Fasting e)Exercises.
6. Fundamentals ofAyurveda
7. Fundamental of Siddha
8. Fundamentals ofHomeopathy
9. Fundamentals of Unani
10. Fundamentals ofAllopathy
11. The Diagnostic Procedures in Naturopathy & their Diagnostic Values:
    a. Facial Diagnosis- The Science Of FacialExpression
    b. Iridiagnosis
    c. Chromo-Diagnosis
    d. Spinal Analysis.
    e. Arogya-Rakshaka Panchatantras and Their Importance InRestoration ,MaintenanceOf Health And Prevention OfDiseases.
12. Treatment Modalities in Nature Cure (in brief):
    a. A) Enema - Colon Flushing
        i. B) Colon Hydrotherapy.Hydrotherapy:
    b. Hydrotherapy:
    j) Hip Bath
        i. Spinal Bath
        ii. Spinal Spray
        iii. FootBath
        iv. ArmBath
        v. Contrast Arm & FootBath
        vi. SteamBath
        vii. SaunaBath
        viii. Packs
        ix. Full Wet SheetPack
        x. Jacuzzi
        xi. SitzBath
        xii. Full ImmersionBath
        xiii. Under WaterMassage
        xiv. Douches
        xv. Cold Circular JetBath

xvi. Whirlpool Bath
xvii. Gastro Hepatic Pack
xviii. KidneyPack
xix. Oxygen Bath

c. Mud Therapy: i)MudPacks ii) MudBath.
d. Chromotherapy:- ColourTreatment
   i. Heat, Light, Ultra-violet and Infra redrays
   ii. Chromothermolium.
   iii. Heliotherapy
   iv. Sun Bath
   v. Athapa-Snana(Banana LeafBath)

e. Air-therapy
   i)Air Bath ii)OzoneBath H)Magnetotherapy
f. MassageTherapy
g. AromaTherapy
h. Chiropractice
i. Osteopathy
j. Physiotherapy
k. Nutrition & Dietetics.

13.Crises and their Management.
14.Sleep - Repose.
15.Toxins and anti-toxins, their generation & mitigation in nature cure way.
16.Vaccinations and inoculation, their ill effects on the human mind and body.
17.Old age problems and natural rejuvenation.
18.Family planning by Natural therapeutics.

COURSE OUTCOME-

After completion of the course, the student shall be able to:

1. Explain the history of Naturopathy including major contributors to the field and their work;
2. Correlate the evolution and composition of the human body according to different schools of medicine such as Naturopathy, *Yoga*, *Ayurveda*, Homeopathy, Modern Medicine,etc.
3. Analyse naturopathic viewpoints of concepts like hygiene, vaccination, family planning, personal life and prevention of diseases, geriatrics, etc, and implement them in his/herpractice
4. Analyse Principles behind using the diagnostic procedures of Naturopathy, like spinal diagnosis, facial diagnosis, iris diagnosis, and chromodiagnosis.
5. Demonstrate knowledge of recent advances and research in Naturopathy principles/theories.

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

PNC PRACTICALS

a. Students should be introduced to various treatment procedures used in Naturopathy.
b. Students should have knowledge of giving varioustreatments.
c. Demonstration of :a) Natural Diet (Live food). b) Satvic boiled diet. c) Way of serving & various specialdiets.
d. Practicals withrecord.v. Visiting to various nature cure clinics/ hospitals.

COURSE OUTCOME-

After completion of the course, the student shall be able to:

1. Understand Principles behind using the diagnostic procedures of Naturopathy, like spinal diagnosis, facial diagnosis, iris diagnosis, and chromo diagnosis.
2. Demonstrate knowledge of recent advances and research in Naturopathy principles/theories.
3. Demonstrate basic knowledge of the various therapeutic modalities utilised in Naturopathy;
4. Describe the various principles of Naturopathy with respect to the body, health, disease and therapy, diagnosis andmanagement

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30 marks
Practicalinternalassessment	-	10Marks

Text Books—

1. Philosophy ofNatureCure - By HenryLindlahr.
2. Practice ofNatureCure - By HenryLindlahr.
3. Human cultureandCure - By Dr. E.D.Babbit
4. PracticalNatureCure - By Dr. K.Laxman Sharma.
5. History and Philosophy ofNatureCure - BY S.J.Singh

6. MyNature Cure - By M.K.Gandhi
7. Natural health care- Ato Z - By BelindaGram
8. Introduction toNaturalHygiene - By Herbert M.Shelton
9. A Complete Hand book ofNatureCure - By H.K.Bakhru
10. Nature Cure - a wayoflife - By S.R.Jindal
11. The cure of advance cancer by Diet Therapy - Dr. Max GersonM.D.
12. Toxemia - J.H.Tilden
13. (i) Dainandin rogo kiPrakartikChikitsa - Dr. Kulranjan Mukherjee
(ii) Purane rogo kiGrahChikitsa - Dr. Kulranjan Mukherjee
(iii) Stri rogo kiGrahChikitsa - Dr. Kulranjan Mukherjee
(iv) Shishu rogo kiGrahChikitsa - Dr. Kulranjan Mukherjee
(v) AbhinavPrakartikChikitsa - Dr. Kulranjan Mukherjee
(vi) Khadya kinayiVidhi - Dr. Kulranjan Mukherjee
14. (i) Swasthya keliyeBhojan - Dr. BhojrajChhabaria
(ii) BinadavaTandurusti - Dr. BhojrajChhabaria
(iii) SwasthyaavamSudaulata - Dr. BhojrajChhabaria
15. How toget well - Dr. PaavoAirola
16. The Encyclopedia of health &PhysicalCulture - Dr. BernarrMacfadden
17. Mywater cure -Father Sebastian Kneipp
18. The New ScienceofHealing - LouisKuhne
19. Returnto Nature - AdolfJust
20. DietReformSimplified - Dr. StanleyLief
21. RationalFasting - Dr. ArnoldEhret
22. The Human Cultureand Cure - Edwin Babbit
23. Rogo kiAchookChikitsa - Dr. Janaki Sharan Verma
24. The GreatestHealthDiscovery - American Natural HygieneSociety
25. The History ofNaturalHygiene - HerewardCarrington.
26.Principles ofNaturalHygiene -HerbertM.Shelton
26. HealthForAll -H.M.Shelton
27. IntegratedHealingArts - Dr.J.M.Jussawala

28. PrakratikChikitsaSagar - Dr. Gaurishankar Mishra
29. Speaking of Nature Cure - K.Laxmana Sharma &S.Swaminathan
30. Human Life-its Philosophy&Laws - Herbert M.Shelton
31. How to Get Rid of The Poisons inYourBody - Gary Null & Steven Null
32. Let"sGetWell -Adelle Davis
33. Be yourOwnDoctor -Ann Wigmore

ReferenceBooks

1. My Nature Cure orPracticalNaturopathy - By S.J.Singh
2. The Science offacialexpression - By LouisKuhne
3. The Story of my experimentwithtruth - BY M.K.Gandhi
4. Ayurveda for health andlonglife - By Dr. R.K.Garde
5. Everybody"sguidetoNature Cure -BYHarryBenjamin
6. Prayer - By M.K.Gandhi
7. Diet andDietReforms - By M.K.Gandhi
8. Panchatantra - By VenkatRao
9. A. Nature Cure B. Healingfromwithin -By J.M.Jussawala
10. Miracleoffasting - By Dr. PaavoAirola
11. Raweating - By Aterhov & ByHira Lal
12. Vitality fasting&Nutrition - ByHereward Carrington
13. DeathDeferred -By HerewardCarrington
14. Natural NutritionofMan -By HerewardCarrington
15. Mucousless diethealingSystem - By ArnoldEhret
16. Natural Hygiene - Pristine wayoflife - By Herbert M.Shelton
17. Better Sightwithoutglasses - By HarryBenjamin
18. Swasthavrittavijyana - By R.H.Singh
19. FundamentalsofAyurveda - By K.N.Udupa
20. ArogyaPrakasha - By Ramnarayana Vaidya
21. ChikitsaTatvaDipika - By VaidyaMahaveer Prasad Pandey
22. PadarthVijanam - By Ram PrakashPathak
23. Gem ofSiddhaMedicine -By Dr. RamMurthy
24. Living life to LiveitLonger - By HerbertM.Shelton
25. Eating for Health with EmphasisonEconomy -ByL.Ramachandran
26. Hand BookofNaturopathy - By SukhbirSingh

27. Healing ThroughNaturalFoods - By H. K.Bakhru
28. TheHumanBody:Nature‟sAmazingCreation-ByDr.M.M.Bhamgara.

5. YOGA PRACTICES

Course type- Core Course

Course code – BNY 112, BNY 113P

Credits- 8

Objective:

The objective of teaching *Yoga* to undergraduate students is to familiarize them with basic principles of *Yoga* with respect to history, definitions, philosophy and practices of *Yoga*, with emphasis of *AshtangaYoga*.

THEORY

1. Different definition of yoga, its philosophy &origin.
2. Fundamental outlines of Astanga Yoga.
   a) Yama
   b) Niyama
   c) Asanas : Shirshasana, Vajrasana, Supta Vajrasana Paschimottanasana, Baddha Padmasana, Trikonasana , Ardhakati and Kati Chakrasana, Padahastasana,shavasana,
   d) Pranayama-Suryabhedana, Ujjayi, Bhastrika, Sheetkari, Sheetali, Bhramari, Murcha,Plavini.
   e) Prathyahara
   f) Dharana
   g) Dhyana
   h) Samadhi
3. Kriyas

i) Neti	Jal
	Sutra
	Ghrita
ii) Dhouti	Vamana
	Vastra
	Danda
iii) Nauli	Madhya
	Dakshina & Vama
iv) Trataka	Bindu
	Jyoti
v) Kapalabhati	

4. Rules & regulations to be followed for practising asanas, difference between exercise and asanas.
5. The life sketches, philosophy of Socrates, Plato, Aristotle, Adisankaracharya, Ramanujan, Maharshi Dayananda Saraswati, Ramakrishna Paramahansa, Swami Vivekananda, Swami Kuvalyanada, Ramana Maharshi, A.C. Bhakti vedanta Prabhupada, Jiddu Krishna Murthy, Shirdi Saibaba, Buddha, Mahavir, Shri Aurabindo, Sant Hirdaram Sahibji, Swami Lilashah, SantKanwarram

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

1. Explain the various definitions of *Yoga*, history of *Yoga* and branchesof *Yoga* ;
2. Describe kinds of*Yogasanas*, its importance, methods, rules, regulations and limitations;
3. Illustrate the various limbs of*AshtangaYoga*;

Assessment Scheme:

Theory – 50Marks
InternalAssessment – 15Marks

Yoga Practicals

Asanas
Kriyas
Pranayama
Dharana
Dhyana-Meditation
Practicals with records.

ASANAS

A. Standing Postures

1. Tadasana
2. ArdhakatiChakrasana
3. Padahastasana
4. Ardha Chakrasana,,
5. Kati Chakrasana
6. Trikonsana

B. SupinePostures

1. Shavasana
2. Matsyasana
3. Sarvangasana
4. Halasana
5. Chakrasana
6. Pavanmuktasana.

C. PronePostures

1. Makarasana
2. Bhujangasana
3. ArdhaShalabhasana
4. Shalabhasana
5. Dhanurasana

D. Sitting Postures

1. Vakrasana
2. Ardhamatsyendrasana
3. Paschimottanasana
4. Ustrasana
5. Vajrasana
6. Padmasana
7. BaddhaPadmasana
8. Supta Vajrasana

Pranayama

1. Kapalbhati
2. Bhastrika
3. Sheetakari

4. Sheetali

5. AnulomaViloma

6. Ujjayi

7. Bhramari

8. Plavani

Kriyas

1. Neti - Jala -Sutra

2. Dhouti -Vaman

3. Nauli - Dakshina -Madhya

4. Trataka -Jyoti

5. Kapalbhati

COURSE OUTCOME

`After the completion of the course, the student shall be able to:

1. Demonstrate knowledge of *pranayamas*, *prana* and lifestyle, breathing and lifespan.
2. Demonstrate various types of *Yogasanas* in their correct method of performance;
3. Demonstrate different*pranayamas*.
4. Explain about the definitions, origin, branches of*Yoga*.

ASSESSMENT SCORE
PRACTICAL SCORE- 20
INTERNAL ASSESSMENT - 15

Reference Books

1. SukshmaVyayama - Swami DhirendraBrahmachari
2. Basis and definitions of Yoga -VivekanandaKendra
3. RajaYoga -SwamiVivekananda.
4. Asanas -SwamiKuvalyananda.
5. Glimpses ofDivineLight - S.K.Das.
6. The GospelofBuddha - Parul Caruso
7. The Gospel of Sri Ramakrishna -MahendranathaGupta
8. Complete works of sri Aurobindo -SriAurobindo
9. Asanas, Pranayama, Mudras & Bandhas - Swami SatyanandaSaraswati,

10.Yoga inDailylife - Dr. A.U.Rahman
11. Yoga- The science of Holistic living -VKSyoga
12. YogasanaVigyan -Swami DhirendraBrahmachari

6.SANSKRIT

Course Type – Ability Enhancement Course (NON EXAM)

Course Code- BNY114
Credits: 1

Objective:
The objective of teaching *Sanskrit* to undergraduate students is to provide a comprehensive knowledge of *Sanskrit* in order to be able to study, understand, comprehend and utilise the knowledge contained in Indian traditional texts in their professional practice, **especially in the field of *Yoga***.

Theory

Basic Orientation

Knowledge of Devanagari script - alphabet, i.e. vowels, consonant vowel combination, two consonant combinations, special conjunct consonants and their pronunciation associated with their articulation.

Chapter 1

Verb roots, nine forms for three persons and three numbers; practice all the verb roots and their forms for correct pronunciation; usage of prefixes and how they change the meaning of the verb root and how to find them in the dictionary.

Chapter 2

Noun, masculine and neuter genders; 8 cases and their possible meanings; 24 forms of a noun and its declensions; practice of other similar declensions and usage of the 24 forms of a noun.Introduction to write a sentence; syntax, prepositionsandtheirdefiniterequirementsofcases;rulehow„ra/sha‟‟changes dental„n‟‟tocerebral„N‟‟andits exceptionsforthisrule;repeatdeclensionsfor pronunciation.

Chapter 3

Noun- feminine gender; both ā ending and i-ending and practice of similar declensions. Practice of writing sentences with words mainly in feminine gender; exercises mainly for the feminine gender illustration; special declensions where dental „n‟ changes to cerebral „N‟; repeat all feminine noun declensions.

Chapter 4

Madhurashtakam illustrating all the three genders of nouns and study of the adjectives, having all the three genders and changing according to the gender of different qualified nouns; Midterm examination.

Chapter 5

Ex 32-38 ; models of declensions; how to recognize a gender or find the gender using the dictionary and write declensions of new words according to their models of declensions, while applying the rule changing dental „n‟ to cerebral „N‟; making simple sentences for all the words given there; repeat vowel-ending model declensions.

Chapter 6

Exercises for appropriate use of the cases; irregular verbs; absence of verb root "to have" in Sanskrit; where to *om*it root „AS‟ (to be), use of certain special verbs; repeat model declensions.

Chapter 7

Pronouns: Introduction to pronouns; declensions of pronouns; corresponding translations of pronouns into English; forming sentences with pronouns; Different aspects of pronouns being used as demonstrative pronouns and as interrogative pronouns and details of distance specification.

Chapter 8

Sandhi explanation; three major kinds of Sandhi: Vowel-Sandhi, Visarga-Sandhi and Consonant- Sandhi, and fifteen exercises.

Parasmaipadi (P) and *Atmanepadi* (A) forms of verbs;
Verb and ten *Ganas*; how to find the *Gana* using the *Apte* Samskrta - English Dictionary

Verb and ten *Lakaras*; mastering five *Lakāras* of both *Parasmaipadi* and *Atmanepadi* and doing the pertaining exercises for that.

Chapter 9

Vaidhyakeeyasubhashitasahityam:

Ragarogya vijnanam
Vyayama vijnanam

Pranayama vijnanam
Madhyagunadosha vijnanam.

Text Books:

Dr. Sarasvati Mohan, Samskrta Level-2, Samskrta Academy
Dr. Sarasvati Mohan, Samskrta-English-Samskrta Dictionary, Samskrta Academy.
Dr. Sarasvati Mohan, Samskrta Level-3, Samskrta Academy
Vaman Sivaram Apte, Samskrta-English Dictionary, Samskrita Academy

Reference Books:

Samskrtabhasadipika, Sri Surasaraswati Sabha (R) Sringeri, Bangalore, 2003.

7.EnglishCommunication
Course Type – Ability Enhancement Course, Course Code - AECC 1
Credits: 1 (NON EXAM)

Objective

The purpose of commencing English communication skills course is to develop in students fundamental communication skills being integral to personal, social and professional interactions. One of the significant associations among human beings is the ability to share thoughts, emotions and ideas through various means of communication: both verbal and non-verbal. The present course hopes to address most of these aspects through an interactive approach of teaching learning process; focusing on various dimensions of communication skills. The course also focuses on enhancing the ability to handle casual and formed satiations in terms of personal and intellectual grooming.

SYLLABUS

Module 01 – Self Introduction

- Introducing self
- Speaking aboutachievements
- Voicing future aspects

Module 02 – Non verbal Communication

- BodyLanguage
- Paralanguageskills

Module 03 – Manners and Etiquettes

- Personalgrooming
- Dress code
- Telephoneetiquettes
- Intellectualgrooming

Module 04 – Conversation in Real life situations

- Meetingpeople,
- Traveling
- Visiting Places
- Shopping

Module 05 – Public Speaking skills

- Extempore
- Role Play
- Group Discussion

Module 06 – Basic Computer Skills

- Compuetrs, Hardware & Software
- Internet,Emails and Search Engine
- MS Office
- Using Internet for Medical Research

Module 07 – Practical Assessment

- Presentations

COURSE OUTCOMES:

1. Projecting the firstimpression
2. Use simple forms of polite expressions to establish basic social contact and to perform everyday functions including making requests and offers, conducting simple phone conversations, asking and telling time, giving simple directions, asking about price, ordering a meal, etc.
3. Students learn to use general, social and professionallanguage.
4. Polishing manners to behave appropriately in social and professional circles.
5. Handling difficulty situations with grace style andprofessionalism.

Books Recommended:

1. An introduction to Professional English and Soft Skills by B. K. Das et al., Cambridge UniversityPress
2. Technical Communication: Principles and Practice, Second Edition by Meenakshi Raman and Sangeeta Sharma, OxfordPublications.
3. Effective Technical Communication by M Ashraf Rizvi, The McGraw-Hill companies.
4. Understanding Body Language by AlanPease.
5. Communicative Grammar of English by Geoffrey Leech and IanSvartik.
6. Better English Pronunciation byJ.D.O‟Connor.
7. English Grammar by Wren and Martin.
8. Strengthen Your English, M. Bhaskaran and D. Horsburgh, Oxford University Press, Delhi1973

SECOND YEAR
1.PATHOLOGY

Course type- Core Course

Course code–BNY 201, BNY202P

Credits- 4

Objective :

The objective of teaching pathology to undergraduate students is to provide a comprehensive knowledge of the mechanisms and causes of disease, so that he/she is able to comprehend fully the natural history and clinical manifestations ofdisease.

