CURRICULUM
DIPLOMA
(Certificate Level)
Yoga and Naturopathy

(Three Year's Programme – Yearly System)

Council for Technical and Vocational Training
Curriculum Development Division
Sanothimi, Bhaktapur
First development: 2017
First Update: 2020
Second Update: 2024

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Introduction
Yoga and Naturopathy is one of the prominent and popular disciplines within the health profession in Nepal. The Yoga and Naturopathy profession has been helping the world for the all-round development of health. It has also been creating salary base employment and self-employment opportunities in government, public and private sectors. This curriculum is designed with the purpose of producing middle level technical workforce equipped with knowledge and skills related to the field of Yoga and Naturopathy. It helps to meet the demand of such human resource in the country to contribute in the national economic development of Nepal. The knowledge and skills incorporated in this curriculum will be helpful to deliver the individual and national needs in the field of health profession especially in Yoga and naturopathy sector.

Nepal Government has adopted a national policy for the attainment of "Health for All beyond the Year 2000 A.D" through the use of the primary health care approach. As a result CTEVT got the mandate to produce middle level trained human resource.

This course is based on the academic requirements to enter bachelor in health sciences and other academic disciplines. They provide health services as a middle level human health worker. After completion of the course the graduate is expected to perform the duty of naturopathy assistant as per assigned by Nepal Health Professional council independently in different health institutions. The program is of three academic years' duration. The first year course focuses on basic science and foundational subjects, the second year course focuses on basic medical subject with theoretical and practical knowledge and skills. Third year is given to the application of learned skills and knowledge within the comprehensive practical settings, in hospitals or health posts.

The foundational subjects like English, Nepali, Physics, Chemistry, Antomy, Physiology and Mathematics are applicable in the health programs. The disciplinary subjects of medical field are included in all three years. This curricular programme also makes the provision of project works as well as real world of work practices in the specific medical areas. The curriculum structure and the subject wise content reflect the details of this curriculum. In brief, this curriculum will guide to its implementers to produce competent and highly employable middle level technical human resource in the field of complementary medicine.

Curriculum Title
Diploma in Yoga and Naturopathy

Aim:
The program aims to produce middle level technical personnel with sound academic knowledge equipped with perfect technical skills that can be faced in real life situation.

Program Objectives:
After the completion of this program, the graduates will be enabled to:

- Plan indoor and community health program.
- Administer medication and treatments under physicians' supervision.

- Assess patient, make provisional diagnosis and manage from available resources under physicians' supervision.
- Identify referral cases and refer.
- Counsel patient for follow up, care and related health problem.
- Perform routine and basic medical investigations nder supervision of physician.
- Undersatnd minor medical and surgical procedure for patient management.
- Identify and refer common emergency cases.
- Manage and supervise health clubs, fitness centers, and spas.
- Manage, supervise and administer treatments in massage therapy, hydrotherapy, Yoga, exercise & fitness departments in a hospital.
- Perform massage therapy, hydrotherapy, spa therapies, Yoga therapy, fitness & exercises in appropriate setups.
- Assist Physician to administer acupuncture, physiotherapy, electrotherapy, manual therapy under supervision.
- Provide maternal, child health, nutrition and family planning services through primary health care center (PHCC), naturopathy centers and health post (HP).
- Implement priority national health programs through PHCC and HP.
- Handle administrative task.
- Maintain medical records.
- Understand quality control system in hospitals/ health posts
- Supervise subordinates and prepare reports.
- Create self-employment opportunities.

Target Location:
The target location of this program will be all over Nepal.

Group Size:
The group size will be maximum of 40 (forty) in a batch.

Entry Criteria:
- SLC Pass or SLC/SEE with minimum GPA 2.0 and C grade in Compulsory Mathematics, English & Science.
- TSLC in Aayurveda, with minimum 68.33%.
- Should pass entrance examination as administered by CTEVT.

Duration
The total duration of this curricular program is three years. The program is based on yearly system. Moreover, one academic year consists of 40 academic weeks and one academic week consists up to 40 hours excluding evaluation period.

Medium of Instruction:
The medium of instruction will be in English and/or Nepali.

Pattern of Attendance:
Minimum of 90% attendance in each subject is required to appear in the respective final examination.

Teacher and Student Ratio
The ratio between teachers and students must be:

- Overall ratio of teacher and student must be 1:10 (at the institution level)
- 1:40 for theory and tutorial classes
- 1:10 for practical classes

Qualification of Teachers and Instructors:

- The program coordinator should be a master's degree holder in the related area.
- The disciplinary subject related teacher should be a bachelor's degree holder in the related area.
- The demonstrators should be diploma degree holder in the related area with three years experiences in training activities.
- The foundational subject related teacher should be master degree holder in the related area.

Instructional Media and Materials
The following instructional media and materials are suggested for the effective instruction and demonstration.

- ***Printed Media Materials*** **(**assignment sheets, case studies, handouts, information sheets, individual training packets, procedure sheets, performance check lists, and text books).
- ***Non-projected Media Materials*** (display, models, flip chart, poster, writing board).
- ***Projected Media Materials*** (opaque projections, overhead transparencies, slides).
- ***Audio-Visual Materials*** (audiotapes, films, slide-tape programmes, videodiscs, videotapes).
- ***Computer-Based Instructional Materials*** (computer-based training, interactive video).

Teaching Learning Methodologies
The methods of teachings for this curricular programme will be a combination of different approaches (not limited to as mentioned here) such as illustrated lecture, tutorial, group discussion, demonstration, simulation, guided practice, practical experiences, fieldwork, report writing, term paper presentation, community campaign, case analysis, role-playing, heuristic, project work and other independent learning.

Theory: Lecture, discussion, seminar, interaction, assignment, group work.
Practical: Demonstration, observation, guided practice, self-practice, project work, clinical practice.

Mode of Education
There will be inductive and deductive mode of education.

Examination and Marking Scheme

a. Internal assessment

- There will be a transparent/fair evaluation system for each subject both in theory and practical exposure.
- Each subject will have internal assessment at regular intervals and students will get the feedback about it.
- Weightage of theory and practical marks are mentioned in course structure.
- Continuous assessment format will be developed and applied by the evaluators for evaluating student's performance in the subjects related to the practical experience.

b. Final examination

- Weightage of theory and practical marks are mentioned in structure.
- Students must pass in all subjects both in theory and practical for certification. If a student becomes unable to succeed in any subject s/he will appear in the re-examination administered by CTEVT.
- Students will be allowed to appear in the final examination only after completing the internal assessment requirements.

c. Requirement for final practical examination

- Professional of relevant subject instructor must evaluate final practical examinations.
- One evaluator in one setting can evaluate not more than 20 students.
- Practical examination should be administered in actual situation on relevant subject with the provision of at least one internal evaluator from the concerned or affiliating institute led by external evaluator nominated by CTEVT.
- Provision of re-examination will be as per CTEVT policy.

d. Final practicum evaluation will be based on:

- Institutional practicum attendance - 10%
- Logbook/Practicum book maintenance - 10%
- Spot performance (assigned task/practicum performance/identification/arrangement preparation/measurement) - 40%
- Viva voce :
  - Internal examiner - 20%
  - External examiner - 20%

e. Pass marks:

The students must secure minimum 40% marks in theory and 50% in practical. Moreover, the students must secure minimum pass marks in the internal assessment and in the semester final examination of each subject to pass the subject.

Provision of Back Paper

There will be the provision of back paper but a student must pass all the subjects of all year within six years from the enrollment date; however there should be provision of chance exam for final year students as per CTEVT rules.

Disciplinary and Ethical Requirements

- Intoxication, insubordination or rudeness to peers will result in immediate suspension followed by the review of the disciplinary review committee of the institute.

- Dishonesty in academic or practical activities will result in immediate suspension followed by administrative review, with possible expulsion.
- Illicit drug use, bearing arms in institute, threats or assaults to peers, faculty or staff will result in immediate suspension, followed by administrative review with possible expulsion.

Grading System

The following grading system will be adopted:

- Distinction: 80% and above
- First division: 65% to below 80%
- Second division: 50 % to below 65%
- Pass division: Pass marks to Below 50%

Certification and Degree Awards

- Students who have passed all the components of all subjects of all 3 years are considered to have successfully completed the course.
- Students who have successfully completed the course will be awarded with a degree of **"Diploma (Certificate Level) in Yoga and Naturopathy"**.

Career Opportunity

The graduates will be eligible for the position equivalent to Non-gazette 1st class/ Level 5 (technical) as Health Worker of Yoga and Naturopathy or as prescribed by the Public Service Commission of Nepal and other related agencies. The graduate will be eligible for registration with the related Council in the grade as provisioned in the related Council Act (if any). They can also work as spa therapist, massage therapists, fitness/Yoga instructor, and health club supervisor.

