

**Subject title:** FASTING THERAPY AND DIETETICS (Duration 12 months)

Subject Code: BNYS T 401 & BNYS P 401

<b>Total Number of Hours:</b> 250	<b>Theory:</b> 150	<b>Practical:</b> 100		
<b>Credits</b>				
<b>Hours/week</b>				
<b>SCHEME OF EXAMINATION</b>				
<b>Total Marks:</b> 200				
<b>Theory:</b> 130		<b>Practical:</b> 70		
<b>Final Theory Exam</b>	<b>Internal Assessment</b>	<b>Viva Voce</b>	<b>Final Practical Exam</b>	<b>Internal Assessment</b>
80	20	30	60	10

### **Goals and Objectives**

#### **Goals:**

The goal of teaching Fasting Therapy and Dietetics to undergraduate students is to provide them with comprehensive knowledge of diet management and Fasting therapy and utilization of the same for therapeutic purposes.

#### **Objectives:**

##### **Knowledge:**

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

- Describe definitions and historical highlights of fasting therapy through the centuries, including fasting employed in different religions;
- Classify fasting according to duration, purpose, type, etc;
- Define rules and regulations of fasting to be followed;
- Understand the metabolism of fasting;
- Understand contraindications and indications of fasting in order to efficiently use fasting as a therapy;
- Understanding Calorie Restriction: Concept, Method, Prevailing basic- Clinical-applied evidence
- Understand the concept of dietetic principles in Naturopathy;
- Understand food combinations and health, including dietary requirements for different age groups, including pregnant and lactating women;
- Describe importance of various components of diet, such as dietary fiber, vitamins, minerals, etc;
- Explain auxiliary concepts of dietetics such as food hygiene, etc.

##### **Skills:**

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

- Utilise knowledge of fasting therapy and dietetics in managing various diseases;
- Demonstrate usage of therapeutic diets and fasting therapy in promotive, preventive, curative and rehabilitative therapy.

##### **Integration:**

At the completion of training, the student should be able to integrate knowledge of fasting therapy and dietetics and efficiently utilise the same for therapeutic purposes.

## **THEORY**

### **Unit-1: Fasting**

(75 Hrs)

- i. Definition
- ii. Historical highlights
  - a. Indian: According to Vedas, *Ayurveda*, Epics and other pioneer in Naturopathy
  - b. Western
- iii. Evidence of fasting in animals and its benefits
- iv. Fasting in different religions
- v. Classification of fasting and its effects, limitations, according to
  - a. Duration (Short, long, intermittent, weekly)
  - b. Purpose (Preventive, therapeutic, religious, political)
  - c. Type (Dry, water, juice, monodiet)
- vi. Starvation – pathological features in different organ systems
- vii. Physiological changes of fasting in short, long, intermittent, dry, water, juice (lemon honey, tender coconut, sugarcane juice, alkaline juices, honey water etc.) and monodiet fasting.
- viii. Difference between hunger and starvation
- ix. Rules and regulations for administering fasting
- x. Rules and regulations for selection of patient for fasting
- xi. Hygiene and auxiliaries of fasting
- xii. Sane fasting
- xiii. Do's and don'ts of fasting
- xiv. Metabolism of fasting
- xv. Preparation of individuals for fasting
- xvi. Psychological effects and barriers for fasting
  - a. Crises during fasting therapy and its management
  - b. Significance of enema during fasting and its physiology
  - c. Significance of fasting in fever
  - d. Fasting for preservation of health
  - e. Contraindications and limitations of fasting
- xvi. Research updates on fasting

### **Unit-2: Dietetics**

(75 Hrs)

- i. Concept of health in naturopathy
- ii. Dietetic principles in naturopathy
- iii. Concept of wholesome diet
- iv. Medical values of food
- v. Natural qualities / properties / characters of foods in naturopathy / *Ayurveda* / modern nutrition
- vi. Natural food and health
  - a. Importance of green vegetables, other vegetables, fruits and ingredients
  - b. Chemical composition of different raw juices and their effects and uses
  - c. Wheat grass, beetroot, cabbage, cucumber, garlic, papaya, mango, pineapple, pumpkins etc
  - d. Comparison with raw and cooked food
  - e. Sprouts, nutrition and method
- vii. Food combination and health
- viii. Naturopathic hospital dietetics and classification
- ix. Disease management for different diseases
- x. Food allergies and diet
- xi. Seasonal changes
- xii. Dietary requirements for pregnancy, lactation and infancy
- xiii. Food hygiene and health

- xiv. Methods of cooking – nutrient losses and preservation
- xv. Dietary fiber and its therapeutic effects
- xvi. Customs and traditions of eating
- xvii. Emotional states and diet

### **PRACTICAL**

- i. Visits to different diet departments of naturopathy and modern medicine hospitals (10 Hrs)
- ii. Menu planning using natural foods and raw diet in general (20 Hrs)
- iii. Demonstration of different sprouts (5 Hrs)
- iv. Preparation of low cost balanced diet for different population groups using natural foods (20 Hrs)
- v. Canteen duties at different naturopathy hospitals (5 Hrs)
- vi. Visit to different nutrition centers like CFTRI, Mysore, NIN, Hyderabad etc. (10 Hrs)
- vii. Study of 20 fasting cases (20 Hrs)
- viii. Case studies of 10 with records (10 Hrs)

### **Textbooks**

1. Fasting for Healthy and Long Life – Carrington
2. Fasting Cure – Lakshman Sharma
3. Fasting - The Ultimate Diet - Allan Cott
4. Mucusless Diet Healing System - Arnold Ehret
5. The Fasting Cure (Classic Reprint) - Upton Sinclair
6. Fasting Can Save Your Life - Herbert M. Shelton
7. Davidson and Passamore Human Nutrition – Passamore
8. Clinical Dietetics and Nutrition – FP Antia
9. Normal Therapeutic Nutrition – Corinne Robinson
10. Essentials of Food and Nutrition – Swaminathan
11. Sprouts – JD Vaish *Yoga* Samsthan
12. Science and Art of Food and Nutrition – Herbert Shelton
13. Nutritive Values of Indian Foods – NIN (Hyd)
14. Publications of NIN, Hyderabad

**Subject title:** OBSTETRICS AND GYNECOLOGY (Duration 12 months)

**Subject Code:** BNYS T 402 & BNYS P 402

<b>Total Number of Hours:</b> 250	<b>Theory:</b> 150	<b>Practical:</b> 100		
<b>Credits</b>		3+1		
<b>Hours/week</b>		4		
<b>SCHEME OF EXAMINATION</b>				
<b>Total Marks:</b> 200				
<b>Theory:</b> 130		<b>Practical:</b> 70		
<b>Final Theory Exam</b>	<b>Internal Assessment</b>	<b>Viva Voce</b>	<b>Final Practical Exam</b>	<b>Internal Assessment</b>
80	20	30	60	10

### **Goals and Objectives**

#### **Goal:**

The goal 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:

- Delineate the anatomy, physiology and pathophysiology of the reproductive system and the common conditions affecting it;
- Detect normal pregnancy, labor, and puerperium;
- Elucidate the leading causes of maternal and perinatal morbidity and mortality;
- Understand the principles of contraception and various methods employed, methods of medical termination of pregnancy, sterilization and their complications;
- Recognize the use, abuse and side effects of drugs in pregnancy, pre-menopausal and post-menopausal periods;
- Explain the National Programmes of Maternal and Child Health and Family Welfare and their implementation;
- Assess different gynecological diseases and describe principles of their management;
- 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:

- Examine a pregnant woman, recognize high risk pregnancies and make appropriate referrals;
- Recognize complications of delivery and provide postnatal care;
- Recognize congenital anomalies of newborn;
- Advise a couple on the use of various available contraceptive devices;
- Perform pelvic examination, diagnose and manage common gynecological problems including early detection of genital malignancies;
- Interpret data of investigations like biochemical, histopathological, radiological, ultrasound etc.