THEORY

General Pathology

1. History and Scope ofPathology
   a) Definition and various branches in Pathology.
   b) Scientific study of disease and methodology.
2. The cell and the reaction of cell, tissue and organ to injury.
   a) Structure of cell and itsfunction.
   b) Causes and nature of cell injury.
3. Reaction of cell to Injuriousagents.
   a) Lethal injury- Necrosis andgangrene.
   b) Cloudyswelling.
   i) Fatty changes in Liver, heart and kidney.
   ii) Glycogen infiltration and hyalinedegeneration.
   iv) Lipoiddegeneration.
   v) Mucoiddegeneration.
   c) Pathological Calcification
4. Inflammation and Repair:
   a) Definition, Classification andnomenclature.
   b) AcuteInflammation.
   Vascular and cellular phenomenon, cell of exudate chemical mediators and tissue changes in acute inflammation Cardinal signs of acute inflamation, Fat, types and systemic effects of acute Inflammation.
5. Chronic Inflammation :
   a) Difference between acute and chronicinflamation.
   b) Definition of Granuloma.
6. Wound healing:
   a) Regeneration andRepair.

b) Repair of epithelial and mesenchymaltissue.
c) Primary union and secondaryunion.
d) Mechanism involved and factors modifying repairprocess.

7. Gangrene - Causes, Dry Gangrene, Moist gangrene, Gasgangrene
8. Granulomas:
   a) Classification ofgranulomas.
   b) Tuberculosis- Genesis and fate of tubercle, primary and secondary tuberculosis.
   c) Definition, Classification and Pathology of Leprosy.
   d) Acquired, Primary, Secondary and Tertiary stages ofsyphilis.
   e) C.N.S.syphilis, C.V.S.syphilis and Gumma, congenitalsyphilis.
   f) Actinomycosis, maduramycosis andrhinosporidiosis.
9. Fluid and Hemodynamic Changes (circulatorydisturbances):
   a) Hyperemia, congestion andhemorrhage.
   b) Thrombosis, embolism,DIC.
   c) Ischemia, infarction andshock.
   d).Edema.
10. Immunopathology:
   a) Basic Pathological mechanism in autoimmunedisorders.
   b) Concept of immunodeficiencydisorders.
   c) Pathology ofAIDS.
11. Growth and its disorders:
   a)Definition of agenesis, aplasia, atrophy, hyperplasia , hypertrophy, hypoplasia ,metaplasia.
   b) Concept of dysplasia, anaplasia andcarcinoma-in-situ.
12. Neoplasia:
   a) Definition, Classification andNomenclature.
   b) Characteristic features of benign and malignanttumours.
   c) Route of spread of malignanttumors.
   d) Grading and staging of cancers and pre-cancerousconditions.
   e) Carcinogenesis andcarcinogens.
   f) Laboratory diagnosis of cancer-Biopsy, exfoliative cytology and prognostic prediction incancer.
   g) Description of common tumours like-Fibroma, Lymphoma, Angioma, Liomyoma and Fibrosarcoma, Lymphosarcoma, Angiosarcoma and Leiomyosarcoma..
   h) Tumours of infancy andchildhood.
13. Mineral and pigment metabolism:
   a) Pathology of melaninpigment
   b) Pathology of hemoglobin and itsderivatives

c) Hemosiderosis andhemochromatosis

14. Genetic disorders:
Klinefelter"ssyndrome,turner"ssyndrome,Down"ssyndrome.

SYSTEMIC PATHOLOGY

1. Disorders ofRBC
a) Definition, morphologic and etio-pathologic classification of anemias. Iron deficiency anemia-B12 and folate deficiency anemia, sideroblastic anemia, post-hemorrhagicanemia.
b) Concept and classification of hemolyticanemias.
c) Laboratory investigations inanemia.
2. Disorders ofWBC
a) Leukopenia &Leukocytosis.
b) Agranulocytosis and TropicalEosinophilia.
3. Coagulation and bleedingdisorders
a) Structure, function and pathology ofplatelets.
b) Definition and classification of blooddyscrasias.
c) Laboratory investigations in bleedingdisorders.
4. Diseases of Cardiovascular System
a) Arteriosclerosis andAtherosclerosis.
b) Aneurysm.
c) Rheumatic heart disease, Endocarditis, MyocardialInfarction.
d) Congenital heartdiseases.
e) Congestive cardiacfailure.
5. Diseases of RespiratorySystem
a) Lobar Pneumonia, bronchopneumonia, pulmonaryTuberculosis.
b) Bronchiectasis andPneumoconiosis.
c) Tumors of lung.
6. Diseases of Gastro-intestinalsystem
a) Pleomorphic adenoma of salivarygland.
b) Barrat"sOesophagus.
c) Gastritis and peptic ulcer and tumors ofstomach.
d) Inflamatory bowel diseases- crohn"s disease, ulcerative colitis, typhoid ulcer.
e) Megacolon and Tumors ofcolon.
f) Malabsorption syndrome, tropical sprue and Coeliacdisease.
g) Amoebiasis, bacillary dysentry and intestinaltuberculosis.
7. Diseases of liver, biliary tract and pancreas:
a) Liver function tests and hepatic failure, viralhepatitis.
b) Cirrhosis of liver. tumors ofliver.

c) Alcoholic liverdiseases.
d) Indian childhood cirrhosis.
E)cholecystitis andGallstones.
f) Pancreatitis and Diabetes Mellitus.

8. Diseases of Kidney:
   a) Renal function tests, Renal failure, Polycystickidney.
   b) Acute glomerulonephritis, Cresentric glomerulonephritis, Membranous glomerulonephritis, Nephroticsyndrome.
   c) Chronic glomerulonephritis , acute tubularnecrosis.
   d) Pyelonephritis, Kidney inhypertension.
   e) Tumors of Kidney.
9. Diseases of Male Genitalsystem
   a) Orchitis and testiculartumors.
   b) Nodular hyperplasia of prostate, carcinoma ofprostate.
   c) Carcinoma ofpenis.
10. Diseases of Female ReproductiveSystems
   a) Endometrial hyperplasia, adenomyosis andendometriosis.
   b) Carcinoma of cervix, tumors ofovary.
   c) Carcinoma and other diseases of vulva anduterus.
11. Diseases of Breast
   a) Fibrocystic disease and tumors ofbreast.
   b) Gynaecomastia,
12. EndocrinePathology

   a) Endocrinal lesions in brief mainly stressing on thyroid and Pheochromocytoma.

13. Musculo-skeletal Pathology
   a) Osteomylitis andOsteoporosis.
   b) Rickets andOsteoporosis.
   c) Tumors of Bone.
   d) Rheumatoid Arthritis,Gout.
   e) Myasthenia gravis and Progressive musculardystrophy.
14. Diseases of NervousSystem
   a) Meningitis, tumors ofCNS.
   b) Tumors of PeripheralNerves.
   c) Encephalitis.
15. Diseases of Lymph nodes andSpleen
   a) Lymphadenopathy.
   b) Malignant Lymphoma, basal cellcracinoma.
16. Pathology ofSkin
   a) Squamous cell carcinoma, Basal cell carcinoma.

b) Malignant melanoma.
c) Warts, Molluscumcontagiosum.
d) Fungal diseases.

17. Pathology ofEye.
18. Pathology ofENT.
19. Clinical Pathology Including Clinical Hematology & Clinical Bio-Chemistry.

1. Sample Collections for various hematological and clinical pathological investigations and anticoagulantsused.
2. Theoritical aspects of HB estimation; hematocrit, blood indices, ESR and normal values inHematology.
3. Blood grouping concept of bloodgroups.
   a) Selection of donor, major andminor-cross-matching.
   b) BIood transfusion, diseases transmitted bytransfusions.
   c) Goomb"stest.
4. CSFAnalysis.
5. Semen Analysis.
6. Urine analysis and microscopy.
7. Liver Functiontests.
8. Renal functiontests.
9. Glucose tolerancetest.
10. Exfoliative cytology.

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

a. Explain the structure and ultra-structure of a sick cell, mechanism of cell degeneration, cell death and repair and be able to correlate structural and functionalalterations.
b. Describe the pathophysiological processes which govern the maintenance of homeostasis, mechanisms of their disturbance and the morphological and clinical manifestations associated withit;
c. Analyse the mechanisms and patterns of tissue response to injury such that he/she can appreciate the pathophysiology of disease processes and their clinicalmanifestations;
d. Correlate normal and altered morphology (gross and microscopic) of different organ systems in common diseases to the extent needed for understanding of disease processes and their clinicalsignificance.

Assessment Scheme:

Theory – 70Marks
InternalAssessment – 30Marks

PATHOLOGY PRACTICALS

I. Hematology

1. Blood groups (A.B.O.System)
2. Estimation ofhemoglobin.
3; Enumeration of RBCs (R.B.C. Count)
4. Total leucocyte count (totalcount)
5. Differential leucocyte count (D.L.C.)
6. Peripheral Smear staining andreporting
7. Absolute eosinophil count.
8. Demonstration of
    a) Hemograms inanemia
        i) Iron deficiencyanemia
        ii) Macrocyticanemia
    b) Hemograms inLeukaemias
        i) Acutetypes
        ii) Chronictypes
9. Slide studyof:
    a) Acute myeloid leukaemia
    b) Chronic myeloidleukaemia
    c) Chronic lymphaticleukaemia

II. SPOTTERS:

A. HAEMATOLOGYSLIDES

1. Mirocytic HypochromicAnaemia.
2. MacrocyticAnaemia.
3. DimorphicAnaemia.
4. AcuteLeukemia.
5. Chronic Myeloid and Chronic LymphaticLeukemia.
6. Eosinophilia.

B. HISTO- PATHOLOGY SLIDES FORDISCUSSION

1. AcuteAppendicitis.
2. LobarPneumonia.
3. T. B.Lymphadenitis.
4. Lipoma, Fibroma, SquamousPapilloma.
5. Squamous CellCarcinoma.
6. Adenocarcinoma,
7. Osteosarcoma,Osteoclastoma.
8. PleomorphicAdenoma.
9. Teratoma, Seminoma ofDysgerminoma.
10. CystoglandularHyperplasia.
11. ProliferativeHyperplasia.

12. SecretoryEndometrium.

C. INSTRUMENTS FOR SPOTTING

1. WintrobesTube.
2. Westergreen.
3. RBCpipette.
4. WBC Pipette..
5. Lumbar PunctureNeedle.
6. Liver biopsyNeedle.

III. MORBIDANATOMY

1. AcuteAppendicitis.
2. LobarPneumonia.
3. TBLung.
4. GastricUlcer.
5. CarcinomaStomach.
6. CarcinomaBreast
7. Atherosclerosis.
8. Dermoid Cyst ofOvary
9. SeminomaTestis.
10. ChronicPyelonephritis.

IV. CLINICALPATHOLOGY

1. Examination of urine for:
   A) Sugar, KetoneBodies.
   B) Protein andBlood.
2. Semen Analysis
3. PregnancyTests.
4. Liver FunctionsTest.
5. Fractional Testmeal.
6. Glucose toleranceTest.

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

1. Elaborateonprinciples, procedures and interpretation of results of diagnostic laboratorytests;
2. Perform with proper procedure simple bed side tests on biological fluid samples like blood, urineetc.
3. Prepare investigation flow-charts for diagnosing and managing common diseases;
4. Identify biochemical and physiological disturbances indiseases;

Assessment Scheme

PracticalAssessment - 90Marks

Theoryviva - 60marks

Practicalviva - 30 marks

Practicalinternalassessment- 10Marks

Recommended Text books for Pathology:-

1. Pathological BasisofDisease - By Robbins, Cotran andKumar
2. Text BookofPathology - By N.C.Dey
3. Text BookofPathology - By HarshMohan

Reference Books-

1. Text BookofPathology - ByAnderson
2. SystemicPathology - BySymmers
3. MadicalLaboratoryTechnology -By RamnikSood
4. Pathology - ByBoyd
5. Oxford Text Book ofPathology
6. ThescienceandfineartofDiseaseProcess(Orthopathy) - Herbert M. Shelton

2.MICROBIOLOGY

Course type- Core Course

Course code–BNY 203,BNY 204P

Credits- 5

1. OBJECTIVE:

The objective of teaching microbiology to undergraduate students is to provide a comprehensive knowledge of the natural history, mechanisms and causes of infectious disease, including etiology, pathogenesis, laboratory diagnosis, treatment and control of diseases in the community.

THEORY

1. General Bacteriology:

a) Historical Introduction

b) Morophology and Physiology ofBacteria.

c) Sterilisation andDisinfection

d) Cultivation of Bacteria

e) Bacterial Growth andMultiplication

f) Basic Principles of BacterialGenetics

2. Immunology

a) Infection andImmunity

b) Immunoglobulins and ImmuneResponse

c) Immune System and Antigen-AntibodyResponse

d) Compliment and other SerologicalTests

e) Hypersensitivity

f) Basic Principles of Auto-Immunity.

3. SystemicBacteriology

Streptococcus, Staphylococcus and Pheumococcus, Gonococcus, Meningococcus,Corynaebatterium, Clostridium, Hemophilus, Bordetella, Mycobacterium, Spirochaetes,Yersinia , Chalamydia.

4. Parasitology

a) Protozoalogy Entamoeba andPlasmodium

b) Helminthiology-. Ankylostoma. Ascariasis, Taenia,Wucheraria.

5. Virology

a) General properties- of Virus and theirdiagnosis.

b) Herpes, Adenovirus, Picorna, HepatitisVirus

c) Poxvirus, Rabies Virus, Poliovirus, HIV,Bacteriophage

6. Mycology

a) General Characters and methods used of study and diagnosis of fungal infections. b) Superficial mycoses, systemic mycoses, Candidiasis, Aspergillosis, Mycetoma,Rhinosporidiosis.

7. Applied Microbiology

a) Normal bacterial flora of human body.

b) Diagnostic methods in commondiseases

i) Meningitis, UTI, PID. Gastroenteritis, RespiratoryInfection.

ii) Urogenital Infections, Pyogenic Infections, NosocomialInfections, Infections of Ear, Eye and Oral Cavity

c) Bacteriology of Water.

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

1. Describe all the infectious micro-organisms of the human body and host-parasiterelationship
2. Describe parasitic micro-organisms (viruses, fungi, bacteria, parasites) with the pathogenesis of the diseases theycause;
3. Illustrate sources and modes of transmission, including insect vectors, of pathogenic and opportunisticorganisms;

4. Describe the pathways and mechanisms of immunity toinfection
5. Correlate knowledge about different vaccines that are available for the prevention of communicablediseases;
6. **AssessmentScheme:**

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

MICROBIOLOGY PRACTICALS

1. Microscopes &Microscopy
2. Sterilization &Disinfection
3. Morphology ofBacteria
4. Culturemedia
5. Culturemethods
6. Staining ofBacteria

a) Grams staining

b) Albertsstaining

c) Z-Nstaining

7. Stools Examination
8. Identification ofBacteria
9. Demonstration of V.D.R.L.test
10. Demonstration of Widaltest.

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

1. Illustrate and Effectively use sterilization and disinfection to control and prevent nosocomial and community acquiredinfections;
2. Analyse and Order laboratory investigations for bacteriological examination of food, water andair.

3. Analyse and Prescribe and interpret laboratory investigations for diagnosis of communicable diseases and identify infectious agents by clinical manifestations;
4. Demonstrate common bed-side tests to detect and identify pathogenic agents, such as blood film for malaria, filaria, gram stain and Acid Fast Bacilli (AFB) staining and stool sample for ova cyst,etc.

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30marks
Practicalinternalassessment	-	10Marks

Text Books

1. Text Book of Microbiology - By R.Anantha Narayana & C.K. Jayaram Paniker
2. Parasitology - By JayaramPanikar
3. Bacteriology - ByDey
4. Text Book of Mircobiology - ByChakravarthy

Reference Books

1. Parasitology - ByChattarjee
2. Practical Microbiology - By R. CruickShank
3. Clinical Microbiology - By Bailey &Scott
4. Medical Laboratory Manual- By MonicaCheesbrough

3.COMMUNITY MEDICINE

Course type- Core Course

Course code–BNY 205,BNY 206P

Credits- 4.5

Objective:

The objective of teaching Community Medicine to undergraduate students is to prepare them to function as community and first level physicians in accordance with the institutional objectives.

THEORY

1. Evolution of Medicine Ancient Medicine, Scientific Medicine, Modern Medicine, MedicalEvolution.
2. Concepts in Community Health Concepts of Health, Health & Development, Indicators of Health, Concepts of Disease, Concepts of Prevention, Disease Control & Eradication, Public Health, Social Medicine, Community Medicine, Health Services, Planning & Management, Risk Approach, Evaluation of HealthServices.
3. General Epidemiology Introduction, Measurement of Mortality & Morbidity, Epidemiologic Methods Descriptive Studies, Analytical Studies, Intervention studies, Association & Causation, Uses of Epidemiology, Infection Diseases Epidemiology, Disease Transmission, Immunity, Immunizing Agents, Disease Preventions & Control, Disinfection, Investigation of anEpidemic.
4. Genetics.
5. Screening of Diseases Concepts, uses, criteria for screening, sensitivity & specificity
6. Epidemiology of communicableDiseases

    a. Respiratoryinfections-smallpox,varicella,measles,rubella, Mumps, influenza, Diphtheria, Pertusis, Tuberculosis

    b. Intestinal Infections - Polio, Viral hepatitis, Cholera, Acute Diarrhoeal Diseases, Typhoid, Food Poisoning, Ameobiasis, Ascariasis, Ancylostomiasis,Taeneasis

c. Arthropod - borne infections Yellow fever, Japanese Encephalitis, Malaria,Filaria.

d. Surface Infections- Rabies, Trachoma, Tetanus, Leprosy, STD, AIDS.

7. Epidemiology of non-communicable diseases Cancer, Cardio-Vascular Diseases, Diabetes, Obesity, Blindness, Accidents, Hypertension, Stroke, Rheumatic Heart Disease.

8. Demography & Family Planning Demographic cycle, Population trends, Fertility related Statistics, Health aspects of Family planning, Contraceptive methods and Delivery System, National Family WelfareProgramme.

9. Preventive Medicine in Obstetrics, Paediatrics & Geriatrics Antenatal, Intranatal, Postnatal Care, Low Birth Weight, Infant Feeding, Growth & Development, Growth Chart, Under fives clinic, National Health Policy, Indicators of MCH care, School Health Services, Behavioral Problems, Geriatrics.

10. Environment & Health and Occupational HealthPurification of water & water Quality Standards, Air, Ventilation, Lighting, Noise, Radiation, Air Temperature & Humidity, Housing, Solid Wastes Disposal & Control, Excreta Disposal, Water Carriage System, Modern Sewage Treatment, Entomology Mosquito, Housefly, Lice, Itch mite, Cyclopes, Rat Flea, Rodents, Insecticides - Hazards, Diseases, Preplacement Examination, Measures for General Health, Protection of Workers, Prevention of Occupational Diseases,Legislation.

11. Basic Medical Statistics Censes, Vital Events, Legislation, SRS, Notification of Diseases, Measures of Dispersion & Centring, Sampling, Tests of Significance, Correlation &Regression.

12. Health Educations and Communication Objectives, Principles, Aids, Practice of Health Education, Planning andEvaluation.