Course Structure: Diploma (Certificate Level) Yoga and Naturopathy

Second year

S.N	Subject	Mode (Weekly Hours)			Distribution of Marks						
					Theory			Practical			Total Marks
		Theory	Practical	Total	Internal	Final	Time Hours	Internal	Final	Time Hours	
1	Clinical Pathology	2	1	3	10	40	1.5	25	0	0	75
2	General Medicine, Emergency Care and First Aid	3	2	5	20	80	3	30	20	3	150
3	Philosophy of Naturopathy	3	2	5	20	80	3	30	20	3	150
4	General Yoga, Exercise & Fitness	3	2	5	20	80	3	30	20	3	150
5	Dravyaguna Vigyan (Herbology, Pharmacology and Pharmacognosy)	3	1	4	20	80	3	25	0	0	125
6	Massage & Manipulative Therapies	2	3	5	10	40	1.5	60	40	3	150
7	Preventive and Community Medicine	4	1	5	20	80	3	25	0	3	125
8	Acupuncture, Acupressure & Reflexology	2	3	5	10	40	1.5	60	40	3	150
9	Health care system, Health Management, Ethics and Jurisprudence	2	1	3	10	40	1.5	25	0	3	75
	Total	**24**	**16**	**40**	**140**	**560**		**310**	**140**		**1150**

S.N	Subject	Mode			Distribution of Marks					Minimum Exam Hour	Total Marks
					Theory			Practical			
		Theory	Practical	Total	Internal	Final	Exam Hour	Internal	Final		
A	**Class (20 weeks * 40 hours per week)**										
1	Clinical Naturopathy	6	4	10	20	80	3	30	20	3	150
2	Therapeutic Yog	6	4	10	20	80	3	30	20	3	150
3	Physiotherapy and Sports Medicine	4	4	8	10	40	1.5	30	20	3	100
4	Hydrotherapy & Spa Therapies	4	4	8	10	40	1.5	30	20	3	100
5	Nutrition, Dietetics & Fasting Therapy	3	1	4	10	40	1.5	25	0	0	75
	Total	**22**	**18**	**40**	**70**	**280**		**145**	**80**		**575**
B.	**Comprehensive Clinical Practicum (10 weeks * 40 hours per week)**										**300**
C.	**Comprehensive Community Field Practicum (5 weeks * 40 hours per week)**										150
	Grand Total (A+B+C)										**1025**

Third Year: Diploma (Certificate Level) Yoga and Naturopathy

First Year

(Please see separate curriculum for General Health Science First Year all)

SECOND YEAR

Clinical Pathology

Hours Theory: 70
Hours Practical: 35

Course Description:

This is an introductory course to basic pathology and its clinical aspects. It is divided into six different units. First is about Pathology, the discipline is divided into **general pathology** (unit one) and **systemic pathology** (unit two); the former focuses on the fundamental cellular and tissue responses to pathologic stimuli, while the latter examines the particular responses of specialized organs. In this we first cover the broad principles of general pathology and then progress to specific disease processes in individual organs and finally other units covers the clinical aspects of pathology. Unit three contains **microbiology** involving morphology of different categories of microorganisms, their relation to human diseases, basic identification techniques and, their growth & sterilization properties. Unit four deals about **biochemistry** including the biochemical processes of - digestion & absorption of foods, metabolism of different kinds of foods & their disturbance effects in our body together with the physiological roles of different kinds of vitamins & enzymes unit five **Hematology** contains about human blood & its constituents together with different hematological techniques. Unit six is about **parasitology** and deals about mode of infection, pathogenicity, laboratory diagnosis & preventive measures of important intestinal as well as blood & tissue parasites of man including different kinds of defense mechanisms of a body.

Course objectives

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

1. Describe the pathophysiological processes which govern the maintenance of homeostasis, mechanisms of their disturbance and the morphological and clinical manifestations associated with it.
2. Correlate normal and altered morphology (gross and microscopic) of different organ systems in common diseases to the extent.
3. Remember and recall all the infectious micro-organisms of the human body and host-parasite relationship.
4. Describe parasitic micro-organisms (viruses, fungi, bacteria, parasites) with the pathogenesis of the diseases they cause.
5. Explain biochemical basis of inherited disorders with their associated sequelae
6. Familiarize with principles of various conventional and specialized laboratory investigations and instrumentation analysis and interpretation of a given data.
7. Prepare investigation flow-charts for diagnosing and managing common diseases and identify biochemical and physiological disturbances in diseases.

Reference Books:

1. Anderson, [First Initial]. *Textbook of pathology*.
2. Symmers, [First Initial]. *Systemic pathology*.
3. Chakravarthy, [First Initial]. *Textbook of microbiology*.
4. Cruickshank, R. *Practical microbiology*.
5. Bailey, & Scott. *Clinical microbiology*.
6. Gupta, R. K., & Yadav, B. K. *A textbook of medical laboratory technology* (Vols. I & II). Kathmandu: Samikshaya Books.
7. Cheesbrough, M. *Medical laboratory: Manual for tropical countries*.
8. Devlin, T. M. (Ed.). *Textbook of biochemistry with clinical correlations*. Wiley-Liss Publishers.
9. Pattabhirama, & Acharya. *Laboratory manual of biochemistry*.

Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical 40
Unit 1: General Pathology	Hrs. theory 10	Hrs. lab/practical
Sub-unit 1.1: Cell injury	Hrs. theory 2	Hrs. lab/practical
Objectives:	Content:	
1. Define the Various terminologies use in pathology. 2. Discuss the structure of cell and its functions.	1. General introduction of the term: Pathology, etiology, pathogenesis, morphology, injury, Lesion, Inflammation, Edema, Hyperemia, congestion, Hemorrhage, Thrombosis, embolism, Ischemia, infarction, agenesis, aplasia, atrophy, hyperplasia, hypertrophy, hypoplasia, metaplasia and Neoplasia. 2. Structure of cell and its functions	
Evaluation methods: written exam, viva, performance observation in clinical setting	**Teaching / Learning Activities / Resources:** classroom instruction, practice in a simulated setting, supervised clinical practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical 40
Unit 1: General Pathology	Hrs. theory 15	Hrs. lab/practical
Sub-unit 1.2: Inflammation and repair.	Hrs. theory 4	Hrs. lab/practical
Objectives:	Content:	
1. Describe the General Features of Inflammation, Tissue repair and Wound Healing	1. Definition, classification, component and effects of inflammation, steps of the inflammatory response, Mechanisms of tissue repair explain repair by regeneration and by scar formation, types of healing and Steps in wound healing.	
Evaluation methods: written exam, viva, performance observation in clinical setting	**Teaching / Learning Activities / Resources:** classroom instruction, practice in a simulated setting, supervised clinical practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical 40

Unit 1: General Pathology	Hrs. theory 15	Hrs. lab/practical
Sub-unit 1.3: Hemodynamic disturbance	Hrs. theory 4	Hrs. lab/practical
Objectives:	Content:	
1. Discussed the abnormal fluid homeostasis (circulatory disturbances) and its consequences.	1. Edema (definition, Pathophysiologic Categories, Pathways leading to systemic edema morphology and Clinical Correlation). 2. Anasarca (cause, sign, symptoms and treatment)	
Evaluation methods: written exam, viva, performance observation in clinical setting	**Teaching / Learning Activities / Resources:** classroom instruction, practice in a simulated setting, supervised clinical practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 2: Systemic Pathology	Hrs. theory 25	Hrs. lab/practical
Sub-unit 2.1: The Hematopoietic and Lymphoid Systems	Hrs. theory 3	Hrs. lab/practical
Objectives:	Content:	
1. Familiarize with the term related to blood cells disorders. 2. Discuss the disorders of red blood cells and explain Anemia in details.	1. Introduction of: Polycythemia, erythropoietin, Mean cell volume (MCV),Mean cell hemoglobin (MCH), leukopenias, Neutropenia, Leukocytosis, Lymphadenitis, thrombocytopenia, Polycythemia, Bleeding time, Prothrombin time (PT), Partial thromboplastin time (PTT), INR, Disseminated intravascular coagulation(DIC). 2. Definition, types, courses clinical features of anaemia. Explain in details about the morphology of different types of anaemia: o Iron deficiency anaemia. o Thalassemia o Hereditary spherocytosis, o Sickle cell anemia o folate or B12 deficiency.	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 2: Systemic Pathology	Hrs. theory 25	Hrs. lab/practical
Sub-unit 2.2: Diseases of Blood Vessels and Cardiovascular System	Hrs. theory 3	Hrs. lab/practical
Objectives:	Content:	
1. Identify and list the diseases of Blood vessels and CVS. 2. Discuss Normal blood vessels and Sclerotic vessels.	1. Brief Introduction of : a) Arteriosclerosis and Atherosclerosis b) Vasculitis and thromboangitis obliterans	