**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****Unit-1: Obstetrics****(84 Hrs)**

- i. Basic Anatomy and Physiology
  - a. Anatomy and Physiology of female reproductive organs and pelvis
  - b. Maturation and fertilization of ovum
  - c. Development of placenta
  - d. Embryology of uterus
- ii. Physiology of pregnancy
  - a. Maternal changes due to pregnancy
  - b. Diagnosis of pregnancy
  - c. Differential diagnosis of pregnancy
  - d. Foetus in normal pregnancy
  - e. Antenatal care
- iii. Physiology of labor
  - a. Causation and stages of labor
  - b. Mechanism of labor
  - c. Conduct of normal labor
- iv. Physiology puerperium
  - a. Phenomena of normal puerperium
  - b. Care of puerperium
  - c. Care of new born child
- v. Pathology of pregnancy
  - a. Hyperemesis Gravidarum
  - b. Venereal diseases
  - c. Anemia in pregnancy
  - d. Diseases of the urinary system
  - e. Diabetes in pregnancy
  - f. Diseases and abnormalities of fetal membranes and placenta
  - g. Abortion
  - h. Ectopic pregnancy
  - i. Ante-partum hemorrhage
  - j. Placenta Previa
- vi. Pathology of labor
  - a. Occipito-posterior position
  - b. Breech presentation
  - c. Prolapse of the cord, compound presentation
  - d. Multiple pregnancy
  - e. Contracted pelvis
  - f. Management of labor in contracted pelvis
  - g. Complications of 3rd stage of labor
- vii. Affection of new-born
  - a. Asphyxia Neonatorum
  - b. Pre-term baby
  - c. Congenital malformations

- viii. Obstetrical operations
  - a. Forceps
  - b. Caesarean section
  - c. Induction of abortion and labor
- ix. Pathology of Puerperium – Puerperal infections
- x. Miscellaneous:
  - a. Perinatal mortality and maternal mortality
  - b. Post-dated pregnancy
  - c. Placenta insufficiency
  - d. Control of contraception
  - e. Medical termination of pregnancy
  - f. Pre-term labor
  - g. Ultrasonography in Obstetrics
- xi. Applied aspects in Obstetrics:
  - a. *Yoga* and Naturopathy for Healthy parenthood
  - b. Antenatal and postnatal care through *Yogic* methods
  - c. Antenatal and postnatal care through Naturopathic modalities
  - d. Antenatal and postnatal care through general exercises
  - e. Antenatal and postnatal care through Hydrotherapy
  - f. Natural diet during pregnancy and lactation

## **Unit-2: Gynecology**

(66 Hrs)

- i. Anatomy of the female pelvic organs
  - a. External genitalia
  - b. Internal genitalia
  - c. Female urethra
  - d. Urinary bladder
  - e. Pelvic ureter
  - f. Rectum and Anal canal
  - g. Pelvic muscles
  - h. Pelvic fascia and cellular tissue
- ii. Blood vessels, lymphatic drainage and innervations of pelvic organs
  - a. Pelvic blood vessels
  - b. Pelvic lymphatics
  - c. Pelvic nerves
- iii. Puberty and Menopause
- iv. Neuroendocrinology in relation to reproduction
- v. Menstruation
- vi. Examination of a gynecological patient and the diagnostic aids
  - a. History
  - b. Examination
  - c. Ancillary aids
  - d. Cytology
  - e. Colonoscopy
- vii. Pelvic infection
  - a. Defense of the genital tract
  - b. Acute pelvic infection
  - c. Chronic pelvic infection
  - d. Genital tuberculosis
- viii. Sexually transmitted diseases
- ix. Infections of the individual pelvic organs
  - a. Vulva
  - b. Bartholin's gland
  - c. Vagina

- d. Cervix
- e. Endometrium
- f. Fallopian tube
- g. Ovary
- h. Parametrium
- x. Dysmenorrhea and other disorders of menstrual cycles
  - a. Dysmenorrhea
  - b. Dysfunctional uterine bleeding
- xi. Displacement of the uterus
  - a. Retroversion
  - b. Prolapse
  - c. Chronic inversion
- xii. Infertility
  - a. Causes
  - b. Investigations
  - c. Treatment
  - d. Assisted reproductive techniques
  - e. Counseling techniques
- xiii. Benign lesions of the vulva and vagina
  - a. Vulval epithelial disorders
  - b. Vulval ulcers
  - c. Vulval and vaginal cysts
- xiv. Benign lesions of the cervix
- xv. Benign lesions of the uterus
  - a. Fibroids
  - b. Polyps
- xvi. Benign lesions of the ovary
- xvii. Ovarian neoplasm
- xviii. Endometriosis and adenomyosis
- xix. Premalignant lesions
  - a. Vulva
  - b. Vagina
  - c. Cervix
  - d. Endometrium
- xx. Genital malignancy
  - a. Cervical
  - b. Endometrial
  - c. Gestational trophoblastic neoplasia
  - d. Ovarian
- xxi. Urinary problems in gynecology
  - a. Anatomy of the urethra-vesical unit
  - b. Genuine stress incontinence
  - c. Overflow incontinence
  - d. Retention of urine
  - e. Urinary tract infections
- xxii. Genital fistulae
  - a. Genito-urinary
  - b. Recto-vaginal
- xxiii. Amenorrhea
  - a. Physiological
  - b. Primary
  - c. Secondary
- xxiv. Contraception
  - a. Barrier methods

- b. Natural
- c. IUCD
- d. Steroidal
- e. Emergency
- f. Sterilization
- xxv. Special problems
  - a. Abnormal vaginal discharge
  - b. Pruritis vulvae
  - c. Pelvic pain
  - d. Postmenopausal bleeding
  - e. Low backache
  - f. Breast in gynecology
  - g. Vaginismus
  - h. Dyspareunia
  - i. Hirsutism
  - j. Galactorrhoea
- xxvi. Operative gynecology
  - a. Postoperative care
  - b. Dilation of cervix
  - c. Dilation and curettage
  - d. Dilation of and insufflation
  - e. Hystero salpingography
  - f. Cervical biopsy
  - g. Cryosurgery
  - h. Perineoplasty
  - i. Amputation of cervix
  - j. Abdominal hysterectomy
  - k. Vaginal hysterectomy
- xxvii. Endoscopic surgery in gynecology
  - a. Laparoscopy
  - b. Hysteroscopy
- xxviii. Applied aspects in Gynecology:
  - a. Role of Naturopathy and *Yoga* in Gynecology
  - b. Water treatments for gynecological disorders.