13. Health Planning - Management - International Health Organizations. Planning Cycle, Management Methods & Techniques, National Health Policy, Health Planning in India, Five Year Plans, Health Systems in India- at Centre, State and District Levels, Panchayat Raj, Rural Development Schemes.

14. Health care of Community - Health Systems and National Health Programmes. Levels of Health care, Health for All, Primary Health Care, Health Care Delivery, Health Problems, Health Care Services and Systems, Voluntary Agencies, National HealthProgrammes.

COURSE OUTCOME

After completion of the course, the student shall be able to:

1. Describe the health care delivery system including rehabilitation of the disabled in thecountry;
2. Describe the National Health Programmes with particular emphasis on maternal and child health programmes, family welfare planning and population control;
3. Classify and List epidemiological methods and describe their applications to communicable and non-communicable diseases in the community or hospital situation;
4. Illustrate the demographic pattern of the country and appreciate the roles of the individual family, community and socio-cultural environment in health and disease;
5. Explain the health informationsystems;
6. Correlate the principles and components of primary health care and national policies to achieve the objective of „Health administration, Health education in relation tocommunity".

Assessment Scheme:

Theory – 70Marks
InternalAssessment – 30Marks

COMMUNITY MEDICINE PRACTICALS

1. Insecticides - 10 +Models.
2. UniversalImmunizationProgramme - 10 + Models.
3. CommunicableDiseases - 10 + Models.
4. InsectBorneDiseases - 10 + Models.
5. MicroscopeSlides - 10 + Models.
6. EnvironmentandSanitation - 10 +Models.
7. Statistical Charts
8. Field Visits

a) Rural HealthCentres.

b) Sewage DisposalPlant.

c) Water Filtration Plant.

d) Nature CureHospitals.

e) Yoga Institutes etc.

COURSE OUTCOME-

1. Illustrate epidemiology as a scientific tool for making national decisions relevant to community and individual patientintervention;
2. Analyse, interpret and present simple community and hospital baseddata;
3. Deduce, Diagnose and manage common health issues and emergencies atthe individual family and community levels with existing healthcare resources, respecting socio-culturalbeliefs.
4. Demonstrate, Design, implement and evaluate health education program using simple audio-visualaids

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30 marks
Practicalinternalassessment	-	10Marks

TEXT BOOKS:

1. Text Book of preventive and Social Medicine-By J.E. Park & K.Park

2. Text Book of preventive and Social Medicine-By B.K. Mahajan & M.C. Gupta

REFERENCE BOOKS :-

1. Preventive Medicine by Dr.Ghosh.

2. Preventive Medicine by Dr. Yashpal Bedi. REFERENCEPAPERS:-

- World Health Organization Programmespapers.
- National Health Programmespapers.

- Voluntary Health ProgrammesPapers.
- Red Cross ProgrammesPapers.
- UNICEF Programmespapers.

4.YOGA PHILOSOPHY

Course type- Core Course

Course code–BNY207, BNY 208P

Credits- 5

Objective:

The objective of teaching *Yoga* philosophy to undergraduate students is to understand the intricacies of *Yoga* as a philosophy, its relation to ancient texts, other religious thoughts like Buddhism, with reference to *nyaya*, *vasistha*, *samkhya*, *mimamsa*, *Vedanta* and *PatanjaliYogasutras*.

THEORY

1. Yoga, its definition, its basis, purpose, its relation to philosophy and its application.

2. Histrorical highlights of Yoga- Practices and literature from the ancient to modern times with special refernce to nature of yoga upanishads, smrithis & puranas.

3. The philoshpical Nature of Man and his essence, destiny in concept ofYoga.

4. The theory of Body, Mind, Life and Nature of soul, and evidence for the existence of soul. 5. The existential situation of man as reflected in European and Indianthought.

6. Basic concepts of Indian Psychology-definition a brief history of psychology, contemporary psychology according to Freud, Mr.Woodsworth and varioud psychologists, yogic science in relation to Psychology.

7. AstangaYoga (8-Limbs ofYoga-patanjali)

8. Streams of Yoga-Jnana Yoga, Karma Yoga, Raja Yoga and Bhaktiyoga.

9. Asanas - their importance, methods, rules, regulations andlimitations.

10. Spiritual values of pranyama & kriyas, their methods, importance, rules and regulations, difference between breathing exercises &Pranayama.

COURSE OUTCOME

After the completion of the course, the student shall be able to:

1. Illustrate the basic understanding of *Yoga* as aphilosophy

2. Explain thevariousschoolsofphilosophywhichhadaninfluenceon *Yogic text* like buddhism, *samkhya*, *mimamsa* etc.
3. Correlate the concept of *brahman*according to *Vedanta*.
4. Describe spiritual values of pranayama andkriyas.

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

YOGA PRACTICAL

Loosening exercises (Shitikarana Vyayama)& Breathing exercises- allexercises from "Asanas" pranayama Kriya.-Vivekananda Kendra Publication.

I) Yogasanas

1.Siddhasana	2.Padmasana.
3.Bhadrasana.	4.Samasana.
5.Swastikasana.	6.Vajrasana
7.Simhasana	8. Gomukhasana.
9 .Virasana	10. ArdhaMatsyedrasana
11.Vakrasana	12.Paschimottasana
13Ustrasana	14.Uttitapadasana
15.Shalabhasana.	16.Pavanmuktasana.
17.ViparitakaraniAsana.	18.Sarvangasana
19.Dhanurasana.	20.Halasana
21.Matsyasana	22.Kurmasana
23.Kukkutasana	24.Mayurasana
25.Sirsasana	26.Trikonasana
27.ArdhaKatichakrasana	28. ParshavaKonasana
29.Konasana	30.Katichakrasana
31.Padhastasana	32.Savasana
33.Makarasana	34.Baddhapadmasana

35.Naukasana

36.Chakrasana

37.Garudasana

38. AkarnaDhanurasana

39.Janusirshasana

40.Suptavajrasana

41.Padangusthasana

42.Karnapidasana

43.Tolangulasana

44.Garbhasana

45. Yoganidhrasana

II) Pranayama

1. AnulomaViloma
2. Nadi Suddhi
3. Ujjayi
4. Sheetali
5. Shitakari
6. Bhastrika
7. Bhramari
8. Suryabhedana
9. Chandrabhedana
10. Sadanta

iii) Kriyas

1. Neti -Jal andSultra.
2. Dhouti- Vamana anddanda
3. Trataka - Jyoti andBindu
4. Kapalabhati

IV) Meditation (Dhyana)

1. CyclicMeditation

2. OmkaraMeditation

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

1. Demonstrate knowledge of *pranayamas*, *prana* and lifestyle, breathing andlifespan.
2. Demonstrate various types of *Yogasanas* in their correct method of performance;
3. Demonstrate different*pranayamas*.;
4. Describe various philosophies of *Yoga* and apply them therapeutically, relatingto a patient's life situation or personality. **AssessmentScheme**

PracticalAssessment - 90 Marks

Theoryviva - 60marks

Practicalviva - 30 marks

Practicalinternalassessment- 10Marks

Books Recommended :

1. The History of Yoga-VivianWorthintion

2. The psychology of yoga-Taimini

3. The Science of Yoga-Taimni

4.Yoga & Indian Philosphy-Karel Werner

5. The Basis and applicationof YogaDr.Nagendra (Vivekananda Kendra Publication)

6. Jnana Yoga, Bhakti Yoga, Karma yoga, Rajaj Yoga By Swami Vivekananda (Vivekananda KendraPublication)

7. Narada Bhakti Sutras.

8. Asanas

9. Pranyama (Kaivalyadhma LonavalaPublications)

10. Asana, Pranayama,Kriyas

11. Pranayama- Vivekananda KendraPublication

12. Yoga philosophy in relation to othersystemof philosophy - S.N. Das Gupta

13. Yoga Deepika-B.K.S.lyengar.

14. Psychology-Florance C.Kerip

15. Asana why and how - O.P. Tiwari(Kaivalyadham)

16. Yogank - Kalyan - Gita Press,Gorakhpur

17. Light on The Yoga Sutras of Patanjali - B.K.S.Iyenger

18. Light on Yoga - B.K.S.Iyenger

19. Light on Pranayama - B.K.S.Iyenger

20. Hatha Yoga Pradipika - SwamiMuktibodhananda

21. Asana , Pranayama, Mudra , Bandha - SwamiSatyanandaSaraswati Bihar School of Yoga

5. MAGNETOTHERAPY AND CHROMO THERAPY

Course type- Core Course

Course code–BNY 209,BNY 210P

Credits- 6

1. Objective:

The objective of teaching Colour therapy and Magneto biology to undergraduate students is to provide them with comprehensive understanding of philosophy, science and modes of applications of colours and magnets in preventive, curative and rehabilitativetherapy.

THEORY

1. Introduction

   a) Definition of Magetotherapy

   b) Historical highlights

   c) Use of magnets upheld byNaturopathy

2. Magnetism in theUniverse

   a) Earth a huge naturalmagnet

   b) Nature of EarthMagnetism.

   c) Earth magnetic effects on the humanbeings.

3. Effects of Magnetism on livingorganisms.

4. Bio-magnets- Biological experiments withmagnets

5. Medical influence of magnetic field Rheumatoid arthritis, hemiplegias, arthralgia, Neuralgias, Stimulation of nervous system, endocrine glands etc..

   Magnetotherapy, symptomatic relief , Combined treatments i.e. Magnetotherapy, Hydrotherapy ,Massage, Diet & Yoga and the result of these combined treatments.

6. Magnets and theircomposition

   a) Natural magnets and artificialmagnets

b) Permanent magnets - classification of magnetic materials , Power of magnets- various qualities of magnets- low, medium and high power magnets and magnetic beltsetc.

c) Electro magnets - electro magnetic field on human behaviour, Electro magnets- for medical purpose -Electro magnetic treatment, bed and hand Magnetiser, foot magnetiser, vibroelectro massager, electro-magnetic chair etc. Non Pulsating clinical Electromagnet.

7. Technique of application of magnets - North and South pole, local & general treatment and the Technique of application of Magnets in treatment of various commondiseases.

8. Magnetised water and Magnetisedoils

Magnetised water in Nature, influence of magnetic field on the properties of water, method and preparation of magnetised water, dosage and therapeutic effect of magnetised Water .Method of preparation of magentised oils and their application and therapeutic effects.

9. Advantages of Magneto Therapy , Magnetotherapy is a natural treatment - Use of Magnets as a preventivedevice.

10. Clinical Reports from Indian and Foreign MagnetoTherapists.

11. Magneto therapy and Acupressure- Acupuncture Points- Certain clinical case reports. Utilisation of Acupuncture points in Magnetotherapy

12. Terminology - Technical terms related toMagnetotherapy.

13. Recent developments inMagnetotherapy.

Text Books

1. Magneto therapy - Dr. H.L.Bansal
2. Magnetic cure for common diseases - Dr. R.S. Bansal, Dr. H.L.Bansal
3. The text book on Magneto therapy - by Dr. NanubhaiPainter
4. Magnetotherapyand Acupuncture -Dr.A.K.Mehta

Reference Books—

1. Electromagnetic treatment - Dr. H.L.Bansal

2. Magentic fields or healing by magnets - Dr. A.R. Davis and Dr. A.K. Bhattacharya of Naihati of WestBengal.

CHROMOTHERAPY

Theory

1. Introduction

   a) Historical Highlights

   b) Harmonic laws of theuniverse

   c) SolarFamily

2. Theory of light andforce

3. Chromophilosophy-Reflection, Refraction,Absorption

4.The Source of light- the sun forming sources, the solar atmosphere- sun power- how the colour effects are produced - influence of sun light on skin, muscles, digestive organs,Bones.

5 Chromo-Chemistry- character of spectrum analysis, materials discovered by the spectroscope , the spectrum - spectrum of grey and natural colour elements- spectra of elements of positive colours,chromatic repulsion andattraction.

6 Chromo-diagnosis andchromo-hygiene.

7.Chromo - therapeutics - the healing power of colour, healing power of red, yellow, orange, blue, Green and Violet, non-spectral colours, sun stroke action of sun light onmicroOrganisms.

8. Practical instruments for colour healing –Blue, Green, Red, pink, Violet,Yellow, Orange glasses- the solar thermoleum- the electro thermoleum, chromodisc, the chromolens- chromo lighteradiator.

9. Directions to be followed during treatment withlight.

10. Healing by means of substances charged with different coloured light- method of solarization of water, oils and food substancesetc.

11. Chromo therapy prescriptions for differentdiseases.

12.Chromo - Mentalism.

13. Bordeauxmedicine.Chomoth.

AIRTHERAPY

1. Composition of Air -Night and Daycomposition.
2. Ozone in the atmosphere.
3. Air Pollutants, their acceptablevalues
4. Physiology of Respiratorysystem.
5. Air baths (Cold andHot)
6. Theory of Panchapranas andNadis.

SUN THERAPY (HelioTherapy)

1. History
2. Physiological and Chemical properties ofSunlight.
3. Effect of sunlight on vegetation andMicro-organism.
4. Rejuvenation duringdiseases.
5. General SunBath.
6. Dr.Rikli"smethodof SunBath.
7. Dr. Kuhne"s method of SunBath.
8. Sun Bath through wetpack.
9. Sun bath of children and agedpersons.
10. Sunbath withleaves-Atapasnana.
11. Oil sun bath (Abhyangasnana)
12. Sun Stroke.
13. Practice of Exercise inSunlight.

COURSE OUTCOME

After the completion of the course, the student shall be able to:

1. Correlate basic understanding of principles along which colours and magnets can be used as therapeutic agents, along with history of therapeutic uses of colours andmagnets;

2. Explain bio-magnetism, electro-magnetism, properties of magnets, mechanisms of action of magnets on the human body, magnetic overload, charging, modes of application, etc. and apply this knowledge to therapeutically usemagnets;
3. Illustrate classification of colours, physics of light, electromagnetic spectrum, pathway of vision, human aura, chakras, heliotherapy, colour breathing, chromo charging, and latest research, applying the same to diseasemanagement;
4. Deduce various diseases and disorders of the body and mind using the principles of colourdiagnosis;
5. Analyse the therapeutic values of colours and magnets in treatment of various diseases
6. Analyse latest research finding in improving his/her professionalpractice

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

CHROMO MAGNETO THERAPY PRACTICALS

Students should, have demonstration classes in various chromotherapeutic devices and their clinical application, various types of Magnets, equipment and their clinical application.

1. Case studies withrecord

2. Cases with bio-chemicalreports

3. Demonstration of colour glasses & bottles.

4. Demonstration of instruments andequipments.

COURSE OUTCOME

After the completion of the course, the student shall be able to:

1. Correlate various diseases and disorders of the body and mind using the principles of colourdiagnosis;
2. Illustrate and implement a plan of treatment using colours and magnets as therapeutictools
3. Explain the therapeutic values of colours and magnets in treatment of various diseases
4. Analyse latest research finding in improving his/her professionalpractice

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30 marks
Practicalinternalassessment	-	10Marks

TextBooks

1. The principles of lightandcolour - By Dr. E.D.Babbit
2. Human Culture and Cure infiveparts - By Dr. E.D.Babbit
3. Colourtherapy. - By R.S.Amber
4. HealingthroughColour - By Thea-Gimbel

REFERENCEBOOKS

1. The power oftherays - By S.G.J.Oseley
2. ColourMeditations - By S.G.J.Oseley
3. Colourandhealing - By GladyaMayer
4. Colourhealing(Chromotherapy) -By Health Reserch Foundation (USA)
5. PracticalcolourMagic - By Raymond Buckland

ReferenceBooks:

1. All You Wanted to Know AboutSunTherapy - VijayaKumar
2. Colour Therapy-MiracleofSunrays - Rashmi Sharma and Maharaj KrishanSharma
3. Science ofNatural Life - RakeshJindal
4. PrakratikChikitsaSagar - Dr.GaurishankarMishra
5. Dhanwantari-prakrtikChikitsank - Ganga Prasad Gaud“Nahar

THIRD YEAR1.

MANIPULATIVETHERAPY

Course type- Core Course

Course code–BNY 301,BNY 302P

Credits- 4

1. Objective:

The objective of teaching Manipulative Therapies to undergraduate students is to provide them with comprehensive understanding of science and modes of applications of different manipulative modalities like Massage, Chiropractic, Osteopathy, Aromatherapy in preventive, curative and rehabilitative therapy.

THEORY

1. Introduction and History ofMassage.

2. Rules, Regulations and Characteristics ofMasseur

3. Structures especially concerned in massage and parts of the body to be speciallystudied

   for the purpose is as follows:

   a) Skin

   b) MuscularSystem

   c) Heart andCirculation

   d) Nervous System

   e) Skeletal System Includingjoints

4. Effects of the pressure of hand and lubricants on the following systems :-

   a) Skin

   b) MuscularSystem

   Nutrition and Development Excitation of "M" & contraction of "M", Increase

   of muscular electro-excitability, removal of the fatigue from muscle.

c) On the ligaments and skeletalsystem

d) On the Circulatorysystem

f) On Respiration - Increase of respiratory activity and increase of tissuerespiration.

g) On GIT-Improvement in appetite, improvement in secretion of digestivefluids,

absorption and improvement in peristalsis.

h) ExcretorySystem

i) Powder Massage - merits and demerits.

5. Getting crisis through massage (Side effects andbenefits)

6. Basic therapeutic massage techniques, indications and contraindications of of massage while applying to thepatients.

7. Massage and its effects:-.

a) Nutrition

b) Haematogenesis

c) Phagocytosis

d) Increase in the number of bloodcorpuscles.

e) Absorption of increased inflammatory exudate, change in the weight of the person, obese oremaciated.

8. i) Different Massage manipulations, classification and their detailed explanation, uses and contra-indications.

ii) Manipulative treatments in stressmanagement

iii) Shiatsu in manipulative therapy(Acupressure)

iv) Manipulations and life extension.

v) Dry brushMassage

9. Movements of Joints:-

i) Flexion

ii) Extension

iii)Abduction

iv)Adduction

v) Supination &Pronation

vi) Circumduction

. vii) Deviations - Medial andLateral

viii) Opposition

10. Massaging in local areas under special circumstances-

a) Massage to Abdomen

i) Massage toliver

ii) Massage to Stomach

b) Massage toheart

c) Massage tohead

d) Massage tospine

e) Special types of Massage in differentdiseases

11. Massage to women

12. Massage to infants andchildren

13. Massage for prevention of diseases and maintenance of natural beauty

14. Ayurvedic Massage-Terminology, Methods andManipulations

15. Chiropractic:-

Origin & aims of Chiropractic.
X-Ray Technique and Chiropractic.Importance of spine in Chiropractic.Physiological effects of Chiropractic.

Spinal Manipulative Therapy

Chiropractic Examination.

Chiropractic treatments in various Diseases

16.Osteopathy :-

Definition & the Basic principles of osteopathy, Relation of osteopathyto Musculo-skeletalsystem.

17. Aromatherapy:-

A. Definitions, Origin and History of Aromatherapy.

B. Essential Oils and Its types, extraction of essential oils, distillation, coldpressing or expression, sloven extraction, storage, recognition, selection andmechanism of essential oils.