	c) Angina d) Myocardial infarction e) Cardiac failure f) Valvular disorders 2. Etiologies, pathology, morphology, cardinal signs and clinical features of: a) Arteriosclerosis and Atherosclerosis b) Vasculitis and thromboangitis obliterans	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 2: Systemic Pathology	Hrs. theory 25	Hrs. lab/practical
Sub-unit 2.3: Diseases of Respiratory System	Hrs. theory 3	Hrs. lab/practical
Objectives:	Content:	
1. Identify and list the diseases of Respiratory System. 2. Discuss Chronic - obstructive pulmonary diseases (COPD)	1. Brief Introduction of : • Cough and its types • Shortness of breath, Wheezing, sore throat • Hyperventilation • Acute respiratory distress syndrome (ARDS) • Chronic - obstructive pulmonary diseases (COPD) • Tuberculosis • Other pulmonary infections 2. Etiologies, pathology, types, morphology, and clinical course of: • Chronic - obstructive pulmonary diseases (COPD) ➢ Emphysema ➢ Bronchiectasis ➢ Bronchial asthma ➢ Chronic bronchitis	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 2: Systemic Pathology	Hrs. theory 25	Hrs. lab/practical
Sub-unit 2.4: Diseases of Gastro intestinal tracts	Hrs. theory 4	Hrs. lab/practical
Objectives:	Content:	

1. Identify and list the diseases of Gastro intestinal tracts. 2. Discuss about Peptic Ulcer and Inflamatory bowel diseases.	1. Brief Introduction of : • Indigestion, vomiting, constipation, weight loss, nausea. bloating and heartburn • Ulcerative and inflammatory lesions of oral cavities • Gastritis • Amoebiasis, bacillary dysentery and diarrhoea 2. Definition aetiologies, pathogenesis classifications, morphology and clinical courses of: • peptic ulcer • bacillary dysentery and diarrhoea
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Clinical Pathology	Hrs. theory 80 / Hrs. lab/practical
Unit 2: Systemic Pathology	Hrs. theory 25 / Hrs. lab/practical
Sub-unit 2.5: Diseases of liver, biliary tract and pancreas	Hrs. theory 3 / Hrs. lab/practical
Objectives:	Content:
1. Identify and list the diseases of liver, biliary tract and pancreas. 2. Discuss about Cirrosis and Cholelithiasis (gallstones).	1. Brief Introduction of : • Hepatic Failure, • Hepatic Encephalopathy • Fatty liver disease • Ascites • Jaundice. • Viral Hepatitis • Alcoholic Liver Disease 2. Definitation, clinical features, and pathology of Cirrhosis of liver, gall stones and fatty liver disease
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Clinical Pathology	Hrs. theory 80 / Hrs. lab/practical
Unit 2: Systemic Pathology	Hrs. theory 25 / Hrs. lab/practical
Sub-unit 2.6: Diseases of Kidney and Its Collecting System	Hrs. theory 3 / Hrs. lab/practical
Objectives:	Content:
1. Identify the diseases affecting Glomerular, tubules and interstitium. 2. Discuss about Urolithiasis.	1. Brief Introduction of : • Glomerulonephritis • Nephrotic Syndrome • Urolithiasis, • Hydronephrosis

	2. Definitation, Etiology, Classification or types, Morphology, Pathogenesis and Clinical Course of: • Urolithiasis,	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 2: Systemic Pathology	Hrs. theory 25	Hrs. lab/practical
Sub-unit 2.7: Endocrine Pathology	Hrs. theory 3	Hrs. lab/practical
Objectives:	Content:	
1. Identify and discuss the various endocrine glands and recognize the diseases of the particular glands.	1. Brief Introduction of : • Pituitary, Acromegaly, Hypothyroidism and Grave's disease, diabetes insipidus • Thyroiditis, Hypothyroidism and hyper thyroidism • Diabetes mellitus • Adrenal gland, Addison's disease, Cushing's syndrome.	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 2: Systemic Pathology	Hrs. theory 25	Hrs. lab/practical
Sub-unit 2.8: Musculo– skeletal pathology	Hrs. theory 3	Hrs. lab/practical
Objectives:	Content:	
1. Identify the common conditions affecting the bones and joints. 2. Discuss about RA and Gout.	1. Brief introduction of: • Osteomyelitis, Osteoporosis, and osteoarthritis • Myasthenia gravis and progressive muscular dystrophy 2. Definition and pathogenesis of : • Rheumatoid Arthritis, Gout	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 3: Microbiology	Hrs. theory 8	Hrs. lab/practical
Sub unit 3.1: General Introduction to Microbiology	Hrs. theory 2	Hrs. lab/practical
Objectives:	Content:	
1. Discuss contributions of different pioneers in the field of microbiology. 2. Classification of microorganisms on the basis of morphology. 3. Discuss the Common diseases caused by microorganisms.	1. Contribution of: (Louis Pasteur, Robert Koch and Socransky) 2. Classification of microorganisms: bacteria, viruses, fungi, protozoans and helminthes. 3. List out the common diseases causes by microorganism along with their	

	corresponding causative organisms of each of the above diseases.	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self-study, journals, laboratory practice, appropriate visual means for morphology of different microorganisms.	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 3: Microbiology	Hrs. theory 12	Hrs. lab/practical
Sub unit 3.2: Basic bacteriological investigations	Hrs. theory 2	Hrs. lab/practical
Objectives:	Content:	
1. Discuss and perform Gram staining. 2. Discuss and perform acid fast bacillus (AFB) staining. 3. Explain the culture media and cultivation techniques of bacteria, viruses and fungi. 4. Describe methods for antibiotic susceptibility testing:	1. Theory, principles and procedure for Gram staining and AFB staining. 2. Define culture and culture media. 3. List culture media for bacteria, viruses, and fungi. 4. Antibiotic susceptibility testing: a) Tube dilution technique. b) Paper diffusion technique.	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self-study, journals, laboratory practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 3: Microbiology	Hrs. theory 12	Hrs. lab/practical
Sub unit 3.3: Bacterial growth and sterilization	Hrs. theory 4	Hrs. lab/practical
Objectives:	Content:	
1. Discuss the bacterial growth and describe factors influencing bacterial growth. 2. Describe methods of sterilization and identify the usual materials to be sterilized. 3. Explain process of universal precaution, hand scrubbing, self protection , decontamination and Clinical waste management	1. Definition, characteristics, phase and factors influencing bacterial growth. 2. Physical methods of sterilization. a) Most heat (steam under pressure and fractional sterilization) b) Dry heat (hot air sterilization, incineration) c) Radiation (x- rays, gamma rays, cathode rays, etc.) d) Filtration 3. Chemical methods of sterilization : (formaldehyde, gluteraldehyde, ethylene oxide, β– propiolactone, etc) 4. Define and describe procedures followed in universal precaution, hand scrubbing, explain process of wearing face mask, gloves and gowns, list and explain the types of waste management.	

Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self-study, journals, laboratory practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 4: Clinical Biochemistry	Hrs. theory 11	Hrs. lab/practical
Sub Unit 4.1: Carbohydrates, Lipids and Proteins	Hrs. theory 3	Hrs. lab/practical
Objectives:	Content:	
1. Discuss Carbohydrates, Lipids and Proteins and their relevant metabolic disorders.	1. Introduction and Biological importance of Carbohydrates, Lipids and Proteins. 2. Define metabolism and explain the metabolic disorders related to: Carbohydrate Metabolism – diabetes mellitis Lipid Metabolism- Ketosis, fatty liver, dyslipidemia, hyperlipidemia. Metabolism of proteins and amino acids - Gout	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self-study, journals, laboratory practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 4: Clinical Biochemistry	Hrs. theory 12	Hrs. lab/practical
Sub Unit 4.2: Vitamins, minerals and water	Hrs. theory 4	Hrs. lab/practical
Objectives:	Content:	
1. Discuss in details about Vitamins and minerals. 2. Discuss electrolytes and water metabolism.	1. Definition, classification, chemistry, sources, physiological roles and deficiency disorders of Vitamins and minerals. 2. Properties of Water, Water metabolism, fluid balances.	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self-study, journals, laboratory practice	
Course: Clinical Pathology	Hrs. theory 80	Hrs. lab/practical
Unit 4: Clinical Biochemistry	Hrs. theory 12	Hrs. lab/practical
Sub Unit 4.3: Biochemistry of blood	Hrs. theory 4	Hrs. lab/practical
Objectives:	Content:	
1. Discuss in details about metabolism of hemoglobin and its metabolic disorders. 2. Explain Regulation of PH of blood. 3. Basic organ function tests.	1. Outline of synthesis and degradation of heme, functions of hemoglobin, abnormal hemoglobin, Jaundice. 2. Role of kidney and lungs in maintaining pH of blood, Acidosis and Alkalosis.	