## **PRACTICAL**

- i. History taking of antenatal and gynecological cases (5 Hrs)
- ii. Demonstration of physical examination of antenatal and postnatal gynecological cases (25 Hrs)
- iii. Demonstration of conductive labor, normal delivery and use of minor instruments during delivery. (20 Hrs)
- iv. Demonstrations of instruments like Sim's speculum, Cusco's bivalve self training vaginal speculum, Cervical dilators, Anterior vaginal wall retractor, Uterine curette (20 Hrs)
- v. Specimens
- vi. X ray, US, and CT plates (5 Hrs)
- vii. Case-history writing of antenatal and gynecological cases (5 Hrs)
- viii. Demonstration of underwater delivery and painless delivery using acupuncture desired. (20 Hrs)



**Textbooks**

1. Clinical Obstetrics – Mudaliar and Menon
2. Textbook of Obstetrics and Gynecology – CS Dawn
3. Shaw's Gynecology
4. Textbook of Obstetrics and Gynecology - Dutta

**Subject title:** YOGA THERAPY (Duration 12 months)

**Subject Code:** BNYS T 403 & BNYS P 403

<b>Total Number of Hours:</b> 225	<b>Theory:</b> 125	<b>Practical:</b> 100		
<b>Credits</b>				
<b>Hours/week</b>		4		
<b>SCHEME OF EXAMINATION</b>				
<b>Total Marks:</b> 200				
<b>Theory:</b> 130		<b>Practical:</b> 70		
<b>Final Theory Exam</b>	<b>Internal Assessment</b>	<b>Viva Voce</b>	<b>Final Practical Exam</b>	<b>Internal Assessment</b>
80	20	30	60	10

### Goals and Objectives

#### Goal:

The goal 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

#### Objectives

##### Knowledge:

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

- Describe the physiological effects of various *yogic* practices like *kriyas*, *asanas*, *pranayamas*, *mudras*, *bandhas*, *drishtis*, Guided relaxation and Meditation;
- Define rules and regulations of *Yoga* to be followed;
- Understand the therapeutic aspects of *Yoga* as applied to different disease conditions;
- Understand contraindications and indications of *yogic* practices in order to efficiently use *Yoga* as a therapy
- Understand the concept of health and disease in *yogic* lore and role of stress in disease causation and management of the same with *Yoga* ;
- Understand importance of food according to *Yoga*;
- Delineate the importance of *Yoga* and mental health;

##### Skills:

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

- Utilise knowledge of *Yoga* therapy in managing various diseases;
- Demonstrate usage of therapeutic aspect of *Yoga* in promotive, preventive, curative and rehabilitative therapy.
- Institute remedial measures in *Yoga* for various disease conditions.

##### Integration:

At the completion of training, the student should be able to integrate knowledge of *Yoga* and efficiently utilize the same for therapeutic purposes.

### THEORY

**Unit-1:** Introduction to *Yogic* Therapy / Basis of *yogic* Therapy (3 Hrs)

**Unit-2:** Role of *Asanas* in curing various diseases (3 Hrs)

**Unit-3:** Specific importance of *Pranayama* in curing various diseases (2Hrs)

<b>Unit-4:</b> <u>Vital role of Bandhas, Mudras, Drishtis, in curing various diseases</u>	(3Hrs)
<b>Unit-5:</b> <u>Role of Shat kriyas in curing various diseases</u>	(2 Hrs)
<b>Unit-6:</b> <u>Role of general exercises in health and diseases</u>	(1 Hr)
<b>Unit-7:</b> <u>Sudarshan Kriya and other modern variants</u>	(3 Hrs)
<b>Unit-8:</b> <u>The effects of various Yogic practices on different systems (skeletal system, endocrine system, nervous system, digestive system, respiratory system, excretory system, cardiovascular system, muscular system, reproductive system)</u>	(10 Hrs)
<b>Unit-9:</b> <u>Research methods in yogic therapy, statistical analysis etc.</u>	(8 Hrs)
<b>Unit-10:</b> <u>Yoga therapy for</u>	(25 Hrs)
i. Cardiovascular diseases	
ii. Psychiatric disorders	
iii. Musculoskeletal disorders	
iv. Nervous system disorders	
v. Gastrointestinal disorders	
vi. Hormonal diseases	
vii. Respiratory diseases	
viii. Metabolic diseases	
ix. Ophthalmologic disorders	
x. Pediatric disorders	
xi. ENT Disorders	
xii. OBG disorders	
<b>Unit-11:</b> <u>Meditation and its applications on psychosomatic disorders</u>	(2 Hrs)
<b>Unit-12:</b> <u>Yoga and relaxation techniques</u>	(3 Hrs)
i. QRT – Quick Relaxation Technique	
ii. IRT – Instant Relaxation Technique	
iii. DRT – Deep Relaxation Technique	
<b>Unit-13:</b> <u>Teaching methods of Yoga to public, students and patients. Model lesson planning and adoption of Yoga in education system, limitations, vidhi and nishedha (right and wrong)</u>	(4 Hrs)
<b>Unit-14:</b> <u>Advanced techniques of Yoga therapy (CM, PET, MSRT, MIRT, MEMT, VISAK, ANAMS, and SMET etc.)</u>	(5 Hrs)
<b>Unit-15:</b> <u>Subtle Energy Medicine</u>	(3 Hrs)
<b>Unit-16:</b> <u>Yoga and Mental Health: Total integration of personality, correct mental behavior and attitude, hormonal relationship of body and mind, self-content tranquilizing effect, psychology of spiritual growth and spiritual values, reasoning and judgment, pure consciousness, mode of living and disciplined life</u>	(2 Hrs)
<b>Unit-17:</b> <u>Drishtis</u>	(2 Hrs)

**Unit-18:** Stress management through Yoga (3 Hrs)

**Unit-19:** Applied Psychology (15 Hrs)

- i. Historical perspective, identifying disorders
  - a. Anxiety disorders
  - b. Dissociative disorders
  - c. Somatoform disorders
  - d. Sexual disorders
  - e. Mood disorders
  - f. Personality disorders
  - g. Schizophrenia
- ii. Therapy for psychological disorders: psychotherapy, therapy interpersonal relations, behavior therapy

**Unit-20:** Lesson planning and teaching methods in Yoga (3 Hrs)

**PRACTICAL** (15 Hrs)

- i. LSP
- ii. QRT
- iii. IRT
- iv. DRT
- v. TM
- vi. CM
- vii. SKY
- viii. SMET
- ix. PET
- x. MSRT
- xi. MIRT
- xii. MEMT
- xiii. VISAK
- xiv. ANAMS

**Reference books:**

1. *Yogic Therapy* – Vinekar
2. *Yogic Therapy* – Garde
3. *Treatment of Common Diseases through Yoga* – Swami Satyananda Saraswati
4. *Seminar on Yoga, Science and Man* – CCRYN, Delhi
5. *Yoga for Healing* – PS Venkateswaran
6. *Handbook of Behavior Modification and Therapy* – Plenum Press
7. *Stress Management Research Papers* – VK *Yoga*, Bangalore
8. All Bihar School of *Yoga* publications

**Subject title:** HYDROTHERAPY AND MUD THERAPY (Duration 12 months)

**Subject Code:** BNYS T 404 & BNYS P 404

<b>Total Number of Hours:</b> 275	<b>Theory:</b> 175	<b>Practical:</b> 100		
<b>Credits</b>				
<b>Hours/week</b>				
<b>SCHEME OF EXAMINATION</b>				
<b>Total Marks:</b> 200				
<b>Theory:</b> 130		<b>Practical:</b> 70		
<b>Final Theory Exam</b>	<b>Internal Assessment</b>	<b>Viva Voce</b>	<b>Final Practical Exam</b>	<b>Internal Assessment</b>
80	20	30	60	10

### **Goals and Objectives**

#### **Goals:**

The goal 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:

- 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 for hydrotherapy.
- Illustrate physiological effects of hot and cold water upon the different systems of the body and applications to reflex areas;
- Explain action and reaction mechanisms and physiology, with their effects and uses
- Demonstrate use of water in preservation, acute diseases, chronic diseases
- 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 and research updates in hydrotherapy and mud therapy
- Demonstrate techniques and procedures of various types of hydriatic applications

##### **Skills:**

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

- Utilise knowledge of hydrotherapy and mud therapy in managing various diseases;
- Demonstrate usage of therapeutic aspect of hydrotherapy and mud therapy treatments in promotive, preventive, curative and rehabilitative therapy.
- Institute and evaluate remedial measures in hydrotherapy for various disease conditions in clinical as well as research settings.

##### **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**

- Unit-1:** Introduction and History (5 Hrs)
- Unit-2:** Physical properties and chemical composition of water (8 Hrs)
- Unit-3:** Physiological basis of Hydrotherapy: The skin and its anatomical construction, functions of skin, temperature sense (10 Hrs)
- Unit-4:** Production of heat and its distribution in the body, regulation of the body temperature, conditions that increase and decrease heat production in the body, body heat and body temperature (5 Hrs)
- Unit-5:** Importance of water to human body (5 Hrs)
- Unit-6:** Physiological effects of water on different systems of the body (20 Hrs)
- i. General and physiological aspects of heat upon: Skin, Respiration, Circulation, Nervous system, Heat and its production-dissipation etc, Tactile and temperature sense
  - ii. General and physiological effects of cold upon: Skin, Respiration, Circulation, Nervous system, GIT, body temperature and its maintenance, circulatory system
- Unit-7:** Reflex areas of the body, results of application of hot and cold over reflex areas (8 Hrs)
- Unit-8:** Actions and reaction, incomplete reaction, conditions that encourage reaction, internal reaction, thermic reaction, modified thermic reaction (10 Hrs)
- Unit-9:** Place of water in preservation (2 Hrs)
- Unit-10:** Place of water in acute diseases (3 Hrs)
- Unit-11:** Place of water in chronic diseases (3 Hrs)
- Unit-12:** Magnesium sulphate – use in Hydrotherapy (1 Hrs)
- Unit-13:** General principles of Hydrotherapy (6 Hrs)
- i. General rules of hydrotherapy
  - ii. Therapeutic significance of reaction
  - iii. Adaptation of individual cases
  - iv. Exaggeration of symptoms under treatment, the untoward effects and how to avoid them
  - v. General indications and contra-indications
- Unit-14:** Therapeutic actions and use of Hydrotherapy (25 Hrs)
- i. Classification of Hydriatic effects, general principles – excitation and depression
  - ii. Primary excitant effects – when to apply and when not to apply

- a. Local hemostatic effects – hydriatic heart tonics
- b. Cardiac effects – Hydriatic heart tonics
- c. Uterine excitations, emanegogic effects
- d. Vesical excitations
- e. Intestinal excitation, peristaltic effects
- iii. Secondary excitant effects
  - a. Restorative effects
  - b. Tonic effects of cold water, physiological effects of cold water, cold water vs. medical tonics, application in the following: anemia, neurasthenia, rheumatism, diabetes mellitus, valvular heart diseases
  - c. Calorific effects
  - d. Diaphoretic effects
  - e. Importance of attention to the skin in chronic diseases – alternative and qualitative effect – hot baths in Bright’s diseases, sweating baths in Dropsy and Obesity. Depurative or Eliminative effects, Toxemia in Rheumatism
  - f. Expectorant effects
  - g. Diuretic effects – Bright’s Disease, Uremia – eclampsia
  - h. Atomic dyspepsia, hyperacidity
  - i. Revulsive and derivative effects, fluxion, revulsive methods for combating superficial anemia and for relief of deep congestion method adopted to anemia of deep rooted organs revulsion on analgesic method
- iv. Resolvent effects
  - a. Sedative effects – general sedatives – local sedatives:
    - Sedatives of circulatory system – antiphlogistic effects, inflammation, pneumonia, pleurisy, other acute disorders
    - Nerve sedatives, hypnotic, calmative, analgesic, anesthetic, antispasmodic, insomnia, chorea, spastic paralysis, exophthalmia, goiter, mania, epilepsy and various painful conditions
    - Antithermic and antipyretic effects, relation to heat production and heat 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 accompanied by rise in temperature – suggestions, effects, indications and contraindications
    - Secretory and sedative effects prophylactic uses - Cold bathing in infancy and early childhood, cold bathing for adults, cold baths for women, cold baths in old age – precautions

**Unit-15: The techniques of Hydrotherapy**

(30 Hrs)

- i. Water Baths
  - a. Plain water bath
  - b. Cold hip bath
  - c. Kellogg’s and Kuhne’s sitz bath
  - d. Shallow bath – for males and females
  - e. Arm and foot bath
  - f. Graduated bath
  - g. Natural bath
  - h. Non-revulsive bath
  - i. Immersion bath
  - j. Cold plunge
  - k. Whirlpool bath
  - l. Aeration bath

- m. Vichy spray massage
- n. Rapid bath
- o. Brand bath
- p. Fever bath
- q. River bathing
- r. Sea bathing
- ii. Various baths and air baths
  - a. Russian bath
  - b. Turkish bath
  - c. Steam bath
  - d. Local steam bath
  - e. Steam inhalation
  - f. Hot air bath
  - g. Local hot air bath
  - h. Super-hot air bath
  - i. Cold air bath
  - j. Indoor and outdoor bath
- iii. Pool therapy
  - a. Introduction
  - b. Principles of treatment part I and part II
  - c. Physiological and therapeutic effects of exercise in warm water
  - d. Indications and contraindications
  - e. Dangers and precautions
- iv. Douches
  - a. Cold Douche
  - b. Hot Douche
  - c. Neutral Douche
  - d. Alternative Douche
  - e. Underwater Douche
  - f. Contrast Douche
  - g. Horizontal Jet
  - h. Cephalic Douche
  - i. Lumbar Douche
  - j. Fan Douche
  - k. Rain Douche or Shower Douche
  - l. Hepatic Douche
  - m. Circular Douche and semi-circular Douche
  - n. Cerebrospinal Douche
  - o. Plantar Douche
  - p. Percussion Douche
  - q. Scotch Douche
- v. Packs and compresses
- vi. Procedures that increase oxidation
- vii. Measures that encourage general and local metabolic activity
- viii. Procedures that increase general blood movement and local blood supply
- ix. Measures that increase heat production
  - x. Measures that increase the elimination of heat
  - xi. Measures that combat bacterial development of blood
  - xii. Measures that increase/lessen heat elimination
- xiii. Hydriatic incompatibility
- xiv. Adoption of hydriatic prescription of individual disease
- xv. Hydrotherapy as a means of rehabilitation and health promotion
- xvi. Emergency treatments in Hydrotherapy



**Unit-16: Mud Therapy**

(20 Hrs)

- i. Introduction to Mud therapy
- ii. Classification of Mud for therapeutic use
- iii. Precautions for storing mud
- iv. Methods of treatment of mud
  - a. Applications
  - b. Packing
  - c. Hot poultices
- v. Effect of Mud on different systems of body
- vi. Types of mud therapy applications
  - a. Natural mud bath
  - b. Full and partial mud packs
  - c. Mud plaster
  - d. Thermal bath
  - e. Dry pack
  - f. Sand pack and sand baths
- vii. Cosmetic uses of mud
- viii. Research updates

**PRACTICAL**

- i. Demonstration of various therapeutic effects, procedure and treatments in Hydrotherapy during clinical classes at the Hospital (40 Hrs)
- ii. At the end of the Final BNYS course, candidate should be in a position to give treatments independently
- iii. 5 case documentation of all hydriatic applications (20 Hrs)
- iv. Clinical dissertation on case studies with minimum sample size of 20 patients on one general and two local applications (40 Hrs)

**Text books:**

1. Baths – SJ Singh
2. My Water Cure – Sebastian Kneipp
3. Rational Hydrotherapy – JH Kellogg
4. Healing Clay –Michael Abserra
5. Our Earth Our Cure – Raymond Dextroit

**Reference:**

1. Handbook of Hydrotherapy – Shew Joel
2. Hydrotherapy in Practice – Davis BC & Harrison RA
3. Medical Hydrology – Sidney Licht

**Subject title:** PHYSICAL MEDICINE & REHABILITATION (Duration 12 months)

**Subject Code:** BNYS T 405 & BNYS P 405

<b>Total Number of Hours:</b> 250	<b>Theory:</b> 150	<b>Practical:</b> 100		
<b>Credits</b>				
<b>Hours/week</b>				
<b>SCHEME OF EXAMINATION</b>				
<b>Total Marks:</b> 200				
<b>Theory:</b> 130		<b>Practical:</b> 70		
<b>Final Theory Exam</b>	<b>Internal Assessment</b>	<b>Viva Voce</b>	<b>Final Practical Exam</b>	<b>Internal Assessment</b>
80	20	30	60	10

### **Goals and Objectives**

#### **Goals:**

The goal 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, rehabilitative purposes

#### **Objectives**

##### **Knowledge:**

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

- Define principles of basic physics that act as a foundation for physical medicine
- 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 and cryotherapy;
- 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.

##### **Skills:**

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

- Demonstrate usage of therapeutic applications of physical medicine in promotive, preventive, curative and rehabilitative therapy, focusing on rehabilitation.
- Institute remedial measures in *Yoga* for various disease conditions.

##### **Integration:**

At the completion of training, the student should be able to integrate knowledge of various treatments used in Physical Medicine and efficiently utilise the same for rehabilitative and therapeutic purposes.

### **THEORY**

#### **Unit-1: Exercise therapy**

(90 Hrs)

- i. Basic Physics in Exercise Therapy
  - a. Mechanics: Force, gravity, line of gravity, center of gravity in human body, base, equilibrium, axes and planes

- b. Mechanical Principles: lever, order of lever, examples in human body, pendulum, spring
- ii. Introduction to exercise therapy
- iii. Starting positions: Fundamental starting positions, derived positions, muscle work for all the fundamental starting positions
- iv. Classification of movements in detail
  - a. Voluntary movements
  - b. Involuntary movements
- v. Active movements
- vi. Passive movements
- vii. Muscle strength: Anatomy and physiology of muscle tissue, causes of muscle weakness/paralysis, types of muscle work and contractions, range of muscle work, muscle assessment, Principles of muscle strengthening/reeducation, early reeducation of paralyzed muscles
- viii. Joint movement: Classification of joint movements causes for restriction of joint movement, prevention of restriction of joints range of movement, principles of mobilization of joint in increasing the range of motion. Technique of mobilization of stiff joint.
- ix. Relaxation: Techniques of relaxation, Principles of obtaining relaxation in various positions
- x. Posture: types, factors responsible for good posture, factors for poor development of posture
- xi. Coordination exercises: Definition of coordinated movements, in coordinated movements, Principles of coordinated movements, technique of coordination exercise
- xii. Gait: Analysis of normal gait with muscles work, various pathological gaits
- xiii. Crutch gait: introduction, crutch measurement, various types of crutch gait in detail
- xiv. Neuromuscular facilitation techniques, functional reeducation
- xv. Suspension therapy: Principles of suspension, types of suspension therapy, effects and uses of suspension therapy with their application either to mobilize a joint to increase joint range of motion or increase muscle power, explaining the full details of the components used for suspension therapy
- xvi. Myofascial Release Therapy and related therapies used in Sports Medicine
- xvii. Therapeutic applications

**Unit-2: Electrotherapy**

(60 Hrs)

- i. Electrical fundamentals
  - a. Physical principles
  - b. Structure and properties of matter
  - c. Molecular atom, proton, neutron, electron, ion etc.
- ii. Electrical energy
  - a. Nature of electricity current
  - b. Static electricity
  - c. Electric potentials generated by cell
- iii. Ohm's Law
- iv. Joule's Law
- v. Magnetic energy
  - a. Nature and property of a magnet
  - b. magnetic induction
  - c. Shaw rule
  - d. Maxwell's corkscrew rule

- vi. Electromagnetic induction
  - a. Principle and working of choke
  - b. Coil
  - c. Transformer
  - d. Rectification of AC to DC
  - e. Metal oxide rectifier
- vii. Semiconductor
  - a. Diode and Triode
- viii. Valves
- ix. Principles of working in a capacitor
  - a. Details of charging and discharging etc.
- x. Transistors
- xi. Measurement of current intensity
- xii. EMS and power
- xiii. Moving coil millimeter and voltmeter
- xiv. Low frequency currents
  - a. Nature and principles of production of muscles stimulating currents
  - b. Types of low frequency currents used for treatment
  - c. Therapeutic electric stimulation
  - d. Ionotophoresis
  - e. Phonophoresis
- xv. Preparation for electrotherapy
  - a. Preparation of apparatus
- xvi. Patient treatment technique
  - a. Stimulating muscles of extremity, back and face through the motor points
- xvii. Faradic and Galvanic currents
- xviii. High frequency current treatments
  - a. Physics of high frequency currents
  - b. Principles
  - c. Biophysics of heat physiology and cold.
  - d. Production, physiological and therapeutic effects and uses.
  - e. Technique of treatment, dangers and precautions, contraindications of: Ultrasonic therapy
- xix. Principles of radiation therapy
  - a. Physics of radiation therapy
  - b. Laws governing radiation: Production, physiological and therapeutic effects, uses, techniques of treatment, dangers and precautions, contraindications etc. of:
    - IRR therapy
    - UV therapy
  - c. Basic principles of TENS and IFT
  - d. Laser Therapy
- xx. Wax therapy
  - a. Physics of wax therapy
  - b. Physiological and therapeutic effects and uses
  - c. Techniques of application

## **PRACTICAL ELECTROTHERAPY**

(50 Hrs)

- i. Interrupted/modified DC (20 Hrs)
  - a. Stimulation of muscles directly
  - b. Diagnostic tests:
    - FG test
    - SD curve
    - Fatigue test
  - c. Uses of surged Faradism and interrupted Galvanism in various peripheral nerve lesions
    - Neuropraxia
    - Axonotmesis
    - Neurotmesis
- ii. High Frequency current treatment (30 Hrs)
  - a. UV radiation: Setting up of apparatus selection of lamps technique of application of UVR for various conditions like test dose, general body bath, acne vulgaris, alopecia areata and tota
  - b. PRACTlis, ulcers, psoriasis, rickets and general debility patients.
  - c. Ultrasonics: Setting up of apparatus, selection of dose, and technique of application of various conditions and to various parts of the body.
  - d. Laser – setting up apparatus including selection of method, technique, preparation of patient, checking contraindications, application for various conditions and parts of the body.

## **PRACTICAL EXERCISE THERAPY**

(50 Hrs)

- i. Demonstration and practice of active and passive movements (6 Hrs)
- ii. Demonstration and practice of putting suspension to shoulder joint and elbow joint in upper limbs, hip and knee joints in lower limbs for all movements. Demonstration of total suspension. (8 Hrs)
- iii. Muscle strength: Demonstration and practice of strengthening, reeducation of weak/paralyzed muscles of both upper and lower extremity, individual group muscles, abdominal muscle exercises (8 Hrs)
- iv. Joint movement: Demonstration and practice of techniques to improve joint range of motion of hip joint, knee joint, ankle and foot, shoulder, elbow joint, radio- ulnar joint, wrist, etc. (6 Hrs)
- v. Demonstration and practice of free exercise to improve joint range of motion (Small joint, Eg: Hand, fingers, toes, etc). Demonstration and practice of all crawling exercises, faulty posture, correcting techniques etc. (4 Hrs)
- vi. Demonstration of various pathological gaits. (4 Hrs)
- vii. Measurement of crutches, walking aids, strengthening muscles, crutch balance, demonstration and practice of all crutch gaits. (4 Hrs)
- viii. Breathing exercises: Demonstration and practice of diaphragmatic breathing, localized expansion exercises. (4 Hrs)
- ix. Passive stretching: Techniques of passive stretching to sternomastoid muscle, shoulder abductors, elbow flexors, supinator, wrist and finger flexors in upper limbs, passive stretching to hip flexors, adductors, iliotibial band, tensor fascia lata, quadriceps, knee flexors, tendoachilles, etc. (6 Hrs)

**Reference Books**

1. Principles of Exercise therapy – Dina Gardiner
2. Tidy's Physiotherapy
3. Cash's Textbook of Physiotherapy
4. Clayton's Electrotherapy

**Subject title:** FIRST AID AND EMERGENCY MEDICINE (Duration 12 months)

**Subject Code:** BNYS T 406 & BNYS P 406

<b>Total Number of Hours:</b> 150	<b>Theory:</b> 100	<b>Practical:</b> 50		
<b>Credits</b>				
<b>Hours/week</b>				
<b>SCHEME OF EXAMINATION</b>				
<b>Total Marks:</b> 200				
<b>Theory:</b> 130		<b>Practical:</b> 70		
<b>Final Theory Exam</b>	<b>Internal Assessment</b>	<b>Viva Voce</b>	<b>Final Practical Exam</b>	<b>Internal Assessment</b>
80	20	30	60	10

### **Goals and Objectives**

#### **Goal:**

The goal of teaching First Aid and Emergency Medicine to undergraduate students is to provide them with the skills and knowledge required to manage medical emergencies efficiently.

#### **Objectives:**

##### **Knowledge:**

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

- Illustrate working knowledge about Golden hour
- Describe quick assessment and recognition of emergency conditions;
- Demonstrate specific first aid measures and emergency treatments used for handling emergency cases before and after diagnosis of the condition;

##### **Skills:**

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

- Demonstrate usage of first aid procedures in various emergency situations
- Describe assessment of emergencies and treatment of the same with suitable procedures.
- Possess the knowledge and skills to perform Basic Life Support procedures in the Golden Hour.
- Able to assess the severity of an emergency condition so as to act in accordance and take necessary steps to prevent further complications.

##### **Integration:**

At the completion of training, the student should be able to effectively use his/her knowledge of assessment and management of medical emergencies in his/her professional practice.

## **THEORY**

### **Unit-1: First aid**

(40 Hrs)

- i. General principles of first aid-definition, principles, responsibilities and golden rules
- ii. Resuscitation techniques-basic life support, mouth to mouth ventilation, artificial ventilation, Sylvester method.
- iii. Unconsciousness and general principles of treatment, recovery position
- iv. Transportation and handling of patient
- v. Hemorrhage and bleeding
- vi. Shock
- vii. Wounds
- viii. Bandages, dressing and slings
- ix. Fractures, sprains and strains
- x. Poisoning
- xi. Asphyxia, Aspiration, drowning, suffocation and strangulation
- xii. Road accidents
- xiii. Effect of temperature, sunburn, hypothermia, frost bite, heat exhaustion, heat stroke
- xiv. Burns and scalds, electrical injuries
- xv. Head injury, chest injury, blast injury, crush injury
- xvi. Sports injuries
- xvii. Epilepsy-febrile convulsions
- xviii. Syncope
- xix. Dog bite, snake bite, scorpion bite and bee sting
- xx. Emergencies in diasthetic patients and cardiac patient

### **Unit-2: Recognition, Evaluation of Clinical Emergencies**

(60 Hrs)

- i. CVS
  - a. Acute myocardial infarction
  - b. Cardiogenic shock
  - c. Cardiac arrhythmias
  - d. Cardiac arrest
  - e. Hypertensive emergencies
  - f. Pulmonary embolism
  - g. Dissection of aortic aneurysm
  - h. Cardiac tamponade
  - i. DVT
- ii. Respiratory System
  - a. Hemoptysis
  - b. Status asthmaticus
  - c. Spontaneous pneumothorax
  - d. Acute respiratory failure
  - e. Massive pulmonary collapse
  - f. Acute laryngeal obstruction
  - g. ARDS
  - h. Pneumonia
  - i. Massive pleural effusion
- iii. Gastrointestinal System



- a. Acute vomiting
- b. Perforation of Peptic Ulcer
- c. Hematemesis
- d. Hepatic Pre coma and coma
- e. Acute pancreatitis
- f. Acute pain in abdomen
- g. Obstruction of intestine
- iv. Nervous System
  - a. Unconscious patient
  - b. Cerebrovascular catastrophes
  - c. Convulsions
  - d. Status epilepticus
  - e. TIA
  - f. Spinal cord injuries
  - g. Brain death
  - h. Head injury
  - i. Acute ascending polyneuritis
- v. Renal System
  - a. Acute renal failure
  - b. Renal colic
  - c. Hematuria
  - d. Hyperkalaemia
  - e. Hypokalaemia
  - f. Hyponatremia
- vi. Endocrine and Metabolism
  - a. Thyroid crisis
  - b. Adrenal crisis
  - c. Diabetic ketoacidosis and coma
  - d. Hypoglycemia
  - e. Tetany
  - f. Hypercalcemia
- vii. Miscellaneous Emergencies
  - a. Syncope
  - b. Acute peripheral circulatory failure
  - c. Anaphylaxis
  - d. Hypothermia
  - e. Hyperpyrexia
  - f. Poisoning
  - g. Drug overdose

### **PRACTICAL**

- i. History taking and physical examination of cases (10 Hrs)
- ii. Case sheet writing in different general cases (25) (10 Hrs)
- iii. Demonstration of equipment and instruments used for investigation in modern diagnostics (15 Hrs)
- iv. Demonstration tour of an ultra-modern super specialty hospital to see the latest techniques management of emergency conditions (15 Hrs)

**Text books:**

1. Hutchison's Clinical Methods
2. Manual of Clinical Methods – PS Shankar
3. First Aid – Red Cross Society
4. First Aid – St. John Ambulance Association
5. First Aid – LC Gupta
6. Bailey and Love's Short Practice of Surgery
7. Harris's Principle of Internal Medicine
8. Davidson's Principle and Practice of Medicine
9. Medical Emergency, Diagnosis and Management

**Subject title:** CLINICAL NATUROPATHY (Duration 12 months)

**Subject Code:** BNYS T 406 & BNYS P 406

<b>Total Number of Hours:</b> 300	<b>Theory:</b> 200	<b>Practical:</b> 100		
<b>Credits</b>				
<b>Hours/week</b>				
<b>SCHEME OF EXAMINATION</b>				
<b>Total Marks:</b> 200				
<b>Theory:</b> 130		<b>Practical:</b> 70		
<b>Final Theory Exam</b>	<b>Internal Assessment</b>	<b>Viva Voce</b>	<b>Final Practical Exam</b>	<b>Internal Assessment</b>
80	20	30	60	10

### **Goals and Objectives**

#### **Goal:**

The goal of teaching Clinical Naturopathy to undergraduate students is to train them to provide well integrated clinical service in Naturopathy.

#### **Objectives**

##### **Knowledge:**

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

- Illustrate decision making in Naturopathy;
- Understand the basic principles of screening and prevention of disease;
- Comprehend the scope of practice- patterns of use, fields of practice, regulations, limitations;
- Understand the concept of healing and disease crises and management of the same.
- Understand the pathogenesis of the disease in Naturopathy basis and preventive measures of the same;
- Create a specific module of therapy for the particular patient with varied presentations.

##### **Skills:**

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

- Apply his /her knowledge of clinical Naturopathy in managing various diseases;
- Demonstrate usage of therapeutic aspect of clinical Naturopathy in curative and rehabilitative therapy;
- Utilize his/ her knowledge of clinical Naturopathy for prevention of disease and promotion of health;

##### **Integration:**

At the completion of training, the student should be able to integrate knowledge of clinical Naturopathy and efficiently utilise the same for therapeutic purposes.

## **THEORY**

- Unit-1: Good Clinical Practice** (2 Hrs)  
i. Guidelines and Standards
- Unit-2: Decision-making in Naturopathy** (2 Hrs)
- Unit-3: Screening and Prevention of Disease** (5 Hrs)  
i. Basic principles of screening
- Unit-4: Scope of practice** (8 Hrs)  
i. Patterns of use  
ii. Fields of practice  
iii. Regulations  
iv. Limitations
- Unit-5: Cardinal manifestations and presentation of disease** (15 Hrs)
- Unit-6: Naturopathic prescription-making and algorithmic line of management for the following diseases:** (40 Hrs)  
• Abscess, Acid-Peptic Disease, Acne, AIDS, Aging, Allergies, Alopecia, Alzheimer's disease, Anal fissures, Anemia, Anorexia nervosa, Anxiety disorders, Appendicitis, Arthritis – OA & RA, Asthma, ADD/ADHD, Back pain, Bad breath, Bedsore, Bladder infection, Bronchitis, Bruise, Bursitis, Cancer - Breast cancer, Cervical cancer, Colorectal cancer, Leukemia, Lung cancer, Prostate cancer, Skin cancer, Stomach cancer, Uterine cancer; Dental caries, Cardiovascular disease, Cerebrovascular disease, Chlamydia, Chloasma (Age spots), Chronic fatigue syndrome, Cirrhosis, Common cold, Colic, Colitis, Nasal congestion, Conjunctivitis, Constipation, Menstrual cramps, Crohn's disease, Cuts (cuts, wounds and scratches), Cyst, Cystitis, Dandruff, Deep venous thrombosis, Clinical depression, Dermatitis, Diabetes, Diarrhea, Diverticulitis, Dizziness, Duodenal ulcer, Dysmenorrhea, Dyspepsia, Diabetes mellitus, Earache, Earwax blockage, Eczema, Edema, Emphysema, Endometriosis, Epilepsy, Erectile dysfunction, External otitis, Fainting, Farsightedness, Fatigue, Fever, Fibromyalgia, Flatulence, Flu, Folliculitis, Food poisoning, Foot odor, Gallstones, Gas, Gastritis, Gastroenteritis, GERD, Gingivitis, Goiter, Gout, Headache, Heatstroke, Hemorrhoids, Hepatitis, Hernia, Herpes (genital), Obesity, Oligomenorrhea, Oral cancer, Ovarian cyst, Parkinson's disease, PID, Phlebitis, PMS, Postnasal drip, PTSD, Rashes (hives), Raynaud's disease, Sciatica, SAD, Seizure disorder, Sinusitis, Snoring, Sore throat, Scoliosis, Sprains, Acute Abdomen.
- Unit-7: Pathophysiology** (20 Hrs)
- Unit-8: Management of pains** (12 Hrs)  
i. Pain sensory systems  
ii. Chronic pain  
iii. Types of pain  
a. Chronic discomfort and palpitation

- b. Abdominal pain
- c. Headache
- d. Back, neck pain

<b>Unit-9:</b> <u>Fever, hyperthermia</u>	(2 Hrs)
<b>Unit-10:</b> <u>Fever, rashes</u>	(2 Hrs)
<b>Unit-11:</b> <u>Fever of unknown origin</u>	(2 Hrs)
<b>Unit-12:</b> <u>Hypothermia &amp; frostbite</u>	(3 Hrs)
<b>Unit-13:</b> <u>Syncope, faintness, dizziness, vertigo</u>	(3 Hrs)
<b>Unit-14:</b> <u>Weakness, disorders of movements and imbalance</u>	(5 Hrs)
<b>Unit-15:</b> <u>Numbness, tingling and sensory loss</u>	(3 Hrs)
<b>Unit-16:</b> <u>Aphasia, memory loss and other focal cerebral disorders</u>	(6 Hrs)
<b>Unit-17:</b> <u>Sleep disorders</u>	(4 Hrs)
<b>Unit-18:</b> <u>Dyspnea, cough</u>	(2 Hrs)
<b>Unit-19:</b> <u>Edema</u>	(2 Hrs)
<b>Unit-20:</b> <u>Dysphasia, nausea, vomiting and indigestion</u>	(2 Hrs)
<b>Unit-21:</b> <u>Diarrhea, constipation</u>	(2 Hrs)
<b>Unit-22:</b> <u>Weight loss</u>	(2 Hrs)
<b>Unit-23:</b> <u>Jaundice, abdominal swelling</u>	(3 Hrs )
<b>Unit-24:</b> <u>Sexual dysfunction</u>	(3 Hrs)
<b>Unit-25:</b> <u>Healing crisis and Disease crisis</u>	(5 Hrs)
<b>Unit-26:</b> <u>Approach to the patient in Naturopathic medicine with:</u>	(25 Hrs)
i. Skin disease	
ii. Cardiovascular disease	
iii. Disease of respiratory system	
iv. Gastrointestinal disorders	
v. Liver and pancreatic disease	
vi. Articular and musculoskeletal disorder	
vii. Neurological disease	
viii. Renal disorders	
ix. Endocrinal disorders	
x. Menstrual disorders	
xi. Peripheral neuropathy	

**Unit-27: Dictum of cure in Naturopathic medicine**

- i. Identify and remove the root cause
- ii. Eliminate the toxins
- iii. Supplement of the vital energy or nerve energy

**Unit-28: Important modes and methods for natural rejuvenation**

**Note:** Apart from the above-listed conditions, other clinical conditions may be discussed but the above-listed conditions are mandatory.

**PRACTICAL**

- i. Case-history taking, documentation and complete management protocol of at least 30 cases.
- ii. Clinical dissertation on any one disease involving multiple patients.

**Text books:**

1. Clinical Naturopathy: An Evidence-Based Guide to Practice-Jerome Sarris, Jon Wardle
2. Clinical Naturopathic Medicine - Leah Hechtman
3. The Clinician's Handbook of Natural Medicine - Joseph E. Pizzorno Jr.
4. Fasting-The Ultimate Diet - Allan Cott
5. Mucusless Diet Healing System - Arnold Ehret
6. The Fasting Cure (Classic Reprint) - Upton Sinclair
7. Fasting Can Save Your Life - Herbert M. Shelton

**Subject title:** RESEARCH METHODOLOGY & RECENT ADVANCES (Duration 12 months)  
**Subject Code:** BNYS T 408 & BNYS P 408

<b>Total Number of Hours: 150</b>		<b>Theory: 100</b>		<b>Practical: 50</b>	
<b>Credits</b>					
<b>Hours/week</b>					
<b>SCHEME OF EXAMINATION</b>					
<b>Total Marks: 200</b>					
<b>Theory: 130</b>				<b>Practical: 70</b>	
<b>Final Theory Exam</b>	<b>Internal Assessment</b>	<b>Viva Voce</b>	<b>Final Practical Exam</b>	<b>Internal Assessment</b>	
80	20	30	60	10	

### **Goals and Objectives**

#### **Goal:**

The goal 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.

#### **Objectives**

##### **Knowledge:**

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

- 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 a study.
- Illustrate statistics and probability theory;
- Use technological aids for preparing research reports;
- Demonstrate knowledge about inter-disciplinary research

##### **Skills:**

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

- Prepare a research study, conduct, evaluate and publish it
- Interpret research findings and analyze whether data is significant or not;

##### **Integration**

At the completion of training, the student should be able to integrate knowledge of clinical Naturopathy and *Yoga* with skills in research methodology to conduct and publish research studies in the field, to help shift the basis of Naturopathy and *Yoga* to an evidence-based science.

## **THEORY**

- Unit-1: Research Methodology** (30 Hrs)
- i. The research process. Methodology and methods.
  - ii. The design of a study.
  - iii. Literature review.
  - iv. Ethics of research.
  - v. Types of common designs. Their advantages and disadvantages.
  - vi. Sampling.
  - vii. The experimental and quasi-experimental methods. Correlation studies.
  - viii. Measurement tools: Observations, questionnaires and others.
  - ix. Data organization in Excel and SPSS.
  - x. Descriptive statistics. Measures of central tendency, measures of dispersion. Correlation coefficients.
  - xi. Graphical representations of data. Simple graphs, the box and whiskers plot.
  - xii. Reliability. The different ways of measuring reliability.
  - xiii. Validity. Types of validity.
- Unit-2: Inferential Statistics and Probability Theory** (25 Hrs)
- i. Inferential statistics – populations and samples.
  - ii. Elementary concepts in probability theory
  - iii. The normal distribution. Z-values and probability
  - iv. Calculating probabilities when population parameters are known
- Unit-3: Research Reports** (15 Hrs)
- i. Microsoft word, excel and power point
  - ii. Reading research reports
  - iii. Writing research reports
  - iv. Presentations
- Unit-4: Other streams** (30 Hrs)
- i. Inter-Disciplinary Research
  - ii. Introduction to research in Management studies
  - iii. Introduction to research in Education, History, and Anthropology.
  - iv. Introduction to research in Social studies and Humanity.
  - v. Introduction to research in Linguistics
  - vi. Introduction to research in Jurisprudence.
  - vii. Introduction to research in Science and technology



## **PRACTICAL**

- i. Dissertation on any one research study (basic or clinical with sample size of minimum 10). Presentation of dissertation.
- ii. Research paper interpretation and presentation
- iii. Single case study from hospital

## **Text books:**

1. Kothari, C.R.: Research Methodology, Methods and Techniques (VishwaPrakashan, New Delhi, 1985)
2. Telles, S.: Research Methods (Swami Vivekananda YogaPrakashan, Bangalore)

## **References:**

1. Robin Monro: *Yoga* research bibliography scientific studies on *Yoga* and meditation (*Yoga* Biomedical Trust, England 1989)
2. Michael H. Cohen: *Complementary and Alternative Medicine: Legal Boundaries and regulatory Perspectives* (Paperback - Aug 19, 1997)
3. Jerrold H. Zar: *Biostatistical Analysis* person education.
4. Russell A. Jones: *Research Methods in the Social and behavioral science* (Sinauer Associates, Saunderland's Massachusetts)
5. A.K. Singh: *Tests, Measurements and Research Methods in Behavioral Sciences* (BharatiBhavan Publishers)
6. J.N.S. Matthews: *An Introduction to randomized controlled clinical trials* (Arnold, London)
7. J.S.P. Lumley: *Research:- Some Ground Rules* W. Benjamin (Oxford University Press)
8. Herman J. Ader: *Research Methodology in the life, behavioral and social Sciences* Gideon J. Mellebeegh (SAGE Publications).