C. Carrier oils - Almond, Apricot, Avocado, carrot, corn, primrose, grapeseed hazelnut, Jojoba, Olive, Peanut, safflower, sesame, Soyabean & sunfloweroil.

D. Different methods of using essential oils- inhalation, diffusers, vaporizers, massage, baths, foot bath, pot pouri, compresses, oral intake, beautytreatment, room sprays, insect repellentsetc.

E. Description of different essentials oils & theirbenefits.

F. The best essential oils - The five fragrance categories - green, floral,citrus, Woody & Spicy and mixing of Aroma Oils & Equipment required for Mixing Oils.

G. Aroma Oils for common problems and their therapeuticproperties.

H. Precautions, ill effects and careful handling of essentialoils

I. Contraindications- Oils to be avoided in particularproblems

COURSE OUTCOME-

At the end of course, a student should be able to –

1. Understand the principles and history of manipulativetherapy.
2. Description and therapeutic uses of different types ofoils.
3. Analyse the application of manipulative therapy in clinicalpractice.
4. Analyse the research based new development in manipulativetherapy.

AssessmentScheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

MANIPUALTIVE PRACTICALS

1. 35 demonstrationclasses

2. 10 demonstrations inPanchakarma

3. Each student should do 35 massages

COURSE OUTCOME

After the completion of the course, the student shall be able to:

1. Demonstrate different types of massage and manipulative therapies, such asOsteopathy.Chiropractic,Aromatherapy,Swedishmassage,Kellogg's massage, Shiatsu, Geriatric Massage, Pediatric massage, Antenatal massage, Ayurvedic massage,etc;
2. Analyse therapies such as Reflexology and Zone therapy in their professional practice for musculoskeletal disorders,etc.
3. Explain the disease and relevant treatment to thepatient.
4. Correlate and study the disease and the manipulativepractices.

Assessment Scheme

PracticalAssessment - 90 Marks

Theoryviva - 60 marks

Practicalviva - 30 marks

Practical internal assessment- 10Marks

Text Books :-

1. Massage Books - By GeorgeDowning

2. Massage - By ConstantYoung

3. Massage Therapy - By Dr. J.H.Kellog

4. The Complete Book of Massage - By Clare MaxwellHudson

5. Step by Step Massage - By Carole Me. Gilvery and GiniReed

6. The Book of Massage - By Luinda Lidell w ith Sarathomas,Carola
Berb Ford Cooke and AnthonyPorta

7. The Complete step-by-step guide to eastern andwestern

8. Baby Massage - The Magic of Loving Touch - By Auckett, AneliaD

9. Natural Healing from Head to Toe - By Aihara, comellia - Aihara,Herman

10. Massage Works - By D. Baloti Lawrence and LewisHarrison

11. Manual of osteopathy Practice - By AlanStoddard

12. Alternative Chiropathy Practice - By SusanMoore

13. Massage (Ayurvedic) - By AchantaLaxmipathy

Reference Books :-

1. The PanchakaramaTreatment of Ayurveda - By T.L.Devraj

2. Chirotherapy : A-Text of Joint Movements - By HesseP.De.

3. MassageTherapy: the Holistic Way
to Physical and Mental Health - By Juckson Richard

4. Book of Massage and Aromatherapy - By Facroix Nity and
(Achieving complete relaxation & seager,Shoron
well being with massage and essential oils)

5. Brain Massage, Revitalize mind body - By Howell,Kelly.

Massage to Common Ailments - By PennyRich

6. All you wanted to know about Aromatherapy - By LalitaSharma

7. Aromatherapy - By JulieSadler

8. Health and Beauty through Aromatherapy - By BlossomKochhar

9. Ayurveda & Aromatherapy - By Dr. Light Miller & Dr. BryanMiller

2. ACUPUNCTURE

Course type- Core Course

Course code–BNY 303,BNY 304P

Credits- 4

1. Objective:

The objective of teaching acupuncture to undergraduate students is to provide them with a comprehensive understanding of the science and art of Acupuncture, Acupressure and related therapies.

THEORY

1. Definition, concepts ofAcupuncture.
2. Traditional and modern theories ofAcupuncture.
3. Materials and Methods ofAcupuncture.
4. Principles of Acupuncture.
5. Rules for selection of Acupuncturepoints.
6. Contraindications and complications ofAcupuncture.
7. The concept of Meridians:-

a) Lung Meridian(Lu)

b) Large intestine Meridian (LI)

c) Spleen Meridian(SP)

d) Stomach Meridian(ST)

e) Heart Meridian(H)

f) Small intestine Meridian(SI)

g) Urinary bladder Meridian(UB)

h) Kidney Meridian(K)

i) Triple warmer Meridian (TW)

j) Gall bladder Meridian(GB)

k) Liver Meridian (Liv)

I) Governing vessel Meridian(GV)

m) Conceptional vessel Meridian(C.V)

n) Eight extra Meridians

8. The extra-ordinarypoints.

9. Diagnostic methods (both- Acupuncture andModern)

10. AuriculoTherapy

11Moxibustion

12. Stimulation inAcupuncture.

13. AcupunctureTherapeutics

14. AcupunctureAnaesthesia

15. Reflexology & ZoneTherapy:-

What is Reflexology, history and development.

How does reflexology work

Body & its reflex zones.

Applications, indications and contra-indications

Preventive effects of reflexology

16. Acupressure :-

What isAcupressure

Its origin & development

Physiological effects of Acupressure

Therapeutic uses of Acupressure

17. Acupuncture/pressure in Acute disorders andemergency

18. PranicHealing.

19. Reiki

COURSE OUTCOME

1. Illustrate the definitions ofAcupuncture.
2. Description of the principles and historical highlights ofAcupuncture;
3. Classify and Correlate the concepts and theories mechanism behind Acupunctur.e
4. Demonstrate basic understanding of procedures of different styles of Acupuncture and related therapeuticmodalities.
5. Deduce basic and advanced tools used inAcupuncture;
6. Analyse the application of Acupuncture in clinicalpractice.

Assessment Scheme:

Theory – 70Marks
InternalAssessment – 30Marks

ACUPUNCTURE PRACTICALS

1. Demonstration of Needling techniques and Electro-stimulation,Moxibustion.

2. Each Student should give treatments to atleast 20 patients during the practicals.

COURSE OUTCOME

1. Demonstrate basic understanding of procedures of different styles of Acupuncture and related therapeutic modalities, such as Traditional Acupuncture, Scalp Acupuncture, Auriculotherapy, Acupuncture Anaesthesia, Reflexology, Zone Therapy, Acupressure,etc;

2. Illustrate case discussion and the techniques to beused.

3. Analyse evidence based acupuncture and itsapplication.

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30 marks
Practicalinternalassessment	-	10Marks

REFERENCE BOOKS-

1.Clinical Practice of Acupuncture - By A.L.Agrawal

2. Clinical Acupuncture - By Dr. AntonJayasurya

3 Principles and practice of Acupuncture - By Dr. J.K. Patel

4. Health in your hands - By DevendraVora

5. Shiatsu - ByOhashi

3.YOGA APPLICATION

Course type- Core Course

Course code–BNY 305, BNY306P

Credits-11

1. Objective:

The objective of teaching *Yoga* and its applications to undergraduate students is to provide them with comprehensive understanding of*Yoga* with reference to traditional texts like *PatanjaliYogasutras*, *Hatha YogaPradipika*, *Shiva samhita*, *Gheranda samhita* and *Swara Yoga*; various streams of *Yoga*, advanced meditative techniques like *Yoganidra*, *Omkar*, C*yclic*, V*ipassana* and learn about benefits of *Yoga*as compared to exercise.

THEORY

1. Patanjali yoga sutras - 1st twochapters.

(ie., Samadhi Pada & Sadhana Pada, brief summary of Vibhutipada & Kaivalyapada)

2. Hatha Yoga Pradipika- full text with necessary reference to Gheranda Samhita & Siva

Samhita.

3. Introduction to other streams of Yoga-Kundlini andTantraYoga.

4. Yoga Nidra-Methods, application, effects andbenefits.

5. Meditation-Types of Meditation-Omkar, Cyclic, Vipassana etc. Methods of application.

benefits, precaution, its influence on health and disease.

6. Different relaxationtechniques.

a) Instant relaxation,

b) Quick relaxation,

c) Deep relaxation techniques-their methods, effects &benefits.

7. Yoga-in relation to personality andeducation.

8. Yoga-in relation to sports and games, social and politicallife.

9. Eye exercises- Benefits, methods,precautions.

10. Physiological aspects ofAsanas.

11. Physiological, Neuro-Physiological aspects of pranayama.,,

12. Shat Kriyas- Comparative study of Shat Kriyas with other system ofMedicine.

13. Physiological aspects ofexercises

14. Physical exercises for health &fitness

(a) Introduction

(b) Who shouldstretch

(c)When to stretch

(d) Why to stretch.

(e)How to stretch

(f) Relaxing stretches for i. Back, legs, feet and ankles.

ii.Hips, hamstring, lowback.

(g) Stretching exercises forelderly.

(h) Stretching exercisesfor

Abdominal muscles, Arms, Chest, Ankles, Legs, knee, thigh, fore arm etc.(i) Techniques of walking, running, Cycling etc.

(j) Caring back.

15. Swara -Yoga

COURSE OUTCOME

After the completion of the course, the student shall be able to:

1. Illustrate the knowledge of traditional texts like *PatanjaliYogaSutras*, *Hatha Yoga*, *Shiva Samhita* and *GherandaSamhita*;
2. Explain the principles behind various meditative practices like *Yoganidra*,*Om*meditation, *cyclic* meditation, V*ipassana* and so on;
3. Explain about *Yoga* in relation to its application in education,sports;
4. Demonstrate basic understanding of procedures of stretching andexercises;

5. Describe basic physiological changes of *asanas* and shat *kriyas*and their adverseeffects
6. Describe the concept of *Yoga* as explained in the traditionaltexts;
7. Deliver a meditative session using any of the meditativestyles;

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

YOGA PRACTICALS

I. Asanas

1. Including all asanas of I year adding some advanced postures from Yoga Deepika.

2. All loosening (Shitilikarana Vyayama) and breathingexercises.

II. Pranayama (as 1stB.N.Y.S.)

III. Kriyas- (including Portion of 1stB.N.Y.S.)

1) Dhouti-Vastra

2) Gajakara ni - (Vari saraDhouti)

3) Nauli- (all threetypes).

4) Shankha Prakshalana- 1. Laghu. 2.Maha

5) Basti

IV. Meditation-

1) Omkara

2) Cyclic

3) Vipassana

V. Techniques Like :-

1) Self Management of Excessive Tension(SMET).

2) Pranic Energisation Technique (PET).

3) Mind Sound Resonance Technique(MSRT).

4)Yoga Nidra (Short and long session).

COURSEOUTCOME

After the completion of the course, the student shall be able to:

1. Explain the knowledge of traditional texts like *PatanjaliYogaSutras*, *Hatha Yoga*, *Shiva Samhita* and *GherandaSamhita*;
2. Illustrate the principles behind various meditative practices like *Yoganidra*,*Om*meditation, *cyclic* meditation, V*ipassana* and so on;
3. Demonstrate basic understanding of procedures of stretching andexercises;
4. Deliver a meditative session using any of the meditativestyles;

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30 marks
Practicalinternalassessment	-	10Marks

Books Recommended :-

1. The Science of Yoga - By Taimini (commentary on patanjali YogaSutras).

2. Hatha Pradipika - By (Kaivalyadhama Publication-Lonavla).

3. Yoga Nidra - By (Bihar School of yoga, Mungerpublications).

4. Kundalini Yoga.

5. TantraYoga.

6. Asana.

7. Pranayams - By Vivekananda KendraPublications.

8. Psychology - By Horensce C.Kenipp.

9. Religiousness in Yoga theory & Practice - By TKVDesikachar.

10. Research papers - ByKaivalyadhama.

(Publication inYoga Mimamsa- all papers relating to physiological effects of Yoga.)

11. Yoga in Education - By Dr. Nagendra (Vivekananda kendraPublication)

12. Vipassana-By S.Goenka.

13. Anatomy & Physiology of Yoga -By Dr.M.M.Gore.

14. An over view on research papers. - By SVYASA,Banglore

15. Patanjali yoga sutra - By Dr P.V. Karmavelkar(Kaivalyadham)

16. Patanjali yog pradeep - By Swami Omanand Teerth (Gita - press,Gorakhpur)

17. Hatha Yoga Pradipika - By Swami Muktibodhananda(Bihar School ofYoga)

18. Light on Yoga - ByB.K.S.Iyenger

19. Light on Pranayama - ByB.K.S.Iyenger

20. Light on The Yoga Sutras of Patanjali - ByB.K.S.Iyenger

4.FASTING THERAPY

Course type- Core Course

Course code– BNY 307,BNY308P

Credits-4

1. Objective:

The objective of teaching Fasting Therapy to undergraduate students is to provide them with comprehensive knowledge of Fasting therapy and utilisation of the same for therapeutic purposes.

THEORY

I. Introduction :-

1. Theory ofFasting

a) Fasting in Animals

c) Your Tongue Never Lies

b) Miracles of Fasting

2. History ofFasting

a) Fasting in AncientIndia

b) History of Fasting inIndia

c) History of Fasting in ForeignCountries

d) Historical Highlights ofFasting

3. Science ofFasting

II. The Philosophy ofFasting

1. The Philosophy of SaneFasting

2. Philosophy of TherapeuticFasting

A) Life & its existence in connection with health anddiseases

B) Nature ofdisease

C) The No-BreakfastPlan

D) Objections commonly raised in FastingTherapy

E) Pros and cons ofFasting

F) Difference between Fasting andStarvation

G) Difference between Hunger and Appetite

III. Physiology ofFasting:-

1) General Physiology.

2) Source and Metabolism of Carbohydrates, Fats and Proteins During Fasting &Starvation.

3) Chemical and Organic changes duringFasting.

4) Repair of Organs and Tissues DuringFasting.

5) Changes in the Fundamental Functions While Fasting.

6) The Mind & Special Senses During aFast.

7) Secretions andExcretions.

8) Bowel Action During aFast.

9) The Influence of Fasting on Growth andRegeneration.

10) Gain and Loss of strength WhileFasting.

11) Gain and Loss of weight DuringFasting.

12) Autolysis

13) Fasting andSex.

14) Rejuvenescence ThroughFasting.

IV. Facts Explained AboutFasting:-

1) Fasting Does Not Induce Deficiency“Disease”.

2) Death In TheFast.

3) Objections To TheFast.

4) The Quantity of Food Necessary to SustainLife.

V. Practice ofFasting:-

1) Does Fasting CureDisease?

2) The Rationale ofFasting.

3) The Length of TheFast.

4) Contraindications ofFasting.

5) Fasting in Special Periods and Conditions ofLife.

6) Symptomatology of TheFast.

7) Progress & Hygiene of TheFast.

8) Breaking The Fast.

9) Gaining Weight After TheFast.

10) Living After TheFast

VI. Rules and regulations of Sane Fasting and TherapeuticFasting.

VII. Definition and Classification offasting

1) Definition of fasting in differentaspects.

2) General classification of fasting (Religious, Political andTherapeutic.)

3) Methods and types of therapeutic fasting (Dry, whey, Juice, Salad, Monodiet (Kalpa),Fruits

Intermittent, Preventive, Weekly etc.

VIII. Hygienic Auxiliaries of Fasting-

1) Air and Breathing

2) Enema

3) Bathing

4) Clothing

5) WaterDrinking

6) Exercise

7) Mental Influence

IX. Study of Patients During and After Fasting-

1. Crises during fasting and theirmanagement.

2. Physiological effects offasting.

3. Biochemical aspects.

4. Study of the tongue, the breath, the temperature and pulseetc.

5. The loss and the gain ofweight.

6. How and when to break the fast.

7. Diet after the fast.

X. Indications and Contraindications offasting.

XI. Therapeutic aspects ofFasting

1. Fasting in acutediseases.

2. Fasting in chronicdiseases.

3. Role of fasting in variousdiseases.

4. Obesity andfasting.

a. Definition and assessment ofobesity.

b. Epidemiology.

c. Etiology.

d. Clinical Features

e. Treatment.

5. Fasting for preservation of health and prevention ofdiseases.

6. Fasting in DrugAddiction.

7. Fasting Versus EliminatingDiets.

XII. Results ofFasting.

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

1. Illustarte definitions and historical highlights of fasting therapy through the centuries, including fasting employed in different religions, the concept of dietetic principles inNaturopathy.
2. Classify fasting according to duration, purpose, type,etc.
3. Explain the metabolism of fasting,Calorie Restriction: Concept, Method, Prevailing basic- Clinical-appliedevidence.
4. Describe importance of various components of diet, such as dietary fiber, vitamins, minerals,etc.
5. Analyse fasting therapy in managing variousdiseases.

FASTING PRACTICALS

Study of 50 fasting cases

Case Study of 25 with record

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

1. Illustarte definitions and historical highlights of fasting therapy through the centuries, including fasting employed in different religions, the concept of dietetic principles inNaturopathy.
2. Classify fasting according to duration, purpose, type,etc.
3. Explain the metabolism of fasting,Calorie Restriction: Concept, Method, Prevailing basic- Clinical-appliedevidence.
4. Demonstrate usage of therapeutic diets and fasting therapy in promotive, preventive, curative and rehabilitativetherapy.

Assessment Scheme

PracticalAssessment - 90 Marks

Theoryviva - 60marks

Practicalviva - 30 marks

Practical internal assessment- 10Marks

Text Books -

1. Fasting for Healthy andLongLife - By HerewardCarrington
2. The Fasting Cure andVitalEconomy - By LakshamanaSharma.
3. Fasting can saveyourlife - By Herbert M.Shelton
4. The EffectsofFasting - By DonaldUpton
5 Fasting as a wayof life - By Allan coliM.D.
6: Fasting can Renewyourlife - By Herbert M.Shelton
7. ScientificFasting - By Hazzard, LindaBurfield
8. FastingforRejuvenation - By Seaton,Julia
9. The Science & Fine Art ofNaturalHygiene - By Herbert M Shelton
10.The Science & Fine Art of Food&Nutrition - By Herbert M. Shelton
11.The Hippocrates Diet andHealthProgramme - By Ann Wigmore
12.TheJuicingBook - By StephenBlauer
13.LiveFoodJuices - By H.E.kirschner

ReferenceBooks-

1. The PhilosophyofFasting - By Edward EaulPurintion
2. Vitality, FastingandNutrition - By HerewardCarrington
3. TheFastingCure - By UptonSinclair
4. The Fast - WayofHealth - By Harold R.Brown
5. Fasting - the MasterRemedy
6. Fast forHealth - By John JosephPicker
7. The Biology ofHumanStarvation - By Keys,Ancel

8. FastingStoryNO.1 - By HealthResearch
9. FastingStoryNO.2 - By HealthResearch
10. RationalFasting - By Prof. ArnoldEhret
11. ExplainingFasting - By Forster,Roger
12. Hints onFastingWell - By Carrington, Herewardetc.
13. The Science and Fine ArtofFasting - By Herbert MShelton
14. MiraclesofFasting - By Dr. PaavoAirola
15. NoBreakfastPlan - By Edward HookDewey
16. Thus SpeakeththeStomach - By Prof. ArnoldEhret
17.The PhysiologicallyCorrectFast -By Dr. AreWaerland

5. NATUROPATHY DIAGNOSIS

Course type- Core Course

Course code–BNY 309, BNY310P

Credits-4

1. OBJECTIVE:

The objective of teaching Diagnostic Methods in Naturopathy to undergraduate students is to provide them with comprehensive knowledge of diagnostic methods employed by traditional Naturopaths that can be used efficiently to diagnose various diseases without the use of sophisticated technology.