	3. Liver Function tests, De-toxification mechanisms 4. Kidney Function Tests, Composition of Urea Urine, clearance creatinine clearance and insulin clearness.	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self-study, journals, laboratory practice	
Course: Clinical Pathology	**Hrs. theory 8**	**Hrs. lab/ practical**
Unit 5: Hematology	**Hrs. theory 8**	**Hrs. lab/ practical**
Objectives:	Content:	
1. Hematopoiesis, composition and characteristics of Blood. 2. Discuss blood collection techniques and hematological tests. 3. Anticoagulants. .	1. Describe the formation and composition of blood and function of its different components e.g. RBC, WBC, Platelets, Plasma. 2. Describe methods of blood collection for: a) Hematological investigations. b) Biochemical investigations. c) Microbiological investigations. 3. Describe test method (Bulk dilution and Pipette dilution) for WBC total count, test-method for WBC differential count with their normal values, 4. Describe test methods (Wintrobe method) and normal value of erythrocyte sedimentation rate (ESR) of blood. 5. Estimation (Shali's method) and normal values of hemoglobin. 6. Define anticoagulants, their types and use	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self-study, journals, laboratory practice	
Course: Clinical Pathology	**Hrs. theory 80**	**Hrs. lab/ practical**
Unit 6: Medical parasitology	**Hrs. theory 8**	**Hrs. lab/ practical**
Objectives:	Content:	
1. Discuss Intestinal Parasites. 2. Describe about Blood and tissue parasites of body. 3. Defense mechanisms of the body.	1. Mode of infection, pathogenicity, laboratory diagnosis and prevention of intestinal parasites: *a) Ascaris* b) Hookworm c) *Trichuris* d) *Enterobius* e) *Taenia* f) *Echinococus* g) *Hymenolepis* h) *Entamoeba*	

	i) *Giardia* j) *Trichomouas*. 2. Modes of infection, pathogenicity, laboratory diagnosis and prevention of blood and tissue parasites of body. a) *Plasmodium* b) *Leishmania* c) *Wuchereria* 3. Different kinds of defense mechanisms of body. 4. Terminology related to defense mechanisms of body. Immunology Rh factor Gammaglobulia Immune System Immunity Phagocyte Immunity Chemotaxis Histamine Chemoattractant Opsin Complement Ontigen B-lymphocyte T-lymphocyte Natural Killer cells Antibody Immuroglobulia Oncogene Memory Cell
Evaluation methods:	Teaching / Learning Activities:
- Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self-study, journals, laboratory practice, slides

Practical

Course: **Clinical Pathology**	**Hrs. lab/ practical 35**
Objectives:	Content:
1. Identify handling techniques of different laboratory goods. 2. Demonstration of culture media, demonstration of sterilization techniques. 3. Perform different – Hematological tests. 4. Perform preparation, staining and examination of thick and thin blood smears. 5. Perform stool examination. 6. Perform various organ function testsand Analysis. 7. Perform different – microbiological and biochemical investigations. 8. Mention reference ranges of mention parameters:	1. Handling techniques of different laboratory goods. 2. Estimate hemoglobin level and demonstrate TLC, DLC and ESR of blood along with Absolute eosinophil count. 3. Peripheral smear staining of: gram stain and AFB stain, Blood smear for malaria parasite and others for identification and interpretation 4. Stool examination for ova, cyst and parasites. 5. Perform and interpretation of Liver function tests, renal function tests, Thyroid Function Test Pregnancy tests, Urine analysis, Semen analysis and CSF analysis. 6. Interpretation of given immunological test. 7. Different – microbiological and biochemical investigations. 8. Reference ranges of : • Blood Sugar (Fasting, random & Post Prandial) • Renal Function Test (RFT): Urea, Creatinine, sodium, potassium, calcium, uric acid • Liver Function Test (LFT): Bilirubin total and direct, SGPT, SGOT, Alkaline Phosphatase, Total Protein, albumin, Globulin and A:G Ratio • Lipid Profile: Total Cholesterol, Triglycerides, HDL Cholesterol, LDL Cholesterol, VLDL Cholesterol. • Cardiac profile: CPKMB, LDH, SGOT, CPK-NAC. • Serum amylase • Thyroid Function Test (TFT): T3, T4 and TSH
Evaluation methods:	Teaching / Learning Activities:

Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self-study, journals, laboratory practice, Textbooks, etc.

General Medicine, Emergency Care and First Aid

Hours Theory: 105
Hours Practical: 70

Course Description:

This course begins with an in-depth presentation on the diagnostic process applied to the history and physical examination of the patient, and includes assessments specific to each system. Medicine presents a basic review of selected conditions and disorders from areas of internal medicine, including: hematological, cardiovascular, respiratory, gastrointestinal, endocrine, hepatic, nervous, and genitourinary systems. For each disease or condition this course examines etiologies, clinical features, differential diagnosis, management at the health post level, indications for referral, and preventive education.This course also provides the principles and techniques for performing the skills of emergency care a, and includes a basic first aid course. The skills include basic procedures for administering medications, wound care, performing invasive procedures, and simple suturing. The first aid course includes procedures for bandaging, cardiopulmonary resuscitation, and choking, in addition to basic first aid measures.

Course Objectives:

On completion of the course the learner will be able to:

1. Perform a thorough history and physical examination, and analyze and interpret the findings to make a rational provisional diagnosis.
2. Identify the etiologies, pathology and clinical features of common systemic disorders.
3. Describe the management and counseling for common systemic disorders and communicable diseases.
4. Identify indications that a case requires referral to a higher level or specialty facility.
5. Identify and implement opportunities for health education, prevention measures.
6. Respond appropriately to first aid situations at the health post or elsewhere in the community.
7. Identify first aid situations which require referral to a higher level facility.
8. Perform selected basic invasive procedures and wound care according to guidelines.
9. Administer medications by each route safely and efficiently.
10. Maintain hygienic conditions within the naturopathy center.
11. Identify topics for community education to promote safety and reduce preventable injuries

References:

- Tierney, L. M., et al. *Current medical diagnosis and treatment*. Stamford, CT: Appleton & Lange. (Current edition).
- Swash, M. *Hutchison's clinical methods*. W.B. Saunders. (Recent edition).
- St. John's Ambulance Association. *First aid: The authorized manual of St. John's Ambulance Association*. (Current edition).
- Health Learning Materials Center. (1999). *Manual for primary health care*.
- Health Learning Materials Center. *Fundamentals of nursing*.
- Gupta, R. K., & Sharma, R. K. (2016). *Basic pathology, first aid, and basic public health* (Revised and updated 2nd ed.).

Unit 1: History taking & Physical Examination	**Hrs. theory 6 Hrs. lab/practical 3**
Sub-unit 1.1: History taking & Physical Examination	**Hrs. theory 4 Hrs. lab/practical 2**
Objectives:	Content:
1. Explain the purpose of the history & physical examination. 2. Describe strategies for organizing a history & physical examination. 3. List the components of a complete history &physical examination. 4. Give examples when modifications must be made to the usual history and physical examination. 5. Describe ways to gain the trust of the patient and patient party. 6. Describe ways to provide privacy and promote comfort and cooperation of the patient. 7. Perform a history taking and physical examination in a simulated setting, according to guidelines. 8. Describe how symptom patterns and symptom correlations direct the process of differential diagnosis. 9. Explanation regarding instruments and apparatus (Stethoscope, Sphygmomanometer, Tuning-fork, Hammer) used while performing general physical examination.	1. Principles and procedures for collecting and interpreting clinical data. 2. Ways to collect subjective and objective data about the patient. 3. What things to assess for each category: "General appearance." "Chief complaint/history of chief complaint" "History of present illness" "Past medical history" "Family history" "Social/personal history Developmental history Dietary history Drug history Menstrual history Immunization 4. Inspection of the patient. 5. Palpation of chest and abdomen. 6. Percussion of chest and abdomen. 7. Techniques for auscultation. 8. Assessment of Jaundice, Anemia, Lymph nodes, Cyanosis, Clubbing, Edema. 9. Techniques for examining body systems. 10. The importance of clustering and analyzing data for patterns and correlations of symptoms, which direct the process of differential diagnosis. 11. Use Stethoscope,Sphygmomanometer, Tuning-fork, Hammer
Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role-play.	

Unit 1: History taking & Physical Examination	**Hrs. theory Hrs. lab/practical**
Sub-unit 1.2: Assessment of vital signs (V. S.)	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. State the indications and purposes for vital signs measurement. 2. Identify factors which interfere with accurate measurements. 3. Discuss implications of abnormal findings.	1. Reviewing anatomy & physiology of respiration, cardiovascular system and temperature. 2. Strategies for careful V.S. assessment. 3. Factors influencing the pulse, respiration and blood pressure. 4. Conditions of measurement of vital signs.

4. Explain the significance of accuracy in Vital Signs measurement. 5. Demonstrate proper techniques according to guidelines: a. Palpating pulses at six chief sites b. Counting respirations c. Taking temperature at 3 chief sites d. Measuring blood pressure e. Recording vital signs f. Caring for vital signs equipment	5. Procedures for care of vital signs equipment. 6. Demonstration proper techniques according to guidelines: a. Palpating pulses at different sites b. Counting respirations c. Taking temperature at different sites d. Measuring blood pressure e. Recording vital signs f. Caring for vital signs equipment 7. Discussion on pulse oxymetry. 8. Discussion on the basic function of oxygen saturation monitoring device.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos and role-play.
Unit 2: Hematological & Cardiovascular Conditions	**Hrs. theory: 12 Hrs. lab/practical 8**
Sub-unit 2.1: Anaemia	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Define anaemia and tell the cardinal signs of anaemia. 2. Discuss the incidence of anaemia. 3. Discuss the causes, symptoms and clinical features of common forms of anaemia: o Iron deficiency anaemia. o Megaloblasticanaemia o Aplastic anaemia o Haemolyticanaemia o Thalassemia o Sickle cell anemia o Heamophilia A and B o Anemia of chronic disease 4. Identify investigations for diagnosing anaemia. 5. Identify complications of anaemia. 6. Describe the management and prevention of common types of anaemia.	1. Incidence of anaemia in Nepal and the socio-cultural factors which contribute to anaemia. 2. Classifications of anemia. 3. Definition, types, courses clinical features, investigation, complications, management and prevention of different types of anaemia: a Iron deficiency anaemia. b Megaloblasticanaemia. c Haemolyticanaemia. o Thalassemia o Sickle cell anemia o Heamophilia A and B o Anemia of chronic disease 4. Normal value of hemoglobin.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Sub-unit 2.2: Haemostatic & atherosclerotic disorders	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Describe the incidence and pathology of common haemostatic disorders and atherosclerotic occlusive disorders. 2. Discuss major modifiable risk factors and non modifiable risk factors for heart diseases.	1. Etiologies, incidence, complications, management, and referral of haemostatic disorders and atherosclerotic occlusive disorders.

3. Describe the clinical features and differential diagnosis, which can be done at the Primary level. 4. Discuss the treatment and complications of haemostatic disorders and atherosclerotic occlusive disorders. 5. Identify indications for referral to a higher level facility.	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 2: Hematological & Cardiovascular Conditions	Hrs. theory Hrs. lab/practical
Sub-unit 2.3: Cardiac disorders – angina, infarction, arrhythmia, valvular diseases	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Discuss the etiologies and incidence of each: a. Angina b. Myocardial infarction c. Cardiac arrhythmia d. Valvular disorders 2. Describe the pathology, cardinal signs and clinical features of each of the above. 3. Discuss differential diagnosis of above conditions. 4. Causes of myocardial infarction (M.I.) without coronary atherosclerosis. 5. Identify indications for immediate referral to a higher level facility. 6. Describe measures to stabilize a patient experiencing M.I. before referral. 7. Describe the advice and emergency management of these conditions	1. Etiologies, diagnosis,emergency management, referral, stabilization in cases of: a. Angina b. Myocardial infarction c. Cardiac arrhythmia d. Valvular disorders 2. Perform physical examination of the cardiovascular system.
Evaluation methods: written exam, spotting, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 2: Hematological & Cardiovascular Conditions	**Hrs. theory Hrs. lab/practical**
Sub-unit 2.5: Cardiovascular disorders – Hypertension	**Hrs. theory 2 Hrs. lab/practical 2**
Objectives:	Content:
1. Define hypertension, tell the cardinal signs, and explain the different classifications. 2. Discuss the incidence of hypertension and complications of untreated hypertension. 3. Identify the etiologies and clinical features of common forms of hypertension.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, hypertensive emergency management, general management of hypertension and referral indications. 2. Measurement of the blood pressure in mid-upper arm and interpretation.

4. Identify investigations necessary for differential diagnosis. 5. Discuss common drugs used in the management of the chronic hypertension and their side effects in brief. 6. Tell how to manage hypertensive emergencies. 7. Describe how to manage the uncomplicated case of hypertension. 8. Explain the role of life style, food habits and Yoga in prevention and control of hypertension. 9. Identify indications for referral. 10. Identify and manage hypertensive crisis.	3. Show X-ray chest-cardiomegaly. 4. Role of life style, food habits and Yoga in prevention and control of hypertension. 5. Hypertensive crisis.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 2: Hematological & Cardiovascular Conditions	Hrs. theory Hrs. lab/practical
Sub-unit 2.6: Cardiovascular disorders - Congestive cardiac failure	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Review the anatomy and physiology of the heart and related organs. 2. Describe the development and condition of congestive cardiac failure (CCF). 3. Identify the cardinal signs, etiologies, clinical features and pathology of CCF. 4. Identify/Physical findings & signs in heart failure. 5. Identify the investigations necessary for differential diagnosis. 6. Describe the complications of CCF. 7. Describe the management of simple cases of CCF. 8. Explain non pharmacologic approach in the management of congestive heart failure. 9. Identify indications for prompt stabilization and referral to a higher level facility.	1. Anatomy and physiology of heart and related organs. 2. Definition, etiology, pathology, clinical features, investigation, complication, differential diagnosis, and management of CCF. 3. Show the x-ray film of chest (Cardiomegaly). 4. Non pharmacologic approach in the management of congestive heart failure. 5. X- ray& ECG of patient.
Evaluation methods: written exam, spotting, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 3: Respiratory Disorders	**Hrs. theory: 9 Hrs. lab/practical: 6**
Sub-unit 3.1: Acute bronchitis	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Define bronchitis, tell the cardinal signs and discuss the incidence. 2. Identify etiology, pathology and clinical features of acute bronchitis.	1. Definition, incidence, etiology, pathology, clinical features, differential diagnosis, complication and management of acute bronchitis. 2. Investigations for acute bronchitis:

3. Identify investigations necessary for differential diagnosis. 4. Identify complications of acute bronchitis. 5. Explain how the incidence of chronic bronchitis can be reduced by preventive measures. 6. Describe the management of diagnosed cases of acute bronchitis and indications for referral to a higher level facility.	a Complete Blood Count (CBC) b TLC (Total leucocytes count) c DLC (Differential leucocytes count) d Sputum for culture and sensitivity 3. Preventative measures: a reduction of environmental air pollution b good nutrition containment of respiratory mucus wastes (not spitting phlegm into the environment)
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 3: Respiratory Disorders	Hrs. theory Hrs. lab/practical
Sub-unit 3.2: Chronic Obstructive Pulmonary Disease (COPD)	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Define COPD and discuss the incidence of this condition. 2. Identify the etiology, pathology, cardinal signs and clinical features of COPD. 3. Identify the investigations necessary for differential diagnosis. 4. Identify breath sounds bronchial, vesiculas, ronchi and crepitations. 5. Describe how to manage a case of COPD with available resources. 6. Identify complications of COPD. 7. Identify indications for referral. 8. List community actions or health education aimed at reducing the incidence of COPD.	1. Introduction, etiology, sign and symptom and preventive management 2. Component disorders: a Chronic bronchitis b Emphysema c Asthma 3. Complications of COPD a Corpulmonale 4. Describe how to prevent COPD.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 3: Respiratory Disorders	Hrs. theory Hrs. lab/practical
Sub-unit 3.3: Respiratory disorders – Pneumonia	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Define pneumonia and discuss the incidence. 2. Explain why pneumonia is a serious problem, and identify the populations most at risk. 3. Identify the etiologies, pathology, cardinal signs and clinical features of different types of pneumonia. 4. Identify complications of pneumonia. 5. List the investigations necessary for differential diagnosis of pneumonia. 6. Describe the management of pneumonia.	1. Definition, etiology, sign and symptoms, investigation, complications, management and epidemiology of pneumonia. 2. Types of pneumonia: 3. Prevention of pneumonia: 4. Demonstration of chest x-ray of pneumonia.

7. Identify indications for referral. 8. Prevention and control of pneumonia including vaccine.	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 3: Respiratory Disorders	Hrs. theory Hrs. lab/practical
Sub-unit 3.4: Asthma	**Hrs. theory 2 Hrs. lab/practical 2**
Objectives:	Content:
1. Define bronchial asthma and tell the cardinal signs. 2. Identify the etiology, pathology and clinical features of bronchial asthma. 3. Discuss the relationship between extrinsic and intrinsic asthma. 4. Identify the investigations necessary for differential diagnosis. 5. List complications of asthma. 6. Manage bronchial asthma. 7. Identify indications for referral. 8. Identify methods of symptom control. 9. Role of vaccine to prevention of bronchial asthma.	1. Definition, etiology, pathology, clinical features, differential diagnosis, diagnosis, complication, & management of bronchial asthma. 2. Show the X-ray of chest of bronchial asthma. 3. Prevention and control of asthma.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 3: Respiratory Disorders	Hrs. theory Hrs. lab/practical
Sub-unit 3.5: Pulmonary tuberculosis	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Define pulmonary tuberculosis (PTB). 2. State the etiology, pathology, cardinal signs and clinical features of PTB. 3. Identify the investigations necessary for differential diagnosis of PTB. 4. Describe complications of PTB. 5. Describe the procedures for managing smear positive cases according the DOTS concept with special reference to Multi Drug Resistance (MDR) and XDR (SCC). 6. Summarize the teaching points for pulmonary positive cases. 7. Identify methods of prevention and control.	1. Definition, etiology, pathology, clinical features, differential diagnosis, classification of Tuberculosis, investigation, complications, management and prevention of PTB. 2. DOTS therapy in PTB according to National Guidelines with special reference to MDR and XDR. 3. Follow up care as per National Guidelines. 4. Definition of relatse, drug resistant and treatment failure case. 5. Prevention and control of PTB a Reporting b Patient/family education c Vaccination d Good nutrition for healthy immune system e Containment of sputum (not spitting phlegm into the environment) 6. Show the sputum smear and X- ray chest of pulmonary tuberculosis.

Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice, field visit to DOTS clinic
Unit 4: Gastrointestinal Disorders	**Hrs. theory: 7 Hrs. lab/practical 5**
Sub-unit 4.1: Peptic Ulcer Diseases	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Define peptic ulcer (PUD) diseases and discuss the incidence. 2. Distinguish between gastritis, gastric ulcer, duodenal ulcer and esophageal ulcer. 3. Identify the etiologies, pathology, cardinal signs and clinical features of PUD. 4. Explain the relationship of Helicobacter pylori to peptic ulcers. 5. Identify investigations necessary for differential diagnosis. 6. Describe integrated comprehensive treatment for PUD. 7. Identify complications of untreated PUD. 8. Identify indications for referral.	1. Revision of anatomy and physiology of stomach and duodenum. 2. Describe physical examination of the gastrointestinal system. 3. Definition, etiology, pathology, clinical features, differential diagnosis, complication and management. 4. Investigations for differential diagnosis: G.I. endoscopy, barium meal X-ray stomach, gastric acid estimation, stool for occult blood, USG abdomen. 5. Integrated comprehensive treatment of PUD: antacids a Gastric acid secretion inhibitors b Antibiotic therapy c Dietary modification d Alcohol/smoking cessation e Stress management
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 4: Gastrointestinal Disorders	**Hrs. theory Hrs. lab/practical**
Sub-unit 4.2: Diarrhea, Constipation and Vomiting	**Hrs. theory 2 Hrs. lab/practical 2**
Objectives:	Content:
1. Define Vomiting, Constipation and Diarrhea. 2. Explain the types of Diarrhea. 3. Discuss the causes of Vomiting, Constipation and Diarrhea. 4. Explain the management of Vomiting, Constipation and Diarrhea. 5. Discuss the importance of fiber diet in Constipation. 6. Explain the food habits to precipitate Constipation. 7. Discuss complication of Vomiting, Constipation and Diarrhea.	1. Anatomy and Physiology of oral cavity esophagus, stomach, duodenum, biliary tract, small intestine. 2. Definition ofVomiting, Constipation and Diarrhea. 3. Types of Diarrhea. 4. Acute and chronic causes of Vomiting, Constipation and Diarrhea. 5. Management of Vomiting, Constipation and Diarrhea. 6. Importance of fiber diet in Constipation. 7. Food habits to precipitate Constipation. 8. Complication of Vomiting, Constipation and Diarrhea.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Sub-unit 4.3: Rectal and anal disorder	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Describe the procedure for examining the rectum through manual palpation. 2. Describe the causes, clinical features and treatments for rectal bleeding and common rectal disorders. 3. Describe indications that require referral to a higher level facility. 4. Discuss preventive health teaching to reduce the incidence of rectal disease.	1. Rectal anatomy and anal sphincter. 2. Procedure and interpretation of findings for rectal examination. 3. Etiologies, clinical features and investigation and management for: rectal bleeding, hemorrhoids, anal fissure, fistula, rectal prolapse, rectal polyp, ischial rectal abscess.
Unit 5: Endocrine System Disorders	**Hrs. theory: 4 Hrs. lab/practical: 3**
Sub-unit 5.1: Type 1 & 2 Diabetes Mellitus	**Hrs. theory 2 Hrs. lab/practical 2**
Objectives:	Content:
1. Identify the cardinal signs for type 1 and type 2 diabetes mellitus. 2. Describe the patho-physiology of diabetes mellitus. 3. Differentiate between type 1 and type 2 diabetes. 4. Explain the production and action of insulin. 5. Identify the signs and symptoms of each type of diabetes mellitus. 6. Discuss the incidence and contributing factors for type 1 & 2 diabetes mellitus in Nepal. 7. Give the rationale for administering insulin versus oral hypoglycemic medications. 8. Describe the health consequences of chronic hyperglycemia. 9. Explain the health teaching points for a diabetic patient including the role of diet & exercises in preventing and controlling diabetes. 10. Describe the signs and symptoms of ketoacidosis. 11. Relate the chief treatments for stabilizing a patient with ketoacidosis. 12. Explain complications of diabetes mellitus.	1. Anatomy & physiology of the pancreas 2. Patho physiology of the different types of diabetes 3. Pharmacologic effects of oral/insulin hypoglycemic medicines 4. Methods for assessing hyperglycemia 5. Treatment for ketoacidosis and hypoglycemia 6. Preventive health care for diabetics 7. Demonstrate the blood glucose level of diabetic subjects. 8. Drugs used in diabetes, their contraindications and side effects. 9. Perform abdominal examination. 10. Listen abdominal normal and abnormal peristalsis movement sound.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 5: Endocrine System Disorders	**Hrs. theory Hrs. lab/practical**
Sub-unit 5.2: Thyroid disorders	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:

1. Discuss the incidence and causes of hypo- and hyper-thyroidism in Nepal. 2. Identify the cardinal signs and clinical features of each of these disorders. 3. Describe the management and complications of hypo and hyper-thyroidism. 4. Explain the clinical features of thyroid cancers. 5. Identify health education programs for the prevention of thyroid disorder.	1. Incidence, etiologies, diagnosis, management and prevention of hypo- and hyper-thyroidism. 2. Clinical features of thyroid cancers. 3. Perform thyroid examination.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 6: Hepatic Disorders	**Hrs. theory: 6 Hrs. lab/practical: 4**
Sub-unit 6.1: Cirrhosis of the liver	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe the anatomy and physiology of the liver. 2. Discuss the physical examination of abdomen especially liver. 3. Describe the different types of cirrhosis of liver. 4. Discuss the incidence and etiology of cirrhosis of the liver. 5. Describe the pathology cardinal signs and clinical features of different types of cirrhosis of the liver. 6. Identify investigations necessary for differential diagnosis. 7. Identify complications of cirrhosis of the liver. 8. Describe how to manage diagnosed cases or stabilize and refer provisionally diagnosed cases of cirrhosis of the liver. 9. Discuss methods of prevention of cirrhosis of the liver.	1. Anatomy and physiology of the liver 2. Definition, types, etiology, pathology, clinical features, differential diagnosis, investigations, complications, management and prevention. 3. Correlate cirrhosis of liver with alcohol and hepatotoxic drug.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 6: Hepatic Disorders	**Hrs. theory Hrs. lab/practical**
Sub-unit 6.2: Ascites	**Hrs. theory 1 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe ascites and cardinal signs. 2. Identify the etiologies, pathology and clinical features of different types of ascites. 3. Identify investigations necessary for differential diagnosis. 4. Identify complications of ascites. 5. Describe how to manage the diagnosed case of ascites.	1. Definition, etiology, pathology, clinical features, complications, investigations, differential diagnosis, management and referral of cases of ascites.

6. Identify indications for stabilization and referral.	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 6: Hepatic Disorders	**Hrs. theory Hrs. lab/practical**
Sub-unit 6.3: Hepatitis	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Define hepatitis and discuss the incidence of hepatitis. 2. Identify the etiology, pathology, cardinal signs and clinical features of the different types of hepatitis. 3. Identify the investigations necessary for differential diagnosis. 4. Identify complications of hepatitis. 5. Describe how to manage the diagnosed case using local resources. 6. Identify indications for referral. 7. Describe the modes of transmission of infectious hepatitis, the methods of prevention and control for each type.	1. Definition, incidence, etiology, pathology, clinical features, differential diagnosis, investigation, complication, management. 2. Prevention of infectious and non-infectious hepatitis. 3. Vaccinations for hepatitis.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 7: Central Nervous System Disorders	**Hrs. theory 11 Hrs. lab/practical 10**
Sub-unit 7.1: Poisoning	**Hrs. theory 2 Hrs. lab/practical 2**
Objectives:	Content:
1. Identify commonly found poisons from chemical, plant, and snake sources. 2. Identify the effect of selected poisons locally and systemically. 3. Describe the appropriate treatments for commonly found poisons and snakebite. 4. Describe how to remove poisons by emesis and gastric lavage; tell exceptions for removal by emesis. 5. Describe symptomatic treatment of poisoning effects. 6. Identify indications for immediate referral.	1. Accidental and intentional causes of poisoning 2. Common poison sources 3. Symptoms and signs of poisoning 4. Emergency management. 5. Recognition of poisoning as medico legal case.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 7: Central Nervous System Disorders	**Hrs. theory Hrs. lab/practical**

Sub-unit 7.2: Cerebro-vascular accident (CVA)	**Hrs. theory 3 Hrs. lab/practical 3**
Objectives	Content:
1. Identify the causes and incidence of cerebral vascular accidents. 2. Describe the classifications of CVA based on pathology. 3. Describe the cardinal signs and clinical features of mild, moderate and severe CVA. 4. Discuss the differential diagnosis of CVA. 5. Describe the treatment and expected outcomes for each type of CVA. 6. Discuss advice and counseling for the family of this patient, to promote rehabilitation. 7. State the risk behaviors for CVA which you would include in preventive education. 8. Identify indications for referral of a CVA patient for higher level or specialty care.	1.Etiology, classifications, diagnosis, treatment, prognosis. 2.Rehabilitation, counseling and prevention of cerebro-vascular accidents. 3.Difference between ischaemic and hemorrhagic stroke.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 7: Central Nervous System Disorders	**Hrs. theory Hrs. lab/practical**
Sub-unit 7.3: Chronic disorders of CNS	**Hrs. theory 6 Hrs. lab/practical 5**
Objectives:	Content:
1. Identify chronic central nervous system disorders seen in Nepal, their etiologies and incidence. 2. Discuss the cardinal signs and clinical features of each. 3. Identify recommended treatment and prognosis for each. 4. Discuss family counseling for each diagnosis. 5. Describe strategies to prevent or give early treatment for these disorders.	1. Etiology, classifications, diagnosis, treatment, prognosis, rehabilitation, counseling and prevention of central nervous system disorder: a. Multiple sclerosis b. Cerebral palsy c. Muscular dystrophy d. Mental Retardation e. Parkinsonism f. Alzheimer's disease g. GB Syndrome
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 8: Musculoskeletal Disorders	**Hrs. theory: 2 Hrs. lab/practical 2**
Sub-unit 8.1: Arthritis	**Hrs. theory 2 Hrs. lab/practical 2**
Objectives:	Content:
1. Identify the incidence of osteoarthritis and rheumatoid arthritis. 2. Explain septic arthritis and gout. 3. Describe the cardinal signs, clinical features and pathology of each. 4. Explain the investigations for differential diagnosis.	1. Incidence, pathology, diagnosis, management and Prevention of osteoarthritis and rheumatoid arthritis. 2. Septic arthritis and gout. 3. Use of NSAID and its complication 4. Dietary habits.

5. Describe the advice and management for osteoarthritis and rheumatoid arthritis. 6. Identify indications for referral to a higher level facility. 7. Discuss contributing factors in the development of these types of arthritis. 8. Discuss the components of education programs to reduce the incidence of arthritis.	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 9: Urinary System Disorders	**Hrs. theory: 1 Hrs. lab/practical 1**
Sub-unit 9.1: Renal failure	**Hrs. theory 1 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe the anatomy and physiology of the renal and urinary system in males and females. 2. Discuss physical examination of the abdomen. 3. Discuss the causes cardinal signs and clinical features of acute and chronic renal failure. 4. Identify indications for referral. 5. Describe the management of acute and chronic renal failure. 6. Identify important components of counseling for the patient with renal failure.	1. Incidence, pathology, diagnosis and management. 2. Prevention of acute and chronic renal failure. 3. Role of water and fluid intake. 4. Diet factors and drug toxicity. 5. Indication of dialysis.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 10: Other Disorders	**Hrs. theory: 2 Hrs. lab/practical 1**
Sub-unit 10.1: Acute Rheumatic fever	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Discuss the incidence of Rheumatic fever and explain the cardinal signs. 2. Identify the etiology, and pathology of Rheumatic fever. 3. Identify the clinical features and investigations for making a differential diagnosis. 4. Explain Jone's diagnostic criteria to diagnose Rheumatic fever. 5. List the complications of Rheumatic fever if early diagnosis and treatment are not given. 6. Describe how to manage the case after diagnosis. 7. State the methods of prevention of Rheumatic fever. 8. Identify etiology, pathology, clinical features, investigation and management of infective endocarditis.	1. Definition, etiology, pathology. 2. Clinical features and differential diagnosis. 3. Investigations, early diagnosis, management, complications and referral. 4. Prevention and control. 5. Jone's diagnostic criteria to diagnose Rheumatic fever. 6. Etiology and pathology, clinical features, investigation and management of infective endocarditis.

9. Identify indications that the patient should be referral.	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 11: Dermatological Conditions	**Hrs. theory 2 Hrs. lab/practical 1**
Sub-unit 11.1: Skin inflammatory disorder, skin ulcer, pressure sore	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe the etiologies and clinical features of common skin inflammation disorders. 2. Identify appropriate treatments for common skin inflammation disorders and dispense medications according to guidelines. 3. Differentiate common skin ulcers and identify the appropriate treatment for each (wound dressing, minor stamp skin graft). 4. Identify indications for referral to specialty facilities in cases suspicious of malignant skin ulcer. 5. Differentiate between gas gangrene and dry gangrene. 6. Explain why the patient with gangrene and gas gangrene requires referral to a higher level facility. 7. Describe how to counsel the family about appropriate management to prevent or treat pressure sores.	1. Common skin diseases. 2. Etiology, clinical features and their management. 3. Gangrenous conditions, their etiology, clinical features, pressure sores and their management. 4. Pressure sore and their management.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.
Unit 12: Basic Medical Procedures	**Hrs. theory 6 Hrs. lab/practical 3**
Sub-unit 12.1: Administration of IM & IV medicines	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Tell the advantages and disadvantages of drugs administration by the intramuscular (IM) and intravenous (IV) routes. 2. Identify the types of drugs which are administered by subcutaneous (SC or SQ) or intradermal (ID) routes. 3. Identify appropriate sites for IM administration in adults, children and infants. 4. Explain why there are increased risks when drugs is injected directly into the vein.	1. Principles and procedures for parenteral medications. 2. Safe needle management. 3. Risks of administering drugs directly into the vein. 4. Guidelines for administration of medicine via parenteral routes.

5. State the precautions which must be followed to protect the patient from harmful IV medicine administration. 6. Describe the procedures for administering IM and IV drugs, or beginning IV fluids, according to guidelines. 7. Describe the technique and reason for using the "Z track" method of IM administration. 8. Describe principles and procedures for safe needle disposal. 9. Demonstrate one-handed needle recapping, to use when a safe needle disposal container is not readily available. 10. Demonstrate administration of drugs by the above routes according to guidelines.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: skill guidelines, textbook self-study, classroom instruction and demonstration, return demonstration, models, videos, role play.
Unit 12: Basic Medical Procedures	**Hrs. theory** **Hrs. lab/practical**
Sub-unit 12.2: Universal precaution & Infection control	**Hrs. theory 2** **Hrs. lab/practical 1**
Objectives:	Content:
1. Differentiate between surgical asepsis (free from all organisms) and medical asepsis (free from pathogens) 2. Explain the principles and rationale for medical asepsis and surgical asepsis. 3. Discuss the ways to maintain sanitation in the health post setting. 4. Demonstrate proper handwashing technique, according to guidelines. 5. State the principles and rationale for using careful handwashing. 6. Discuss when to use different kinds of handwashing procedures. 7. Demonstrate aseptic technique when using instruments for an aseptic procedure. 8. Demonstrate handling sterile instruments during a sterile procedure.	1. Definitions and implications of sterile, aseptic and non-sterile. 2. Procedures for application of principles of medical and surgical asepsis. 3. Principles and procedures for handwashing and sanitation. 4. Proper handling of aseptic and sterile equipment.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.

Unit 12: Basic Medical Procedures	**Hrs. theory Hrs. lab/practical**
Sub-unit 12.3: Administration of oral and topical medicines	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Tell the advantages and disadvantages of the various routes for medication administration. 2. Explain how medicines are absorbed by the body from the GI tract, skin, or membranous tissue. 3. Tell what functions are served by topical medications. 4. Give examples of medicines, which can be absorbed through the skin. 5. Tell what things may interfere with the absorption of oral or topical meds. 6. Discuss ways to modify giving oral medicine when the patient is unable to cooperate with swallowing pills. 7. Describe the "5 rights" in the administration of all drugs. 8. Describe the procedure for administering drugs into the eye, ear, nose, rectum, vagina or onto the skin. 9. Discuss procedures for recording medication administration. 10. Demonstrate administration of drugs by all of the above routes according to guidelines.	1. Advantages and disadvantages of each mode of medicine administration. 2. Principles and physiology of medication absorption. 3. Procedure for safe administration of drugsbyorally, rectum, vagina, on topically, into the eye conjunctiva and external ear. 4. Factors increase or reduce the effect of oral and topical medications. 5. Safe medication administration procedures: Right patient, right medicine, right dose, right route, and right time.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Unit 13: Emergency Treatment	**Hrs. theory 20 Hrs. lab/practical 10**
Subunit 13.1: Trauma	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe the steps for evaluating the patient's condition in emergency situations. 2. Describe andconduct primary emergency care to stabilize the patient. 3. Describe indications for immediate transfer of patient to higher level facility. 4. Describe measures to maintain the life of the patient during transport.	1. Trauma and types of injury. 2. Methods of controlling external hemorrhage. 3. First aid and emergency treatment. 4. Principles of patient transfer. 5. Management principles of chest trauma. 6. Management principles of fractures. 7. Management of head and spinal cord injuries. 8. Management principles of urinary tract injuries. 9. Management principles of abdominal trauma. 10. Observation tour to concern hospital and center.

Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.
Unit 13: Emergency Treatment	Hrs. theory Hrs. lab/practical
Sub-unit 13.2: Head Injury	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Identify the common causes for injury to the brain. 2. Describe the cardinal signs and clinical features of acute and residual brain injury. 3. Describe the process for stabilization of the patient with acute brain trauma, and measures to transport to a higher level facility. 4. Describe the advice and counseling for the family of a person with acute or chronic brain trauma. 5. Identify health education measures to reduce the incidence of brain trauma.	1. Causes, clinical features, pathology, management, prognosis, counseling, referral for acute or residual brain trauma. 2. Use of the Glasgow Coma scale. 3. Use of Traige while managing emergency cases 4. Preventive education measures (motorcycle and bicycle helmets, safety harness for high altitude work, rafting helmets)
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.
Unit 13: Emergency Treatments	**Hrs. theory Hrs. lab/practical**
Sub-unit 13.3 : Fluid and electrolyte	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Describe the ways the body maintains fluid and electrolyte balance. 2. Demonstrate the methods for assessing hydration. 3. State the principles which guide the in deciding which parenteral fluid to administer, by which route, and at what rate.	1. Normal distribution and composition of body fluid. 2. Maintaining acid-base balance. 3. Management of mild moderate and severe dehydration. 4. Selecting appropriate injection fluid and their routes of administration. 5. Principles of parenteral fluid replacement therapy.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.

Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Unit 13: Emergency Treatments	**Hrs. theory Hrs. lab/practical**
Sub-unit 13.4: Acute abdomen pain	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Describe the condition of acute abdomen. 2. Discuss the causes of acute abdomen. 3. Identify the etiology, pathology, and clinical features of common causes of acute abdomen. 4. Identify investigations necessary for differential diagnosis of acute abdomen. 5. Describe the complications of acute abdomen. 6. Describe the natural of acute abdomen and indications for immediate referral and transport to a higher level facility.	1. Etiology, Clinical features of disease entities which may cause acute abdomen: acute gastroenteritis, acute pancreatitis, acute cholecystitis, peptic ulcer perforation, acute appendicitis, peritonitis. 2. Principles of management of: a Acute gastroenteritis b Acute pancreatitis c Acute cholecystitis d Peptic ulcer perforation e Acute appendicitis f Peritonitis 3. Role of analgesic, antipyretic and antibiotics before diagnosis of acute abdomen.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Unit 13: Emergency Treatments	**Hrs. theory Hrs. lab/practical**
Sub-unit 13.5: Hepatobiliary disease	**Hrs. theory 3 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe the anatomy and physiology of the liver. 2. Describe the functions of the liver. 3. Identify the clinical features of liver injury in abdominal trauma which requires immediate stabilization and referral. 4. Describe the etiologies, pathologies, and clinical features of gall stones, liver abscess, and hepatoma. 5. Identify investigations necessary for differential diagnosis. 6. Describe the indications which require referral to a higher level facility.	1. Anatomy and physiologyof liver and gallbladder. 2. Clinical features of liver injury. 3. Clinical features, differential diagnosis and treatment of cholelithiasis (gall stones), amoebic liver abscess. 4. Cholangitis, cholecystitis. 5. Differentiate between pYogaenic and amobic liver abscess. 6. Tumor of the liver.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.

Unit 13: Emergency Treatments	**Hrs. theory Hrs. lab/practical**
Sub-unit 13.6: Urinary stones and urinary tract infection	**Hrs. theory 4 Hrs. lab/practical 1**
Objectives:	Content:
1. Define UTI, hematuria and dysuria and its causes and management. 2. Describe how to perform the three test tubes test to differentiate hematuria origin. 3. Describe the mechanism of urinary stone formation. 4. Describe how to counsel patients for prevention of stone formation. 5. Differentiate between the clinical features of urinary tract infection (UTI) and urinary stones. 6. Describe the investigations needed to make a differential diagnosis of UTI or urinary stones. 7. Explain the action of urinary tract analgesics and antispasmodic medicine in the treatment of urinary pain and urinary colic. 8. Identify indications for referral to a higher level facility.	1. Causes and investigations of UTI and hematuria. 2. Etiologies, clinical features and investigations for infections of the urinary tract: urethritis, cystitis, pyelonephritis. 3. Etiologies, clinical features and investigations for infections of the male reproductive system: epididymo-orchitis, prostatitis. 4. Urinary stone formation and classification. 5. Predisposing and contributing factors of urinary stone formation. 6. Symptoms, signs, and treatments of urinary stones. 7. Etiologies, clinical investigations, and differential diagnosis of hematuria.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Unit 13: Emergency Treatments	**Hrs. theory Hrs. lab/practical**
Sub-unit 13.7: Acute retention of urine	**Hrs. theory 1 Hrs. lab/practical 1**
Objectives:	Content:
1. Mention Benign enlargement of prostate (BEP), Urinary tract infection (UTI), urethral stone. 2. Identify the causes and clinical features of urinary retention and incontinence. 3. Identify steps in conservative management: reassurance, urinary catheterization. 4. Identify conditions indicating resistance to conservative treatment. 5. Describe the procedure for rectal palpation of the prostate gland. 6. Identify the clinical features of benign prostatic hypertrophy. 7. Identify indications for referral to a higher level facility.	1. Causes of dribbling of urineand acute urinary retention. 2. Symptoms and signs of acute urinary retention. 3. Management of acute urinary retention. 4. Technique for rectal examination of the prostate. 5. Etiologies, clinical features and treatments for benign prostatic hypertrophy (BEP)
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return

	demonstration, anatomical models, videos, supervised clinical practice.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Unit 13: Emergency Treatments	**Hrs. theory Hrs. lab/practical**
Sub-unit 13.8: Fractures, splints, immobilization	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe the clinical features of a closed fracture. 2. Differentiate between the symptoms of a dislocation and a fracture. 3. State the management of an open fracture. 4. Describe ways to immobilize selected fractures 5. