**COURSE OUTCOMES**

**Department of Yoga & Naturopathy: BNYS Programme**

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| **S No** | **Class & Semester** | **Course & Course Code** | **COs** | **Course Outcomes** |
| **01** | **BNYS 1st Year** | **Anatomy I** **& II** **(BNY-101 & BNY-102)** | **CO1.** | Identify body structures including topography of living body; |
| **CO2.** | Understand normal human anatomy clinically important inter-relationship and functional anatomy of bodily structures; |
| **CO3** | Explain 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 diseased states; |
| **CO4.** | Describe developmental basis of variations and abnormalities with respect to sequential development of organs and systems, teratogens, genetic mutations and Environmental hazards. |
| **CO5.** | Illustrate histological structures of various tissues and organs and co- relate structure and function in order to understand diseased states; |
| **CO6.** | Understand clinical basis of somecommon clinical procedures i.e., intramuscular and intravenous injection, lumbar puncture etc. |
| **CO7.** | Develop an understanding of the applied aspects of human anatomy. |
| **02** | **BNYS 1st Year** | **Physiology I** **& II** **(BNY-103 & 104)** | **CO1.**  | Explain the normal functioning of all the organ systems and their interactions for well Co- ordinated body function; |
| **CO2.**  | Describe the physiological aspects of normal growth and development; |
| **CO3.**  | Illustrate the physiological response and adaptations to environmental stresses; |
| **CO4.** |  Analyze physiological principles underlying pathogenesis and disease management  |
| **CO5.**  | Appreciate the relative contribution ofeach organ system to the homeostasis |
| **CO6.**  | Interpret experimental/investigative data |
| **CO7.** | Conduct experiments designed to study physiological phenomena |
| **03** | **BNYS 1st Year** |  **Biochemistry** **(BNY-105)** | **CO1.**  | Define the molecular and functional organization of a cell and list its sub cellular components; |
| **CO2.**  | Outline structure, function and inter-relationships of bio molecules and consequences of deviation from normal; |
| **CO3.**  | Review the fundamental aspects of enzymology and clinical application wherein regulation of enzymatic activity is altered; |
| **CO4.**  | Illustrate digestion and assimilation of nutrients and consequences of malnutrition; |
| **CO5.**  | Integrate the various aspects of metabolism and their regulatory pathways |
| **CO6.**  | Explain biochemical basis of inherited disorders with their associated sequelae; |
| **CO7.**  | Describe mechanisms involved in maintenance of body fluid and pH homeostasis; |
| **CO8.**  | Delineate the molecular mechanisms of gene expression and regulation, the principles of genetic engineering and their application in medicine; |
| **CO9.**  | Summarize the molecular concept of body defences and their application in medicine; |
| **CO10.**  | Outline the biochemical basis of environmental health hazards, biochemical basis of cancer and carcinogenesis; |
| **CO11.** | Familiarize with principles of various conventional and specializedlaboratory investigations and instrumentation analysis and interpretation of a given data; |
| **CO12.** | Suggest experiments to support theoretical concepts and clinical diagnosis. |
| **04** | **BNYS 1st Year** | **Philosophy of Naturopathy****(BNY-106)** | **CO1.** | Illustrate the history of Naturopathy including major contributors to the field and their work; |
| **CO2.**  | Understand the evolution and composition of the human body according to different schools of medicine such as Naturopathy, Yoga, Ayurveda, Homeopathy, Modern Medicine, etc.  |
| **CO3.**  | Understand Principles behind using the diagnostic procedures of Naturopathy, like spinal diagnosis, facial diagnosis, iris diagnosis, and chromo diagnosis. |
| **CO4.**  | Understand naturopathic viewpoints of concepts like hygiene, vaccination, family planning, personal life and prevention of diseases, geriatrics, etc, and implement them in his/her practice |
| **CO5.** | Describe foreign matter, toxin accumulation, theory of Toxemia, Unity of disease and Unity of Cure. |
| **CO6.**  | Explain the history of Naturopathy including major contributors to the field and their work; |
| **CO7.**  | Demonstrate knowledge of recent advances and research in Naturopathy principles/theories. |
| **CO8.**  | Firmly establish his/her diagnostic and therapeutic thought processes in the fundamental principles of Naturopathy: |
| **05** | **BNYS 1st Year** | **Principles of Yoga****(BNY-107)** | **CO1.** | Explain the various definitions of Yoga, history of Yoga and branches of Yoga; |
| **CO2.** | Describe kinds of Yogasanas, its importance, methods, rules, regulations and limitations; |
| **CO3.** | Explain about the definitions, origin, branches of Yoga. |
|  |  |  | **CO4.** | Illustrate the various limbs of AshtangaYoga; |
| **CO5.** | Demonstrate knowledge of pranayamas, pranaand lifestyle, breathing and lifespan. |
| **CO6.**  | Demonstrate various types of Yogasanasin their correct method of performance; |
| **CO7.**  | Demonstrate different pranayamas. |
| **06** | **BNYS 1st Year** | **Sanskrit****(BNY-108)** | **CO1.** | Understanding Indian culture and philosophy  |
| **CO2.** | Understanding the language of ancient Indian scriptures, including the Vedas, Upanishads, and Bhagavad Gita. |
| **CO3.** | Learning Sanskrit can help students gain a deeper understanding of Indian culture, philosophy, and spirituality. |
| **CO4.** | Make Sanskrit as a speaking language |
| **CO5.** | Grammatical analysis of Sanskrit shlokas |
| **07** | **BNYS 2nd Year** | **Pathology****(BNY-201)** | **CO1.**  | Describe the basic pathological processes/concepts in terms of pathogenesis and morphological changes in tissues.  |
| **CO2.**  | Explain the mechanisms which govern the disturbances of circulation and their morphological and clinical manifestations. Describe the general principles of neoplasia,  immunological and genetic disorders |
| **CO3.**  | Describe the pathophysiology of anaemias, leukaemias and disorders of coagulation and correlate haematologic changes with their clinical manifestations. Describe the common Indications and procedures of safe blood transfusion. |
| **CO4.** | Describe the mechanism of common disease processes |
| **CO5.** | Correlates the altered morphology (Gross & microscopic) of different organ systems in common diseases to the extent needed for understanding of disease processes and their clinical significance. |
| **08.** | **BNYS 2nd Year** | **Microbiology** **(BNY 202)** | **CO1.**  |  Remember and recall all the infectious micro-organisms of the human body and host- parasite relationship |
| **CO2.**  | Describe parasitic micro-organisms (viruses, fungi, bacteria, parasites) with the pathogenesis of the diseases they cause; |
| **CO3.** | Enumerate and illustrate sources and modes of transmission, including insect vectors, of pathogenic and opportunistic organisms |
| **CO4.** | Describe the pathways and mechanisms of immunity to infection |
| **CO5.**  | Acquire knowledge about different vaccines that are available for the prevention of communicable diseases |
| **CO6.** | Effectively use sterilization and disinfection to control and prevent nosocomial and community acquired infections |
| **CO7**  | Order laboratory investigations for bacteriological examination of food, water and air |
| **09.** | **BNYS 2nd Year** | **Community Medicine** **(BNY-203)** | **CO1.**  | Describe epidemiological methods and their applications to communicable and Non-communicable diseases in the community or hospital situation; |
| **CO2.** | Describe the health care delivery system including rehabilitation of the disabled in the country. |
| **CO3.**  | Describe the National Health Programmes with particular emphasis on maternal and child health programmes, family welfare planning and population control. |
| **CO4**  | Describe the health information systems and health educationin relation to community |
| **CO5.**  | Enunciate the principles and components of primary health care and the national health policies to achieve the goal of 'Health for All'. |
| **10.** | **BNYS 2nd Year** |  **Yoga Philosophy** **(BNY-204)** | **CO1.**  | Explain the various schools of philosophy which hadan influence on Yogic text likeBuddhism, samkhya, mimamsa etc. |
| **CO2.** | Describe spiritual values of pranayama andkriyas. |
| **CO3.**  | Illustrate the basic understanding of Yoga as a philosophy. |
| **CO4**  | Correlate the concept of Brahman according to Vedanta. |
| **CO5.**  | Recognize the concept of Nyaya, Vaisheshika, Sankhya, Mimamsha and Vedanta |
| **11.** | **BNYS 2nd Year** |  **Basic Pharmacology**  **(BNY 205)** | **CO1.** | Understand the basis of drug handling by the body (pharmacokinetics) and clinical Pharmacokinetic parameters and their clinical applications. |
| **CO2.**  | Understand the concepts underlying drug action like receptor, drug receptor interaction, drug interactions and adverse drug reactions with their clinical implications. |
|  | Describe the pharmacokinetics and pharmacodynamics (mechanism of action, action profile) of essential and commonly used drugs. |
| **CO3.**  | Describe the pharmacokinetics and pharmacodynamics (mechanism of action, action profile) of essential and commonly used drugs. |
| **CO4.** | List the indications, contraindications, interactions and adverse reactions of commonly used drugs. |
| **CO5.**  | Describe the pharmacokinetic basis, clinical presentation and diagnosis of toxicity of commonly used drugs with measures to prevent & treat the same. |
| **12.** | **BNYS 2nd Year** | **Colour****Therapy****and****Magneto Therapy****(BNY 206)** | **CO1.** | Correlate basic understanding of principles along which colours and magnets can beused as therapeutic agents, along with history of therapeutic uses of colours and magnets |
| **CO2.**  | 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 use magnets. |
| **CO3.**  | Illustrate classification of colours, physics of light, electromagnetic spectrum, and pathway of vision, human aura, chakras, heliotherapy, colour breathing, chromo charging, and latest research, applying the same to disease management. |
| **CO4.** | Deduce various diseases and disorders of the body and mind using the principles of colour diagnosis |
| **CO5.** | Analyze the therapeutic values of colours and magnets in treatment of various diseases. |
| **13.** | **BNYS 2nd Year** | **Forensic Medicine & Toxicology** **(BNY 207)** | **CO1.** | Define medico-legal responsibilities of a general physician working in a ruralprimary health centre or an urban health centre. |
| **CO2.**  | Understand the basic concept, scope and importance of this subject. |
| **CO3.**  | Preserve and dispatch relevant viscera, articles and trace evidence to Forensic science laboratory and interpret the FSL report. |
| **CO4.** | Appreciate the physician’s responsibilities in criminal matters and respect for codes of Medical Ethics. |
| **CO5.** | Identify the basic medico-legal aspects of hospital and general practice. |
|  |  |  | **CO6.** | Detect occupational and environmental poisoning, their legal aspects, particularly Pertaining to Workman’s Compensation Act. |
|  |  |  | **CO7.** | Outline basic medico-legal aspects of Hospitals and general practice. |