THEORY

FACIAL DIAGNOSIS

1. Introduction to the science of facialexpression.

a) Historicalhighlights.

b) Definition and scope of the science of facialexpression.

2. Characters of the HealthyBody.

a) Normal functions.

b) NormalFigure.

3. Foreign matter theory:-

a) Definition of foreignmatter.

b) The process of accumulation of foreign matter in thebody.

c) Encumbrance.

d) Changes caused in the body due to the accumulation of foreignmatter.

e) General pathology of foreignmatter.

4. The nature: origin and cure of diseases of children and theirunity.

5. Bad habits supports the accumulation of foreign matter in the body-tobacco, alcoholic drinks, coffee, tea, opium etc. Drug addictions -Pethedine, Heroin, Injection etc., Suppression of diseases viz elimination of morbid and diseased germs from thesystem.

6. Types of encumbrance - Front encumbrance, - back encumbrance front and right side Encumbrance, left side encumbrance and mixed or whole encumbrance, their description, general characters and possible diseases in the concerned encumbrance and theirtreatment.

7. Diseases of the internal organs and theirtreatment.

8. Process of elimination of foreignmatter.

a) Importance of Nature Curetreatments.

b) The digestive process-naturaldietetics.

c) Artificial outlets ofelimination

9. Methods to be followed to increase the vitality of thebody.

10. The importance of Nabhi Pareeksha, the methods of NabhiPareeksha

& the techniques ofcorrection.

I R I S D I AGNOSIS :-

1. Introduction of iridology:

a) Definition of Iridology-,;

b) Historical highlights.

c) Comparison of other systems - Allopathy , Homeopathy , Ayurveda, Unani etc.

Diagnosticmethods.

d) Anatomy of theIris.

e) Theory inapplication.

f) The theory of healingcrisis.

g) A unit form division and classification ofdiseases.

h) Philosophicalphase.

i) Theoreticalphase

2. I. Instructions in Methods of Application:-

a) Technique in Irisreading.

b) The normal and abnormal Iris, colour of theIris.

c) The Vibratorytheory.

II. Study of density of theIris.

III. Key toIridiology.

a) Iris charts brought up todate.

b) Zoneareas.

c) Sectoral Division.

3. Comparison of fermentation vizinflammation.

4. Interpretations of Irismanifestations.

I. a) Types of inflammation

b) Inherent (Lesions andweakness)

c) Acidity andCatarrh

d. Toxicsettlements

e. NerveRings

f. The Lymphaticrosary

g. Injuries andoperations

h. Itch or Psora spots in the iris - the surfrim

i. The radii-solaris

j. Tumours

k. The sodiumring

l. Anaemia in the extremities and in thebrain.

M. Drugs and chemicals appearence on the Iris and their poisonous effects in the body

Arsenic, Bismuth, Bromides, Coaltar products, Ergot, Glycerin, Iodine, Iron, Lead,Mercury, Opium , Phosphorous, Quinine, Salicylic acid, Sodium, Strychnine, Sulphur, Turpentine, Vaccines etc.

II. The iris reveals the cause ofdisease.

5. Case histories according toIridology.

6. Advance research inIridology.

a) Reflex areas and remotesymptoms.

b) Stomach and intestinal disorders, the principle causes, the principle disorders & remedial Measures.

COURSE OUTCOME:

After the completion of the course, the student shall be able to:

1. Illustrate historical significant developments in diagnostic procedures used in Naturopathy and the characteristics of a Healthy Body with respect to NaturopathicPrinciples
2. Describe philosophical theories of causation of disease according to Naturopathy
3. Analyse knowledge of theory of encumbrances, their types and interpretation, along with naturopathic ways to therapeutically correctthem.
4. Describe in detail Iris Diagnosis, with respect to history, techniques, iris signs, interpretations and tools used, and use the same to diagnosediseases;
5. Explain the techniques and interpretations of stool and urine diagnosis, correlating modern medical knowledge and Ayurvedic *sthoola* and *muthra pariksha*;
6. Analyse and apply different diagnostic procedures in Naturopathy to effectively and accurately diagnose various diseases, such as Iris Diagnosis, Facial Diagnosis, Stool and Urine Diagnosis,etc.

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

NATUROPATHY PRACTICALS

1. Clinical classes

2. Demonstrations in the Nature CureHospital.

3. Case Studies 25 with Record.

4. Demonstration ofEquipments.

COURSE OUTCOME:

After the completion of the course, the student shall be able to:

a) Illustrate historical significant developments in diagnostic procedures used in Naturopathy and the characteristics of a Healthy Body with respect to NaturopathicPrinciples
b) Explain philosophical theories of causation of disease according to Naturopathy
c) Deduce knowledge of theory of encumbrances, their types and interpretation, along with naturopathic ways to therapeutically correctthem.
d) Demonstrate the techniques and interpretations of stool and urine diagnosis, correlating modern medical knowledge and Ayurvedic *sthoola* and *muthra pariksha*;

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60 marks
Practicalviva	-	30 marks
Practicalinternalassessment	-	10Marks

RecommendedText Books:-

1. Science of Facial Expression - By LouisKuhne
2. The New Science of Healing - By LouisKuhne
3. The Science and Practice of Iridology - By BernardJensen
4. Iridiagnosis and other Diagnostic Mehods. - By Henry Lindlahr

REFERENCE BOOKS:-

1. Iridology : A Guide to Iris Analysis and PreventiveHealthCare - By Adam J. Jackson
2. Iridology: How to Discover Your Own Pattern of Health and well being Through theEye -By DorothyHall

3. Iridology : A Complete Guide to Diagnosing Through the Iris and all related forms of treatment -By Davis andFarida.

4. Iridology : AlternativeHealthSeries - By Adam J.Jackson

5. Vision of Health:UnderstandingIridology - By Jensen, Bernard and Booden, Donald.

6. Eyes Talk: Through IridologyBetterHealth - By VriendJoha.

6.MORDERN DIAGNOSIS

Course type- Core Course

Course code–BNY 311, BNY312P

Credits-5

1. Objective:

The objective of teaching Diagnostic Methods in Conventional Medicine to undergraduate students is to provide them with comprehensive knowledge of diagnostic methods employed by conventional doctors that can be used efficiently to diagnose various diseases, for diagnosis as well as prognosis.

THEORY

Section A-Clinical Diagnosis

I. Examination of Patients :-

1.Approach to apatient

2. History taking and case sheetwriting

3. Symptomatology

4. Examination of VitalData

5. Importance of height, weight, abdominalgirth

6. General physicalexamination

7. Examination of breasts, back, spine andgenitals

8. Systemic examination of thepatient

a)Abdomen (Digestivesystem)

b) CardiovascularSystem

c) RespiratorySystem

d) Renalsystem

e) Central Nervoussystem

f) Locomotor system

g) Examination of ear, nose andthroat

h) Gynaecological examination

9. Provisional Diagnosis

II. Routine and special Investigations:-

1. LaboratoryInvestigation

a) Urineanalysis

b) Stool examination

c) Blood examination

i) Peripheral smear, Total WBC Count, Differential WBCCount

ii) Erythrocyte sedimentation rate (E.S.R), HbEstimation

iii) Blood Sugar, Blood Urea, Serum uric acid, Serum cholesterol, Serum lipid profile, Serumcreatinine.

2. Radiological Investigation:-

a) Plain chestX-Ray

b) K.U.B.

c) Lumbar and cervicalspine

d) Skull and paranasalsinuses

e) Joints

3. Contrast Radiography :-

a)Cholecystography

b) Pyelography

d)Angiography

e) Bronchogram

4. Electrocardiography

5. Echo-Cardiography

6. Coronaryangiography

7. Electro-Encephalography

8. Bio-chemical investigations-

a)Liver functiontests

b) Creatinine clearancetest

c) Vanillo-mandellic acid (VMA) excretion test inurine

d) SGOT andSGPT

e) LDH

f) CPK

9. DiagnosticParacentesis

10. DiagnosticThoracocentesis

11. Lumbar Puncture and CSFanalysis

12. Radio-active Iodine up-takestudies

13. Thyroid T3, T4 estimation

14. Diagnostic skintests

15. Endoscopicprocedures

16. Ultra-sonography

17. Computerised tomographic scan (CTScan)

18. Magnetic Resonance technique(MRI)

19. Positron Emission Tomography(PET)

20. DopplerStudy

III. Final Diagnosis

Section B- FIRSTAID

1. General principles of FirstAid

2. Wounds Control of hemorrhage,Epistaxis

3. Shock- Classification and treatment

4. Dog bite, Snake bite, Scorpionsting

5. Burns andScalds

6. Heat exhaustion, heat stroke and fainting, frostbite

7. Fractures, dislocations, sprains andstrains

8. Poisoning

9. Epileptic fits, convulsions inchildren

10. Aspiration of foreignbody

11. Artificial respiration

12. Bandages of differenttypes

13. Unconsciousness and general principles oftreatment

Section C-

Recognition, Evaluation of Clinical Emergencies.

I. Cardio Vasular System:-

1. Acute myocardial infarction

2. CardiogenicShock

3. Cardiacarrhythmias

4. Cardiacarrest

II. RespiratroySystem-

1. Hemoptysis

2. Status asthmaticus

3. Spontaneouspneumothorax

4. Acute respiratoryfailure

III. Gastro Intestinal System:-

1. AcuteVomiting

2. Perforation of PepticUlcer

3. Hemetemesis

4. Hepatic Precoma and coma.

IV. Central Nervous System:-

1. Unconscious patient

2. Cerebrovascularcatastrophes

3. Convulsions

4. Status epilepticus

V. Renal System:-

1. Acute renal failure

2. Renal colic

3. Hematuria

VI. Endocrine and Metabolism:-

1. Thyroid crisis

2. Adrenal Crisis

3. Diabetic Keto acidosis andcoma

4. Hypoglycemia

VII. Miscellaneous Emergencies-

1. Syncope

2. Acute peripheral circulatoryfailure

3. Acutereaction

4. Hypothermia

RECOMMENDED TEXT BOOKS :-

1. Hutchinson"sClinicalMethods -ByChamberlin

2. ClinicalMethods - ByP.S.Shanker

3. Manual ofClinicalMethods - By JaiVakil

4. ClinicalDiagnosis - By P.J.Mehta

5. ModernDiagnosis - By Red CrossSociety

6. Oxford"shandbookof ClinicalMedicine - By St. John Ambulance Association.

7. FirstAid - By L.C. Gupta andothers

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

a) Understand the procedures and nuances in approaching a patient and taking a detailed history and writing a casereport;
b) Illustrate examination procedures and techniques generally as well as for specific systems and make provisional diagnoses of commondiseases;
c) Describe laboratory investigations used for supporting the provisional diagnosis made after history taking andexaminations;
d) Analyse and interpret radiological investigations, biochemical investigations, sonography, EEG, ECG, EMG, echocardiography, CT, PET, MRI, etc for diagnostic and prognosticpurposes..
e) Analyse and interpret any further investigations required for the provisional diagnosismade.

Assessment Scheme:

Theory – 70Marks
InternalAssessment – 30Marks

MORDERN DIAGNOSIS PRACTICALS

1. History taking and physical examination ofcases.

2. Case sheet writing in different general cases(25)

3. Demonstration of equipments and instruments used for investigation in modern diagnostics

4. Demonstration tour of an ultra modern super-speciality Hospital to see the latest techniques of moderninvestigations.

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

1. Illustrate the procedures and nuances in approaching a patient and taking a detailed history and writing a casereport;
2. Correlate examination procedures and techniques generally as well as for specific systems and make provisional diagnoses of commondiseases;
3. Deleniate laboratory investigations used for supporting the provisional diagnosis made after history taking andexaminations;
4. Analyse and interpret radiological investigations, biochemical investigations, sonography, EEG, ECG, EMG, echocardiography, CT, PET, MRI, etc for diagnostic and prognosticpurposes.
5. Demonstrate knowledge of invasive tests such as paracentesis, thoracocentesis, lumbar puncture, laparoscopy, endoscopy, biopsy, etc., take a case history with examinations and prepare a detailed casereport.
6. Analyse and interpret any further investigations required for the provisional diagnosis made.

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30 marks
Practicalinternalassessment	-	10Marks

7. SPA THERAPY

COURSE TYPE- SKILL ENHANCEMENT COURSE
COURSE CODE - BNY 313

1. INTRODUCTION TO ANATOMY & PHYSIOLOGY

Skeletal System
Muscular System
Nervous System
Lymphatic System
Cardiovascular System
Digestive System
Skin System

2. HISTORY AND INTRODUCTION TO SPA

Club spa
Cruise ship spa
Day spa
Destination spa
Medical spa
Mineralspring's spa
Resort/hotel spa

3. Special Massage Therapy like Swedish Massage, Ayurveda Massage, Thai Massage, Aroma therapy

4. Spa Product Knowledge

Herbs
Essential Oils
Aromatic Oils
Preservatives
Active Ingredients
Carrier Oils & Base Creams
Pre Blended Oils
Pre Blended Creams, Soaps, Shampoos, Lotions
Licensing (Drug Control)
Product Testing
Efficacy Shelf
Life Storage
Contamination
Allergies
Product Handling Dispensing
Self-Protection.

FINAL YEAR

1.NUTRITION DIETETICS AND HERBS

Course type- Core Course

Course code–BNY 401, BNY402P

Credits-4

OBJECTIVE:

The objective of teaching Nutrition and Medicinal Herbs to undergraduate students is to enable them to analyse nutritional profiles of their patients and prescribe diets to them based on nutritional requirements, as well as use herbs in the management of various diseases.

THEORY

I. Introduction ofNutrition:-

1) History ofNutrition

2) Progress in FoodScience

3) Basic Principles ofNutrition

4) Food , Nutrition &Health

5) Need of CompleteNutrition

6) Nutritional Basis of Life and Life in Connection with Food

7) Composition of Body in Relation toNutrition

II. Components of Food and theirClassification:-

1) Carbohydrates

2) Proteins

3) Lipids

4) Vitamins

5) Minerals and TraceElements

6) Water and Electrolytes

7) Metabolism and Energy Needs of thebody

8) Energy Balance and the regulation of the bodyweight

9) Enzymes

III. A. FoodGroups:-

1) Cereals

2) Millets and Coarsegrains

3) Pulses

4) Green leafyVegetables

5) OtherVegetables

6) Roots &Tubers

7) Fruits

8) Milk & Milk Products

9) Sugar &Jaggery

10) Honey

11) Nuts &Oil-seeds

12) Spices &Condiments

B. Nutritive Values of Food ingredients Commonly used in India

IV. The Science & Fine Art of Food &Nutrition:-

1) Philosophy ofNutrition

2) Calories: Measuring what weeat.

3) Law of theMinimum

4) Organic foods & Organicacids

5) Organic Vs. InorganicFoods

6) Salt Eating, Salt Stimulation Vs. GoodDiet

7) Fruitarianism andVegetariansm

8) Nature‟s FoodRefinery

9) The Digestibility ofFoods

10) Mental Influences inNutrition

11) Enjoying our Food

12) Absorption ofFood

13) Uses ofFood

14) How much shall we eat?

15) How toEat?

16) Correct Food Combining - Food CombiningCharts

17) Effects Of Cooking

18) Uncooked Foods (RawEating)

19) Salads

20) ConservativeCooking

21) Effects of DenaturedFoods

22) Under Nutrition

23) Hypo-Alkalinity

24) Diet Reform Vs. SupplementalFeeding

25) Beginning the ReformDiet

26) Building theteeth

27) The EliminatingDiet

28) Feeding InDisease

29) The Three Year NursingPeriod

30) Cow‟sMilk

31) Pasteurization

32) Mother‟sMilk

33) Should Baby Beweaned?

34) No Starch forInfants

35) Three Feeding aDay

36) Feeding ofInfants

37) Feeding Children From Two to SixYears

38) Man Shall Not Diet With FoodAlone

39) Our Denatured Soil

V. Food as Medicine - KnownFacts

1) Proteins are BodyBuilders

2) Proteins can be BodyKillers

3) Fats -Concentrated BodyFuels

4) How Foods MayPoison?

5) Vegetables as Do It- YourselfTherapy

6) Solid Foods : When, What Kind, HowMuch?

7) Vitamins and Supplements for allages

8) The Vitamins: Proof of natural foodinstincts

9) Facts about commonfoods

10) The Stimulant Delusion

VI. Food &Toxins

1) Infective agents & Toxins infood

2) Food Adulteration and ConsumerProtection.

3) Food additives

4) Health hazards of added chemicals infoods

5) Nutrition & Infection

6) Study about adverse effect of Alcohol &Tobacco

VII. Nutritional Diagnosis

VIII. Public Health andNutrition-

1) Education inNutrition

2) Nutritional Program

3) Nutrition Survey andMethodology

4) Balanced Diets

5) Nutritional assessments, Social aspects of theNutrition

6) Fortification andEnrichment

7) Exercise in BalancedDiet

8) Nutrition in relation to disastermanagement

9) Nutritional requirements of specialgroups

IX. Nutrition inHealth-

1) Human Nutritionalrequirements

2) Nutrition in Pregnancy , Lactation , Infancy, Childhood, Adolescence and OldAge

3) Nutrition andImmunity

X. Nutritional deficiency diseases, Preventive and Curativeapproach

XI. The Optimum Nutrition Program for Correcting Disease & Restoring , Building and Maintaining Health

DIETETICS

THEORY

1. Concept of Health inNaturopathy

2. Dietetic principles inNaturopathy

3. Concept of wholesomediet

4. Medicinal values ofFoods

5. Natural qualities / properties / character foods in Naturopathy / Ayurveda / Modern Nutrition

6. Natural food andhealth-

a) Importance of Green Vegetables, other vegetables, fruits and theingredients

b) Chemical Composition of different raw juices , their effects and uses- Ginger, Raddish, Bottlegourd,Wheat grass, Beetroot, Cabbage, Carrot, Cucumber, Lettuce, Garlic, Onion, Lemon, Papaya,Knol-kol,Pineapple, Mango, Tomato, Pomegranate, Grapes, Apple, Bittergourd, Ashgourd, Bael fruit , Spinach,Pumpkins, Watermelon, Indian Gooseberry , Orange , Sweet Lime, whey water & Neeraetc.

c) Sprouts, their Nutritive Values and Methods ofSprouting

d) Food Values in Raw states, germinated form and Cookedform

e) Comparison with raw and cookedfoods

7. Diet for Physical Labor & Mentalwork

8. Arguments from comparative Anatomy , Physiology, Chemistry &Hygiene

9. Naturopathic Hospital dietetics and theirclassification

10. Disease management withdiet

Diabetes, Renal diseases, Anaemia, PEM, Peptic Ulcer, Constipation, Malabsorption syndrome,

Liver diseases like Jaundice, Fatty liver etc. HBP, LBP, Atherosclerosis, Gall Bladder disease,

Cancer and arthritis

11. Food allergy and dietarymanagement

12. Diet for Weight Reduction & Weight Gaining

13. Dietary modification for specificcondition

14. Dietary reaction for a different population groups with special reference to pregnancy,lactation,Infancy

15. Seasonal changes in the dietary pattern inAyurveda/Naturopathy and Modern nutrition

16. Food ,Sanitation, hygiene andhealth

17. Naturopathic approach towards vegetarian and non-vegetarianfood

18. Harmful effects of the food colours, preservatives, pesticides, artificialmanures

19. Dietary fibre and its therapeutic effects (e.g. constipation, ano-rectal disorders, colonicdisorders,

GIT disorders, D.M. etc.)

20. Geriatric nutrition anddiet

21. Diet in exercise, sports, games andathletics

22. PaediatricNutrition

23. Nutrition and life Span: How to Prolong Life & PostponeDeath?

24. Diet, Fasting and Disease .

25. Vegetarianism: Its Positive and Negative aspects inNaturopathy

26. Customs and manners of eating:Different views, Effect of emotional state on food utilisation

27. Kalpa therapy in Naturopathy: Grapes, Mango, Matha, MilkEtc.

28. Ideal Diet, China study & Genuine HealthCare

29. Food , Eating , Self-Healing , Recovery ofvigor

30. Drugs Increase Nutritional Requirements

31. Toxicless Diet, Body Purification & HealingSystem

32. How Vitamin-C keeps you Young, NaturalAnti-oxidants

33. Question of Quality & Quantity ofFood

34. Hygienic Food & HygienicCookery

35. Physio-Pharmacology of Foods:-

A) Anti- Bacterial / Anti-SepticFoods

B) Anti- CoagulantFoods

C) Anti- DepressantFoods

D) Anti- DiabeticFoods

E) Anti- DiarrohealFoods

F) Anti-InflammatoryFoods

G) Anti-Oxidant Foods

H) Anti-Viral Foods

I) Anti- HypertensiveFoods

J) Calming & SedativeFoods

K) Anti-Cancerous Foods

L) CarminativeFoods

M) Cholesterol LoweringFoods

N) DiureticFoods

O) Immunity EnhancingFoods

P) Life Prolonging Foods

Q) Memory EnhancingFoods

R) Expectorant Foods

S) OestrogenicFoods

T) AnalgesicFoods

U) AphrodisiacFoods

V) Anti-UlcerFoods

W) Anti-PyreticFoods

X) Anti-SpasmodicFoods

Y) Spoliative & Sudorific / DiaphoreticFoods

Z) EliminativeFoods

Aa) Cooling & Heating Foods

Ab) Anti- Emetic Foods

Ac) Purgative & Laxative Foods

1. HERBOLOGY

THEORY

a. Introduction to Herbology. The following herbs are to be studied with respect to their source and therapeuticuses.

b) Botanical details shall be avoided..

c) Botanical Name :-

1. EmblicaOfficinalis.

2. CassiaFistia.

3. Ficus Glomerata.

4. VelivertaZizanodies

5. CinnamomumCamphora

6. MonardicaCharantia

7. Tribulus Terrestris

8. MyristibaFragrans

9. CuminimCyminum

10. SesamumIndicum

11. Ocimumsanctum

12. PunicaGranatum.

13. CoriandrumSativum.

14. AzadirachtaIndica.

15. AlliumCepa.

16. PiperLongum

17. PsoraleaCorylifolia

18. Taxus Baccata .
19. AegleMarrnelos
20. Semecarpus Anacardium
21. Phyllanthus Niruri
22. PiperNigrum
23. SanthalumAlbum
24. SanthalumAlbum
25. AlliumSativam
26. MimosaPudica
27. Acorus Calamus
28. Asparagus Racemosus
29. RauwoffiaSerpentina
30. CurcumaLonga
31. TerminaliaChebula
32. FerulaNarthex
33. SyzygiumAramaticum
34. TerminaliaBelerica
35. GingiberOfficinalis

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

- **a)** Describe fundamentals of nutrition, with respect to different nutrients and foodgroups;
- **b)** Illustrate details of nutritional requirements for different age groups, as well as pregnant and lactatingwomen;
- **c)** Classify modern nutrition to traditional Naturopathicdiets;
- **d)** Illustrate the use of specific herbs in common diseases, with therapeutic values.

e) Analyse the nutritional status of a patient; Plan, implement and evaluate nutritional advice for people of different ages and patients of different diseases, including the use ofherbs.

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

NUTRITION DIETETICS AND HERBS PRACTICALS

1. Visits to the dietetic department of thehospital
2. Menu planning using natural foods and raw foods in generalpatients
3. Demonstration ofsprouts
4. Preparation of low cost balanced diet for different population groups using natural foods
5. Modification of normal diet in consistency-liquid fullsoft
6. Canteen duties at nature curehospital
7. Knowledge of Sathvic food preparation at nature curehospital
8. Visit to different nutrition centres like NIN - Hyderabad, CFTRI(Mysore)

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

a) Understand the procedures and nuances in approaching a patient and taking a detailed history and writing a casereport;
b) Illustrate examination procedures and techniques generally as well as for specific systems and make provisional diagnoses of commondiseases;
c) Describe laboratory investigations used for supporting the provisional diagnosis made after history taking andexaminations;
d) Analyse and interpret any further investigations required for the provisional diagnosismade

Assessment Scheme

PracticalAssessment - 90 Marks

Theoryviva	-	60marks
Practicalviva	-	30marks

Practicalinternalassessment- 10Marks

Recommended Text Books-

1. Davidson and Passamore Human Nutrition and dietetics-By Passmore,Eastwood.
2. Cinical Dietetics and Nutrtion- By F.P.Antia
3. Normal and Therapeutics nutrition" - By Corinne H. Robinson Marilyn R.Lawler.
4. Essentials of Food and Nutrition-BySwaminathan
5. Foundations of Normal and Therapeutic Nutrition-By RandallTeltal.
6. Nutrition and dietetics-By SubhaginiJoshi.
7. Sprouts-By J.D. Vaish, YogaSamsthan
8. Medical Secrets of Your Food-ByAman.
9. Mucusless Diet healing System - By Prof. ArnoldEhret
10. Raw Eating - ByAterhov
11. The Science and Fine Art of Food & Nutrition. - By Herbert M.Shelton.
12. Nutritive value of Indian foods - By NIN B.S. NarsingaRao.
13. Text book of Nutrition And Dietetics - By SriLakshmi
14. All publications of NIN,Hyderabad

Reference Book-

1. FoodandNutrition -ByGupta
2. Modern Nutrition in HealthandDisease -ByShills
3. HumanNutrition -By Maxine E.Mc. Divit and Sumati Rajgopal
4. SuperiorNutrition -By Herbert M.Shelton
5. All publicationsonNutrition -By National institute of Nutrition,Hyderabad.

6. Periodicals of Indian Journal of MedicalResearch.

7. Indian Journal of Nutrition andDietetics

8. Nutrition survey ofIndia

9. A Complete Guideto Vitamins -Edited By J.I. Rodeleand Staff.

10. Nutrition - By Chaney andRoss.

11. The Complete Book of FoodandNutrition - By J.I. Rodele andstaff.

12. FoodRemedies - By S.J.Singh.

13. TheSproutingBook - By AnnWigmore

14. Dictionary ofNaturalFoods - By WilliamL.Esser

15. Healing throughNaturalFoods - By H.K.Bakhru

16. Food CombiningMadeEasy - By Herbert M.Shelton

17. Encyclopedia of Fruits, Vegetables, Nuts & Seeds for HealthfulLiving - By JosephM.Cadans

18. Nutritive Value of IndianFoodStuffs - By S.J.Singh

19. Diet&Nutrition - By RudolphBallentine

20. Nature‟sHealingGrasses - By H.E.Kirschner

21. Diet to DissolveKidneyStones - By Dr. S.J.Singh

22. The Vitamin &HealthEncyclopedia - By JackRitchason

23. Food is YourBestMedicine - By Henry G.Bieler

24. NaturalDietetics - By Dr. J.M.Jussawala

25. TheGrapeCure - By JohannaBrandt

26. Aahar hiAushadhihai - By Dr.Hiralal

27. The Hippocrates Diet andHealthProgram - By AnnWigmore

28. The Natural FoodofMan - By HerewardCarrington

29. Sugar - The CurseofCivilization - ByJ.J.Rodale

30. FoodsThatHeal - By H.K.Bakhru

31.AnubhavaurSar - By Dr. Sohanlal NishkamKarmyogi

32. Protective Foods in Health&Disease - By KulranjanMukherjee

33. MiracleofGarlic - By Dr. PaavoAirola

34. Old age, its causes&prevention - By SanfordBennett

35. The Encyclopedia of Health and Physical Culture(Vol2) - By Bernarr Macfadden

HERBOLOGY BOOKS

1) Fundamentals of Ayurveda - By K.N.Udupa

2) Fundamentals of Ayurveda (ISM, Bangalore Publication) - By Mahadev ShastriM.

3) Swastha Vriptta Vignana - By R.H.SINGH

4) Arogya Prakash - By RamnarayanaVaidya

5) Astaanga Hirudaya - ByVagbhatta

6) Charak Samhita - ByCharak

7) Sushrut Samhita - BySushrut

8) Herbs that Heal - By H.K.Bakhru

2.OBSTRETRICS ANDGYNAECOLOGY

Course type- Core Course

Course code–BNY 403, BNY404P

Credits-6

OBJECTIVE:

The objective of teaching Obstetrics and Gynecology to undergraduate students is to provide them with the comprehensive knowledge of anatomy, physiology and pathophysiology of the reproductive system and gain the ability to optimally manage common problems.

. Objectives:

- **Knowledge:**

After the completion of the course, the student shall be able to:

1. Delineate the anatomy, physiology and pathophysiology of the reproductive system and the common conditions affectingit;
2. Detect normal pregnancy, labor, andpuerperium;
3. Elucidate the leading causes of maternal and perinatal morbidity and mortality;
4. Understand the principles of contraception and various methods employed, methods of medical termination of pregnancy, sterilization and their complications;
5. Recognize the use, abuse and side effects of drugs in pregnancy, pre-menopausal and post-menopausalperiods;
6. Explain the national programmes of maternal and child health and family welfare and their implementation;
7. Assess different gynecological diseases and describe principles of their management;
8. Explain the indications, techniques and complications of procedures like Caesarean section, laparotomy, abdominal and vaginal hysterectomy, and vacuum aspiration for Medical Termination of Pregnancy(MTP).

- **Skills:**

After the completion of the course, the student shall be able to:

1. Examine a pregnant women, recognize high risk pregnancies and make appropriatereferrals;
2. Recognise complications of delivery and provide postnatalcare;
3. Recognize congenital anomalies ofnewborn;
4. Advise a couple on the use of various available contraceptivedevices;
5. Perform pelvic examination, diagnose and manage commongynaecological problems including early detection of genitalmalignancies;

6. Interpret data of investigations like biochemical, histopathological, radiological, ultrasoundetc

- **Integration**

At the completion of training, the student should be able to integrate knowledge of Obstetrics and Gynaecology to manage related ailments and educate masses on family planning norms.

THEORY

Section-A

1. Basic Anatomy & Physiology-;

a) Anatomy and Physiology of female genital organs andpelvis.

b) Maturation and fertilization ofovum.

c) Development ofplacenta.

d) Embryology ofuterus.

2. Physiology of Pregnancy :-

a)Maternal changes due topregnancy

b) Diagnosis of pregnancy

c) Differential diagnosis ofpregnancy

d) Foetus in normalpregnancy

e) Ante-natal care.

3. Physiology of Labour :-

a)Causation and stages oflabour

b) Mechanisms oflabour

c) Conduct of Delivery - the Naturalmeans.

4. Physiology ofPuerperium

a) Phenomena of normal puerperium

b) Care ofPureperium

c) Care of new-bornchild

5. Pathology ofPregnancy

a) Hyperemesisgravidarum

b) Anaemia in pregnancy

c) Diseases of urinarysystem

d) Diabetes inpregnancy

e) Abortion

f) Ectopicpregnancy

g) Ante-partumhaemorrhage

h) Placentaprevia

6. Pathology ofLabour

a) Occipito - posteriorposition

b) Breechpresentation

c) Multiplepregnancy

d) Contracted pelvis

e) Management of labour in contractedpelvis

g) Complications of 3rd stage of labour

7. Affection of New-Born

a) Asphyxianeonatorum

b) Pretermbaby

8. Obstetrical Operations

a) Forceps

b) Cessarean section

c) Induction of abortion andlabour

9. Pathology of Puerperium

Puerperal infections

10. Miscellanencous

a) Perinatal mortality and Maternalmortality

b) Post-datedpregnancy

c) Placenta insufficiency.

d) Control ofcontraception

e) Medical Termination ofPregnancy.

f) Pre-termlabour.

11. NaturopathicApplication:

a) Hydrotherapy inPregnancy

b) Importance of Naturopathic Diet in Pregnancy &Puerperium

c) Underwaterdelivery

12. Yogicapplication:

a) Exercises in -

st I Trimester

IInd Trimester

Illrd Trimester

Puerperium

b) Pelvic FloorExercises

13. NaturalChildbirth

14. Birth Control: Natural andUnnatural

15. Holistic Approach to menstrualProblems

16. Vaginitis: A NaturalApproach

17. Breast Cancer Can Be Prevented

18. Vericose Veins: Prevention andTreatment

19. Understanding the Pregnancy: The Miracle ofCreation

20. What Smoking Does to Women?

21. Depression : A NewEpidemic

22. What Woman Should Know AboutAnaemia?

23. Overweight: Must It Be A LifetimeStruggle?

24. Menopause: Dreadful Affliction or Glorious Experience?

25. Uterine Tumors can Be Prevented

Section - B

1. Gynaecologicaldiagnosis

2. Malformation of Female genitalorgans

3. Diseases ofvulva

4. Diseases ofvagina

5. Sexually transmitted diseases infemale

6. Diseases of urinarysystem

7. Trophoblasticdiseases

8. Disorders of menstruation

9. Prolapse ofuterus

10. New Growths ofuterus

11. Endometriosis andadenomyosis

12. Diseases ofovary

13. Pelvic inflammatorydiseases

COURSE OUTCOME

After the completion of the course, the student shall be able to:

a) Illustrate the anatomy, physiology and pathophysiology of the reproductive system and the common conditions affecting it, Detect normal pregnancy, labor, andpuerperium;

b) Classify the leading causes of maternal and perinatal morbidity and mortality;
c) Understand the principles of contraception and various methods employed, methods of medical termination of pregnancy, sterilization and their complications;
d) Describe the national programmes of maternal and child health and family welfare and theirimplementation;
e) Analyse different gynecological diseases and describe principles of their management, differenttechniques.
f) Analyse a pregnant women, recognize high risk pregnancies and make appropriatereferrals;

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

PRACTICALS

1. History taking of ante-natal and gynaecologicalcases

2. Demonstration of physical examination of ante-natal and gynaecologicalcases

3. Demonstration of conductive labour, normal delivery and use of minor instruments during

Delivery

4. Demonstration of various equipments used in obstetrics andgynaceology

5. Case -history writing of ante-natal and gynaecological cases(25)

COURSE OUTCOME

After the completion of the course, the student shall be able to:

g) Illustrate the anatomy, physiology and pathophysiology of the reproductive system and the common conditions affecting it, Detect normal pregnancy, labor, andpuerperium;
h) Classify the leading causes of maternal and perinatal morbidity and mortality;
i) Understand the principles of contraception and various methods employed, methods of medical termination of pregnancy, sterilization and their complications;

j) Describe the national programmes of maternal and child health and family welfare and theirimplementation;
k) Analyse different gynecological diseases and describe principles of their management, differenttechniques.
l) Analyse a pregnant women, recognize high risk pregnancies and make appropriatereferrals;

Assessment Scheme

PracticalAssessment - 90 Marks

Theoryviva - 60 marks

Practicalviva - 30 marks

Practical internal assessment- 10Marks

Recommended Text Books -

1. ClinicalObstetrics - By Mudaliar andMenon
2. Text BookofObstetrics - By C.S.Dawn
3. Shaw"sTextBookof Gynaecology -ByShaw
4. Text BookofGynaecology - By Dr.Dutta
5. Text BookofObstetrics - By Dr.Dutta
6. Text BookofGynaecology - By Nina & MichaelShandler
7. Yoga for Pregnancy & Natural childBirth
8. Women Disease & EasyChild Birth - ByJ.H.Tilden
9. Everywomen"sbook. -By Dr.PaavoAirola

Reference Books-

Illustrated Book of Obstetrics&Gynaecology - By Dr.Gevan

3.YOGA THERAPY

Course type- Core Course

Course code – BNY 405, BNY 406P

Credits-5

1. Objective

The objective of teaching *Yoga* Therapy to undergraduate students is to provide them with comprehensive knowledge of *Yoga* and the physiological effects of various *yogic* practices and utilisation of the same for therapeutic purposes.

THEORY

1. Introduction to Yogic Therapy / Basis of YogicTherapy

2. Role of Asanas in curing variousdiseases

3. Specific importance of Pranayama in curing variousdiseases

4. Vital role of Bandhas, Mudras, Drishtis, in curing variousdiseases

5. Role of Shat-kriyas in curing various diseases particularly digestivedisorders

6. Role of general exercises

7. The effects of various Yogic practices on different systems

Viz : Skeletal system, Endocrine System, Nervous system, Digestive System, Respiratory system, Excretory system, Cardio-vascular system, Muscular system, Reproductive system

8. Research methods in yogic therapy, statistical analysisetc.

9. Yogic therapyfor:

a. Cardio-Vasculardiseases

b. Psychiatricdiseases

c. Mental retardeddiseases

d. Neuro-Musculardiseases

e. Gastro-intestinaldiseases

f. Hormonal diseases

g. Respiratorydisorders

h. Metabolicdisorders

i. Opthalmologicdisorders

j. Paediatricdisorders

k. E.N.T.Disorders

l. Obstetrics & Gynecologydisorder

10. Meditation and its applications on psycho-somaticdisorders

11. Yoga & RelaxationTechniques

a. QRT-Quick RelaxationTechnique

b. IRT - Instant Relaxationtechnique

c. DRT-Deep Relaxationtechnique

12. Teaching methods of Yoga to Public, Students and patients. Model lesson planning and adoption of Yoga in education system, limitations, vidhi and Nisheda (right andwrong)

13. Workshop on Yogictherapy

14. Dessertations

15. Advanced techniques of Yogatherapy

16. Pranic Healing & ReikiTherapy

17. Yoga and Mental health-Total integration of personality, correct mental behaviour and attitude, harmonial relationship of body and mind, self content tranquilising effect, psychology of spiritual growth and spiritual value, toning judgement, pure consciousness, mode of living and disciplinedlife.

18. Applied psychology:-

a. Stress -Its causes, effects and control

b. Historical perspective, Identifying psychologicaldisorders

I. AnxietyDisorders

ii. DissociativeDisorders

iii. Somato formDisorders

iv. Sexual Disorders

v. Mood Disorders

vi. PersonalityDisorders

vii. Schizophrenia

c. Therapy for psychologicaldisorders

psychotherapy, therapy of Interpersonal relations, behavioral therapy

COURSE OUTCOME

After the completion of the course, the student shall be able to:

1. Describe the physiological effects of various *yogic* practices like *kriyas*, *asanas*, *pranayamas*, *mudras*, *bandhas* , *drishtis*, Guided relaxation and Meditation;
2. Dfine rules and regulations of *Yoga* to befollowed;
3. Understand the therapeutic aspects of *Yoga* as applied to different disease conditions;
4. Illustrate the concept of health and disease in *yogic* lore and role of stress in disease causation and management of the same with *Yoga*;
5. Analyse knowledge of *Yoga* therapy in managing variousdiseases;
6. Demonstrate usage of therapeutic aspect of *Yoga* in promotive, preventive, curative and rehabilitativetherapy.

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

1.

YOGA THERAPY PRACTICAL

Demonstration and instructions of advanced yoga posture, kriyas, meditation, and advanced yoga practices.

Case discussion -25

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

1. Demonstrate basic understanding of procedures of stretching andexercises;
2. Deliver a meditative session using any of the meditativestyles;
3. Describe fundamentals of yoga, with respect to itsprinciples;
4. Analyse the patient, and modulate a yoga session for thesame.

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30 marks
Practicalinternalassessment	-	10Marks

REFERENCE BOOKS :-

1. Yogictherapy - By Dr. Vinekar, Govt. of India.Publication.
2. Yogictherapy -By Dr.Giarde
3. Treatmentofcommon - By Swami Satyananda Saraswati.

Diseases throughyoga

4. Seminars on Yoga, Science&Man - By CCRYN, DelhiPublication.
5. YogaNidra - By Swami Satyananda Saraswati Bihar School of Yoga
6. The Ancient Science and

Art ofPranicHealing. - By Choa KokSui.

7. PranicPsychotherapy - By Choa KokSui.
8. Psychology - By Robert ABaron.
9. Garifeld Special Psychotherapy - By John Wiley &Sons.
10. Hand Bood ofBehavior

Modification&therapy - By Plenumpress.

11. Stress &MentalDisorders. - By Crarrett J.E. Raven Press,Newyork.
12. Counselingandevidences - By Adams J.T. moe. Millionco.
13. Stress Management Research papers. - By V.K. YogaBangalore.

4.HYDROTHERAPY

Course type- CoreCourse

Course code – BNY 407, BNY 408, BNY409P

Credits-4

OBJECTIVE:

The objective of teaching Hydrotherapy and Mud Therapy to undergraduate students is to provide them with comprehensive knowledge of treating diseases using water and mud, and the physiological effects of various kinds of such applications, and utilisation of the same for therapeutic purposes.

Objectives:

- **Knowledge:**

After the completion of the course, the student shall be able to:

a. Describe the properties and chemical composition of water andmud used for therapeutic purposes, physiology of the skin, production of heat and body temperature regulation, which are essential as a foundation forhydrotherapy.

b. Illustrate physiological effects of hot and cold water upon thedifferent systems of the body and applications to reflexareas**;**

c. Explain action and reaction mechanisms and physiology, withtheir effects anduses

d. Demonstrate use of water in preservation, acute diseases,chronic diseases;

e. Show in-depth knowledge of general principles of hydrotherapy, therapeutic applications of water, along with therapeutic actions, indications and contra-indications; and classification of mud, storing of mud, modes of mud treatment, cosmetic uses of mud andresearch updates in hydrotherapy and mudtherapy;

f. Demonstrate techniques and procedures of various types of hydriatic applications;

- **Skills:**

After the completion of the course, the student shall be able to:

1. Utilise knowledge of hydrotherapy and mud therapy in managing various diseases;
2. Demonstrate usage of therapeutic aspect of hydrotherapy and mud therapy treatments in promotive, preventive, curative and rehabilitativetherapy.
3. Institute and evaluate remedial measures in hydrotherapy for various disease conditions in clinical as well as researchsettings.

- **Integration**

  At the completion of training, the student should be able to integrate knowledge of hydrotherapy in various diseases and efficiently utilise the same for therapeutic purposes.

THEORY

PAPER-I

1. Introduction andHistory

2. Physical properties and chemical composition of water

3. Physiological basis of Hydrotherapy:- The Skin and its anatomical construction, functions of thebody

4. Production of heat and its distribution in the body, regulation of the body temperature, conditions that increase and decrease heat production in thebody, body heat and bodytemperature

5. Importance of water to humanbody.

6. Physiological effects of water on different systems of thebody

i) General and Physiological effects of heatupon:-

a. Skin

b. Respiration

c. Circulation

d. Nervous System

e. Heat and its production, dissipationetc.

f. Tactile and temperaturesense

ii) General and physiological effects of cold upon skin, respiration,circulation, nervous system, G.I.T., Body temperature and itsmaintenance.

7. Reflect areas of the body, results of the application of hot and cold over reflex areas

8. Action and reaction, incomplete reaction, Conditions that encourage and discourage reaction, internal reaction, thermic reaction, modified thermicreaction

9. Place of water inpreservation

10. Place of water in Acutediseases

11. Place of water in Chronicdiseases

12. Magnesium sulphate - use inHydrotherapy

Assessment Scheme:

Theory	**–**	**70Marks**
InternalAssessment	**–**	**30Marks**

PAPER - II

1. General Principles ofHydrotherapy

a) General rules ofhydrotherapy

b) Therapeutic significance ofreaction

c) Adaptation of individualcases

d) Exaggeration of symptoms under treatment, the untoward effects and how to avoid them

e) General indications and contra- Indications

2. Therapeutic actions and use of Hydrotherapy:

a) Classification of Hydriatic effects, General principles excitation andDepression

b) Primary excitant effects when to apply and when not toapply

1. Local haemostaticeffects

2. Cardiac effects Hydratic hearttonics

3. Uterinc excitations, emanogogiceffects

4. Vesicalexcitations

5. Intestinal excitations, peristaliticeffects

c) Secondary excitanteffects:-

1. Restorativeeffects.

2. Tonic effects of cold water, physiological effects of cold water, Cold water Vs. Medical tonics, application diseases.

3. Anaemia, Neurasthenia, Hypochondria Cerebral congestion, Rheumatism, Diabetes mellitus, Valvular heartdiseases.

4. Calorificeffects.

5. Diaphoreticeffects.

Importance of attention to the skin in Chronic diseases - alternative & qualitative effect - Hot bath in brights diseases, Sweating baths in dropsy and obesity, Depurative or eliminative effects, Toxemia inRheumatism.

6. Expectorant effects.

7. Diuretic effects - Brights disease, Uremia -eclampsia.

8. Atonic Dyspepsia,Hyperacidity

9. Revulsive and derivative effects, flexion, revulsive methods for Combating superficial anaemia and for relief of deep congestion method adopted to anaemia of deep seated organs revulsion on analgesicmeasure.

d) Resolvent effects ,sedative effects- general sedatives - localsedatives.

i) Sedatives of the circulatory system- antiphlogestic effects, inflammation,

pneumonia, pleurisy and other acutedisorders.

ii) Nerve sedatives, hypnotic, calmative analgesic, anesthetic,antispasmodic,

insomnia, chorea, spastic paralysis, exophthalmic goiter, mania, epilepsy

and various painfulconditions.

iii) Anti- thermic and antipyretic effects, relation of heat production andheat

elimination to antipyretic methods, principles that govern the application of hydriatic measures for the reduction of temperature in fevers , methods that may be efficiently employed in various morbid conditions and effects, indications and contra- indications.

iv) Secretory and sedative effects - prophylacticuses.

a. Cold bathing in infancy and earlychildhood.

b. The cold bathing forAdults.

c. The cold baths forwomen.

d. The cold bath in old age-precautions.

3. The techniques of Hydrotherapy:-

Plain water bath:-

Coldhip bath - Kellog's & Kuhne's sitz bath

Shallowbath - for males, females hand and arm

Graduatedbath bath, foot bath, hot and cold

Naturalbath alternative legbath

Non revulsive bath

Immersion bath

Cold plunge bath

Whirl pool bath

Aeration bath

Vichy spray massage

Rapid bath, Brand -bath, Fever bathing, Sea bathing.

4. Various baths and air baths, Russian bath, Turkish bath, Steam inhalation, Hot air bath, Local hot air bath, Super hot air bath, Cold air bath, Indoor and out-door baths.

5. Pool Therapy:-

a) Introduction

b) Principles of treatment Part I and PartII.

c) Physiological and Therapeutic effects of exercise in warmwater.

d) Indications and contra -indications.

e) Dangers andprecautions.

6. Douches :-

Cold Douche

Hot Douche

NeutralDouche

Alternative Douche

Under water Douche

Contrast Douche

Horizontal Jet

Cephalic Douche

Lumbar Douche

Fan Douche

Rain Douche or Shower Douche

Heptic Douche

Circular Douche and Semi Circular Douche

Cerebrospinal Douche

Plantar Douche

Percussion Douche

Scotch Douche

Revulsive Douche

Ascending Douche

Calliper Douche

Filiform Douche

Fog Douche

Massage Douche

Shoulder Douche

Thoracic Douche

Abdominal Douche

Anal Douche

Perineal Douche

Pulmonary Douche

Cardiac Douche

Gastric Douche

Enteric Douche

Renal Douche

Articular Douche

Vapour Douche

7. Fomentation andStupes:-

The hot water bag, the siphon hot water bag, the thermopore, the mustard Fomentation, clay and glycerin poultice, charcoal poultice, cotton poultice.

8. Compresses and Packs:-

The wet sheet pack, cooling pack, cold shower pack, sweating pack, very

cold compress, proximal compress, neutral compress, alternate compress, repulsive compress, compress of ten days for injuries and eruptions, alternative ten applications to the head and spine, local packs, wet girdle pack, dry abdominal bandage.

Abdominal heating compress, Head pack, Spinal pack

Hot and cold heat compress, Hot and cold lung compress

Hot and cold gastro-hepatic compress

Hot and cold renal compress

Hot and cold intestinalcompress

Hot and cold pelvic compress

Hot and cold abdominal pack

Hot and cold spinalpack

Hot and cold pancreatic pack

SPECIAL FORMS OF COMPRESS :-

Cephalic compress, Chest pack, Triangular chest Pack, Half chest compress, Joint compress, Pelvic pack, Foot pack, Cold spinal compress, Towel chest Pack, Pericardial or cardiac compress, Hip pack, Perineal compress, Prone Packs , Lumbar compress.

9. Internal Use of Water:-

Irrigations and enema (Colon Flushing)

Cold water drinking, Hot water drinking.

Water emetic, irrigation of ear, Nasal Irrigation,

Vaginal irrigation, Intra-uterine irrigation, rectal irrigation.Enema :- Hot, warm, Cold, graduated enema.

Coloclyster, Retentive enema, Tonic Enema.

Hydriatic Prescription Making:-

a. The natural defense of theorganism.

b. Procedures for increasing vitalresistance.

c. Procedures which excite the centralganglia.

d. Procedures that increaseoxidation.

e. Measures that encourage general and local metabolic activity.

f. Procedures that increase general blood movement and local bloodsupply.

g. Measures that increase heatproduction.

h. Measures that increase the elimination ofheat.

i. Measures that combat bacterial development ofblood.

j. Measures that increases/ lessen heatelimination.

k. Hydraticincompatibility.

l. Hydrotherapy as a means of rehabilitation and healthpromotion.

m. Emergency treatments inHydrotherapy.

10. Mud Therapy:-

a) Introduction to MudTherapy.

b) Classification of mud for therapeuticuse.

c) Precautions for storingmud.

d) Methods of treatment of mud - applications, packings hot poultices,effect of mud on different system ofbody.

e) Natural mud bath, full and partial mud packs, mud plaster, thermalbath, dry pack, sand pack and sandbaths.

f)Cosmetic uses ofmud.

COURSEOUTCOME

After the completion of the course, the student shall be able to

1. Describe the properties and chemical composition of water and mud used for therapeutic purposes, physiology of the skin, production of heat and body temperature regulation, which are essential as a foundation forhydrotherapy.
2. Illustrate physiological effects of hot and cold water upon the different systems of the body and applications to reflexareas**;**
3. Explain action and reaction mechanisms and physiology, with their effects and uses
4. Demonstrate use of water in preservation, acute diseases, chronicdiseases;
5. Corelate general principles of hydrotherapy, therapeutic applications of water, along with therapeutic actions, indications and contra-indications; and classification of mud, storing of mud, modes of mud treatment, cosmetic uses of mud and research updates in hydrotherapy and mudtherapy;
6. Demonstrate techniques and procedures of various types of hydriatic applications.

Assessment Scheme

Theory – 70 marks

Internal marks – 30 marks

HYDROTHERAPY PRACTICALS

Demonstration of various therapeutic Procedure and treatments in

Hydrotherapy during clinical classes at the hospital.

At the end of final B.N.Y.S. Course, candidate should be in a position to give

treatments independently.

COURSE OUTCOME

After the completion of the course, the student shall be able to

a) Demonstrate use of water in preservation, acute diseases, chronicdiseases;
b) Correlate general principles of hydrotherapy, therapeutic applications of water, along with therapeutic actions, indications and contra-indications; and classification of mud, storing of mud, modes of mud treatment, cosmetic uses of mud and research updates in hydrotherapy and mudtherapy;

c) Demonstrate techniques and procedures of various types of hydriatic applications.

Assessment Scheme

PracticalAssessment	-	90 Marks
Theoryviva	-	60marks
Practicalviva	-	30 marks
Practicalinternalassessment	-	10Marks

TEXTBOOKS:-

1. Baths - ByS.J.Singh.
2. My Water Cure - By SebastianKeneipp.
3. Rational Hydrotherapy - By Dr. J.H.Kellogg.
4. The Healing Clay - By MichelAdserra.
5. Our Earth and Cure - By RaymondDextroit.

REFERENCE BOOKS

1. Hand Book of Hydrotherapy - By Shew,Joel.
2. Hydrotherapy in Practice - By Davis, B.C.& Harrison,R.A.
3. Medical Hydrology - By SidenyLicht.

5.PHYSIOTHERAPY

Course type- Core Course

Course code – BNY 410, BNY 411P

Credits-1.5

Objective:

The objective of teaching Physical Medicine and Rehabilitation to undergraduate students is to provide them with the knowledge and skills needed for utilisation of Physical medicine for therapeutic, rehabilitativepurposes.

THEORY

I. Basic Physics in excercisetherapy:-

1. Mechanics : Force. Gravity, Line of gravity, center of gravity in human body, base, Equilibrium. Andplanes.

Mechanical Principles :- Lever, Order of Lever, examples in human body, Pendulum, Spring.

2. Introuduction to ExerciseTherapy:-

3. Starting Position :- Fundamental Starting positions, derived position, Muscle work for all the fundamental startingpositions.

4. Classification of movements in detail :-

a) Voluntarymovements.

b) Involuntarymovements

5. Activemovements

6. Passivemovements

7. Muscle strength :-

Anatomy and physiology of muscle tissue, causes of muscle weakness/paralysis, preventing of muscles weakness/ paralysis, types of muscle work and contractions, range of muscle work, muscle assessment.

Principles of muscle strengthening / re-education, early re-education of Paralyzed muscles

8. Joint movement:-

Classification of Joint movements, causes for restriction of joint movement, prevention ofrestriction of joints range of movements , Principles of mobilizations of joint in increasing the range of motion. Technique of mobilization of stiff joint.

9. Relaxation:-

Techniques of relaxation, Principles of obtaining relaxation in variouspositions.

10. Posture :-Types, factor responsible for good posture, factor for poor development of goodposture.

11. Co-ordinadion exercises :-Definition of co-ordinated movements, in-coordinated movements.

Principles of co-ordinated movements, technique of co-crdination exercise.

12. Gait- Analysis of normal gait with muscles work, various pathologicalgaits.

13. Crutch Gait :- Introduction, crutch measurement, various types of crutch gait (indetails)

14. Neuro- musculer facilitation techniques, functionalre-education.

15. Suspension Therapy :- Principles of suspension, types of suspension therapy, effects and uses of suspension therapy , their application either to mobilize a joint or to increase joint range of motion to increase muscle power, explaining the full details of the components used for suspensiontherapy

ELECTROTHERAPY

THEORY

1. Electrical fundamentals, physical principles, structure and properties of matter, molecular atom, proton, neutron, electron, ion, etc., Electrical energy: Nature of electricity current, static electricity current, Electric potentials generated by cell, ohm"s law, joule"s law, Magnetic Energy: Nature and

property of a magnet, magnetic induction, Show rule, maxwell"s cork-screw rule.

Electro magnetic induction, principle and working of choke, coil, transformer, rectification of A.C. to D.C., Metal oxide Rectifier, semiconductor, Diode and triode, valves, principles of working in a capacitor, details of charging and discharging etc.

Transistors, measurement of current intensity,EMS and power, moving coil milometer and voltmeter.

2. Low FrequencyCurrents:-

Nature and principle of production of muscles stimulating currents, types of low frequency currents used for treatment, Therapeutic electric stimulation, Intophoresis.

3. Preparation for electro therapy, preparation of apparatus, patient treatment technique. Stimulating the muscles of extremity, back and face through the motorpoints.

4. Faradic and galvaniccurrents.

5. High frequency current treatments:-

Physics of high frequency currents, production of high frequency currents, principles, Bio Physics of heat, Physiology of heat and cold , Production, Physiological and therapeutic effects and uses. Technique of Treatments, Dangers and precautions, contra-indications of the following.

a) ShortwaveDiathermy

b) MicrowaveDiathermy

c) UltrasonicTherapy

6. Principles of radiation therapy, physics of radiation therapy, laws governing radiation, Production. physiological and therapeutic effects, uses, techniques of treatment, dangers and precautions, contraindication, etc. of the following.

a) infrared radiationtherapy.

b) Ultraviolet radiationtherapy

c) Basic principles of transcutaneous nerve stimulation and interferentialtherapy.

d) Wax therapy-physics-physiological and therapeutic effect and uses, Techniques ofapplication.

COURSE OUTCOME

After the completion of the course, the student shall be able to:

1. Illustrate principles of basic physics that act as a foundation for physical medicine
2. Describe exercise therapy in detail, including starting positions, movements and their types, muscle strength, joint movement, relaxation, posture, co-ordination, gait, walking aids, neuromuscular facilitation, suspension therapy and their therapeutic applications, including allied modalities like heat treatments andcryotherapy;
3. Understand electrotherapy in terms of fundamentals, principles, laws of electricity and magnetism, practical and theoretical aspects of electrotherapeutic applications, such as faradic and galvanic currents, high frequency currents, laser, ultrasound, radiation therapy (IR & UV), TENS and IFT.
4. Demonstrate usage of therapeutic applications of physical medicine in promotive, preventive, curative and rehabilitative therapy, focusing on rehabilitation.
5. Analyse remedial measures in *Yoga* for various disease conditions.

PRACTICALSI

(1) Interrupted/modified D.C.

(a) Stimulation of musclesdirectly.

(b) Diagnostictests

(I) F.G.Test.

(II) S.D.Curve

(III) FatigueTest.

(2) Uses of surged faradism and interrupted galvanism in various peripheral nerve lesions.

(a) Neuroproxia

(b) Axonotomosis.

(c) Neurotomosis

PRACTICALSII

(High frequency current treatment)

(a) Shortwave diathermy-setting up of apparatus including selection of method and electricity, Techniques, preparation of patient, checking, contra indications, application of SWD for various conditions and various parts of the body. Those must be practiced by thestudents.

(b) Microwave diathermy-setting up of apparatus including selection of method and electricity, Techniques, preparation of patient, checking, contra indications, application of MWD for various condition and various parts of the body. Those must be practiced by thestudents.

(c) Ultraviolet radiation: setting up of apparatus including selection of lamps technique of application of UVR for various conditions like test dose, general body bath, acne vulgaris, alopecia areata and total is, ulcers, psoriasis, rickets and general debilitypatients.

(d) Ultrasonics: setting up of apparatus, selection of dose, technique of application in various Condition and to various parts of thebody.

PRACTICALS III

(1) Demonstration and practice of Active and passivemovements.

(2) Demonstration and practice of putting suspension to shoulder joint, Elbow joint in upper limb, hip joint and knee joint in lower limbs for all movements. Demonstration of totalsuspension.

(3) Muscle strength: Demonstration and practice of strengthening, re-education of weak/paralysed muscles of both upper and lower extremity, individual group muscles, abdominal muscleexercises.

(4) Joint movements: Demonstration and practice of techniques to improve joint range of motion of hip joint, knee joint, ankle and foot in lower limb, shoulder joint, elbow joint, radio-ulnar joint, wrist joint & upperlimb.

(5) Demonstration and practice of free exercise to improve joint range of motion (Small joints, eg. hand, finger, toes etc.) Demonstrationandpracticeof all crawlingexercises, faulty posture. Correctingtechniques.

(6) Demonstration of various pathologicalgaits.

Measurement of crutches, walking aids, strengthening of crutch muscles, crutch balance, Demonstration and practice of all crutch gaits.

(7)Breathing Exercises: Demonstration and practice of Diaphragmatic breathing, localised expansionexercises.

(8) Passive stretching: Techniques of passive streching to sternomastoid muscle, shoulder abductors. flexors elbow flexors, supinator, wrist and finger flexors in upper limbs passive streching to hip flexors,Adductors, ilio-tibialband, tensor fascia lata, quadriceps, knee flexors, tendoachilliesetc.

COURSE OUTCOME

After the completion of the course, the student shall be able to:

1. Illustrate principles of basic physics that act as a foundation for physical medicine
2. Describe exercise therapy in detail, including starting positions, movements and their types, muscle strength, joint movement, relaxation, posture, co-ordination, gait, walking aids, neuromuscular facilitation, suspension therapy and their therapeutic applications, including allied modalities like heat treatments andcryotherapy;
3. Understand electrotherapy in terms of fundamentals, principles, laws of electricity and magnetism, practical and theoretical aspects of electrotherapeutic applications, such as faradic and galvanic currents, high frequency currents, laser, ultrasound, radiation therapy (IR & UV), TENS and IFT.
4. Demonstrate usage of therapeutic applications of physical medicine in promotive, preventive, curative and rehabilitative therapy, focusing on rehabilitation.
5. Analyse remedial measures in *Yoga* for various diseaseconditions.

Assessment Scheme:

Theory – 70 Marks
Internal Assessment – 30 Marks
Practical Assessment - 90Marks

Theoryviva - 60marks

Practicalviva - 30 marks

Pratical internal assessment- 10Marks

BOOK REFERENCE (BOTH THEORY AND PRACTICALS)

1. Principles of Exercise Therapy - By DenaGardiner.

2. Tidy"sphysiotherapy.

3. Cash text book ofphysiotherapy.

4. Clayton"sElectrotherapyandActinotherapy.

5. Kisner"s Theraupetic Exercise Foundation andtechniques.

6. Maggie"s text Book ofPhysiotherapy

6. HOLISTIC PREACTICES OF NATUROPATHY & YOGA

Course type- Core Course

Course code – BNY 412, BNY 413P

Credits-3.5

1. Objective:

The objective of teaching Holistic practices of naturopathy & yoga to undergraduate students is to train them to provide well integrated clinical service in Naturopathy.

THEORY

Diseases of System:-

1. CardiovascularDisorders
2. Gastrointestinal Disorders
3. Blood relatedDisorders
4. RespiratoryDisorders
5. Neurological Disorders
6. PsychiatricDisorders
7. Musculoskeletal Disorders
8. E.N.T.Disorders
9. OphthalmologyDisorders
10. Obstetrics & GynaecologyDisorders
11. PaediatricDisorders
12. MetabolicDisorders
13. HormonalDisorders
14. NeuromuscularDisorder
15. Mental RetardationDisorder
16. Psychological Disorder
17. Sexual Disorder

18. Post surgicalRehabilitation

19. Post ChemotherapyRehabilitation

20. Skin Disorders

21. Tumors &Cancers

22. Affections due toParasites

23. Affections due to Physical agents &Intoxicants

24. Care of Wounds, Burns, Bites &Stings

25. Accidents &Emergencies

Cure of Surgical Disorders:-

1. Deviated NasalSeptum

2. Tonsillitis

3. Appendicitis

4. UterineFibroid

5. UterineProlapse

6. Hernia

7. Intervertebral DiscProlapse

8. Cervical Spondylosis & Slipdisc

9. Calcaneal Spur

10. Osteoarthritis

11. Hydroceleetc.

12. Prostate

13. Hemorrhoids (Piles)

14. Fistula

15. Pyorrhea

16. Gall Stone & Renal Stone

17. Breast tumor.

COURSE OUTCOME

After the completion of the course, the student shall be able to:

- **a.** Illustrate decision making in Naturopathy;
- **b.** Understand the basic principles of screening and prevention of disease;
- **c.** Comprehend the scope of practice- patterns of use, fields of practice, regulations,limitations;
- **d.** Understand the concept of healing and disease crises and management of thesame.
- **e.** Understand the pathogenesis of the disease in Naturopathy basis and preventive measures of thesame;
- **f.** Deduce and form a specific module of therapy for the particular patient with variedpresentations.

Assessment Scheme:

Theory – 70 Marks
Internal Assessment – 30 Marks
Practical Assessment - 90Marks

Theoryviva - 60marks

Practicalviva - 30 marks

Pratical internal assessment- 10Marks

7.HOSPITAL MANAGEMENT AND RESEARCH METHODOLOGY

Course type- Core Course

Course code – BNY 414, BNY 415P

Credits-5.5

Objective:

The objective of teaching Research Methodology and Recent advances to undergraduate students is to provide them with the latest updated scientific, knowledge in the field of Naturopathy and *Yoga* and introduce them to research methodology.

THEORY

I - Medical Jurisprudence, Forensic Medicine & Toxicology

A. FORENSICMEDICINE:

1. Definition of Forensic medicine and itsscope.

2. Procedure of giving medical evidence with reference to Indian evidenceact.

3. Methods of identification of living and dead body, race, age, sexetc.

4. Death:- Medico-legal aspects, certification of death, sudden death, causes, Medico-legal importance, sign of death, changes due to death and calculating time of death.

5. Medico legalautopsy.

6. Medico-legal wounds, their classification and study and medico-legalaspects.

7. Examination of blood stains, hairs and seminalstains.

8. Miscellaneous causes of death from heat, cold, electricity , Starvationetc.,

9. Violent asphyxia deaths:- Hanging, Strangulation, Suffocation anddrowning.

10. Sexual Offences: - Impotency and sterility, Virginity, legitimacy, un-natural Offences, Medico-legal aspects, Anestheticdeath.

11. Infanticide.

12. Medico-legal aspects ofinsanity.

13. ForensicPsychiatry.

14. Definition, Police inquest, difficulties in detection of crime, legal procedure in Criminal courts and their powers, oath, medical evidence, medical certificate, Dyingdeclaration.

15. Rules of giving evidence, professionalsecrecy.

16. Post mortemexaminations.

17. Death - signs of death cadaveric rigidity and spasm, putrefaction, estimation of Time sincedeath.

18. Death from asphyxia, differences between hanging and strangulation, suffocation and Drawing.

19. Death from burns and scalds andlighting.

20. Rape and unnaturaloffences.

21. Abortion, pregnancy and delivery,miscarriage.

22. Law in relation to a medical man, medical ethics, duties, professional privilege and responsibilities.

B. TOXICOLOGY:

1. General considerations of poisoning andclassification.

a) Actions of poisons, factors modifying theiraction.

b) Diagnosis of poisoning.

c) Treatment of poisoning inGeneral.

2. Poisons:-

a) Corrosives

b) Nonmetallicpoisons

c) Insecticides andweedkillers

d) Metallicpoisons

e) OrganicIrritantpoisons

f) Somniferous poisons.

g)Inebriantpoisons

h) Delibriant poisons

i)DrugDependence

j) Food poisoning

k)Spinalpoisons 1) Cardiac poisons

m)Asphyxiants n)Miscellaneous

3. Legal responsibilities: Medicalethics.

4. Responsibilities and duties of the medical practitioners to the state,

Professional secrecy and privilegedcommunication.

5. Un-professional conduct andmalpractice.

6. The rights and privilege and duties of medicalpractitioners.

7. The functions of state-medical council and its relationship to Indian Medical Council.

8. Medical ethics approved by Indian Medical council.

PRACTICALS

1. Ageestimation.

2. Autopsies

3. Skeleton remains.

4. Spotters.

5. Examination ofinjured.

6. Alcoholic.

7. Psychiatric.

8. Toxicology.

TEXT BOOKS:-

1. Medical jurisprudence - ByModi

2. A Text Book of Forensic Medicine - By NarayanaReddy

3. A Text Book Of Forensic Medicine - By M.R.K.Krishna

REFERENCE BOOKS:-

1. The essential of forensic medicine - By Dr. C.J.Polson,

D.J. Gee and B. Knight

2. Forensic Medicine - By Corden andShapiro

3. Principles and practice of Medical jurisprudence - ByTaylor's

4. Legal Boundaries of Nature Cure - By Advocate (Dr.)AshokKumar Sharma

III - Hospital Management (Naturopathy & Yoga)

(Hospital Administration)

SECTION 1

HOSPITAL ADMINISTRATION

1. The Hospital administrator - Role and Responsibilities

2. Profile of an effective HospitalAdministrator

SECTION2

MANAGERIAL SKILLS

1. Planning

2. Information System

3. Communication

4. Decision Making

5. Monitoring andEvaluation

6. Managing Time

7. Meetings

SECTION3

HOSPITAL ORGANISATION

1. Hospital Organisation - Structure andFunction

2. HospitalCommittees

SECTION4

THE HOSPITAL

l. Role of Hospital in Health Care

2. Hospital Planning anddesign

3. Special Features of Nature cure Hospital, Qualities of Therapist, Hospital Atmosphere,

Scientific Attitudes, Awareness of Scope, Limitations of nature cure.

4. Newer Technology in Treatment ThroughNaturopathy

SECTION 5

THE CLINICALSERVICES & CLINICALSUPPORTIVE SERVICES

1. The Medical Staff Organisation, interaction withpatients.

2. Radiological Services

3. LaboratoryServices

SECTION6

THE NURSING SERVICES

SECTION7

SPECIALISED SERVICE AREAS

1. CasualtyServices

2. DisasterServices

3. Out-patient Services

4. DayCare

5. DiagnosticServices

6. Medical Records

SECTION 8

HUMAN RESOURCES

1. Personnel

SECTION 9

MATERIALS MANAGEMENT

SECTION 10

FINANCES

1. Finances

2. Activity based costing inHospital

3. Economics of H.M.

SECTION11

QUALITY ASSURANCE

1.Quality Management in ourHospitals

2. Medical Audit

INFECTIONCONTROL

1.Control of Hospital acquired infection.

ETHICS & LAWS

1. Ethics

2. Law applicable toHospitals

3. Consumer Protection act1986

SECTIONI2

1.Indian Health Policy

PRACTICAL

1. Visit to the different Hospitals.

2. Project work in Planning & Designing the Hospital

REFERENCE BOOKS

1. Hospital Planning & Administration - By Llewellyn Davies Macaulay ,H.M.C.

2. Hospital Administration - By Francis C.M & MariaC.Desouza

3. Hospital ward Management - By KusumSamant

4. Text Book of Social & Preventive Medicine - By Park.K.

5. Economics of Health care - By MartinGreen

6. Hospital Planning - By Dr. AshokSahni

7. Principals of Hospital Administration & Planning - B.M.Sakharkar

IV. Research Methodology in Naturopathy & Yoga

1 Introduction

2. Planning a researchProject

3. Design of thestudy

4. Statistics

5. Parameters to be recorded for specificdiseases

    Obesity

    Diabetesmellitus

    Hypertension

    Asthma

    Lumbago

    Rheumatoid Arthritis

6. Project Preparation for Clinical Research

7. Bioethics

8. Ethical Issues in ClinicalTrials

9. Recent Research Update in Naturopathy&Yoga

10. Psychological Aspects in YogaResearch

11. Status of Research in India on naturopathy andyoga

RECOMMENDEDBOOKS

1. Research Methods - By Dr. H.R. Nagendra

3. Fundamentals of Evidence based Medicine - By KamleshwarPrasad

4. Research Reports From 1981 to 2006 - By INYS(Jindal Nature CureInstitute)

COURSE OUTCOME-

After the completion of the course, the student shall be able to;

a. Describe research methodology under process, materials and methods, design of a study, literature review, ethics, sampling, measurement tools, data organisation, statistics, data analysis, reliability and validity, etc, and implement this knowledge in practically designing, conducting, evaluating and publishing astudy.
b. Illustrate statistics and probabilitytheory;
c. Use technological aids for preparing researchreports;
d. Demonstrate knowledge about inter-disciplinaryresearch

Assessment Scheme:

Theory	–	70 Marks
Internal Assessment	–	30 Marks
Practical Assessment	-	90Marks
Theoryviva	-	60marks
Practicalviva	-	30 marks
Pratical internal assessment	-	10Marks

7. PSYCHOLOGY AND BASIC PSYCHIATRY

Course type- Core Course

Course code – BNY 416, BNY 417P

Credits-1.5

Objective:

The objective of teaching Psychology and Basic Psychiatry to undergraduate students is to provide them with comprehensive knowledge of normal and abnormal psychology and assessment of the same for therapeuticpurposes.

THEORY

I. Definition and brief history ofPsychology.

II. Biology of Behaviour: Typical behaviour patterns, Sociobiology, Brainand

Behaviour.

III. Sensory process andPerception.

1. Vision, Hearing, Smell, Taste, Skinsenses.

2. Perceptional Process - Attention from perception, visual depth perception, Consultancy, Movement perception, Plasticity, individualdifference.

IV. Principles of Learning: Classical conditioning, Instrumental conditioning, cognitive learning etc.

V. Memory: Theories about memory, Forgetting and Amnesia, Improving your Memory.

VI. Thinking and Language: The thinking process, concepts, Problems solving, Decision making, Creative thinking, LanguageCommunication.

VII. Motivation: Theories of motivation, Biological motivation, Social motives, Motives to know and to be effective, Frustration and conflict ofmotives.

VIII. Emotion and Stress: Expression and perception of Emotions, physiology of emotion, Stress Theories ofEmotion.

IX. Social Perceptions, Influence and Relationship: Social perception social influence, social relationship.

X. Attitudes: The Nature of attitudes, the measurement of attitudes, attitude theories, Factor in attitude change, attitudes and behaviour, behaviour &Attitudes.

XI. Development during infancy and childhood: Methods of studying development, infancy, early childhood and laterchildhood.

XII. Development during Adolescence, Adulthood and Old age: AdolescI ence, Youth, Early and Middle adulthood, Oldage.

XIII. Psychological Assessment and Testing: Psychological tests, The Nature of intelligence and assessing intelligence, Individual difference in intelligence, Testing for special aptitudes, Personality Assessment, BehaviouralAssessment.

XIV. Personality: Type and Trait theories of personality, Dynamic personality theories, humanistic theories, learning and behavioural theories ofpersonality.

XV. Abnormal Psychology:(Psychiatry)

1. Abnormality in everydaylife

2. The language ofAbnormality

3. General causes of abnormalBehaviour

4. Classifying Psychological Disorders: Clinical syndromes, Brain Syndrome, Psychoses, Neuroses, and Personalitydisorders

5. Psychoneuroses

6. Hysteria, Anxiety state andNeurasthenia

7. Other forms of Psychoneuroses (OCD, Phobiasetc.)

8.Treatment of Psychoneuroses - Psychotherapy and its procedures, Other therapies.

9. Psychoanalysis and relatedschool.

10. Psychoses

11. Schizophrenia

12. Mania - DepressivePsychoses

13. Involutional Melancholia and Paronia

14. Alcoholic MentalDisorders

15. Toxic and Organic Psychoses

16. Epilepsy

17. Mental Deficiency

18. Antisocial personalities andcrime.

XVI. Therapy for Psychologicaldistress:

1.Positive Psychotherapy & other Psychotherapies: Psychoanalysis, Behaviour therapy, Logo therapy, Conversation therapy, Gestalt therapy and Primal therapy, Transactional analysis.

2.Positive Psychotherapy and its practical application for variousconditions.

XVII. Co-relation of Psychology, Mental health andYoga.

COURSE OUTCOME-

After the completion of the course, the student shall be able to:

1. Describe the evolution of Psychology from speculation toscience;
2. Illustrate mechanisms of sense and perception, states of consciousness and theirfunctions;
3. Understand basic and complex functions such as learning, memory, thinking, language, motivation, emotion, intelligence, development of psychology across lifespan, personality, stress coping, social psychology, attitudes,etc.
4. Explain abnormal psychology and describe aetiology and psychopathology along with classification ofdisorders;
5. Demonstrate knowledge of therapies aimed at psychological health, such as psychotherapy, *Yoga*,etc;

Assessment Scheme:

Theory	**–**	**50 Marks**
Internal Assessment	**–**	**20 Marks**
Practical	**-**	**20marks**
PracticalInternal	**-**	**10marks**

BOOKS RECOMMENDED:

1. Introduction to Psychology - By Clifford T. Morgan & Richard A.King

2. Abnormal Psychology - By James DPage

3. Positive Psychotherapy - By NossratPesseschkian

4. Psychologies, Mental Health and Yoga - By A.S.Dalal

5. General Psychology - By J.P.Guilford

6. A brief Introduction to Psychology - By Clifford T.Morgan

SPA MANAGEMENT

COURSE TYPE – SKILL ENHANCEMENT COURSE
COURSE CODE - BNY 419

1. SPA MARKETING

- **Developing a Marketing plan**
- **Essentials of selling to women, men and teen**
- **Generating Good Publicity**
- **Building and Maintaining contacts**
- **Using Technology in business' aid**
- **Building and Managing a Result Oriented Team Effective financial management**
- **Corporate tie ups**

2. ROLE OF A SPA MANAGER

- **Effective financial management**
- **Understanding spa concepts and its operations**
- **Effective planning – short term as well as long term Leadership & management**
- **Human resources**
- **Financial planning and management Therapy designing**
- **Menu designing**
- **Live spa training**
- **Spa recruitment**
    - **Development Operations Spa and Hospitality**

3. FRONT OFFICE & GUEST HANDLING

- **Telephone handling**
- **Guest appointments & booking procedures**
- **Guest orientationGuest intake forms Guest comments.**

4. SPA AS A CAREER

- Basic Requirements
    - Remuneration/Earning Drive & MotivationCommitment
    - Spa Career Options Typical Career Path.
    - How to Start Your Own Spa Business
    - Job Opportunities -India and abroad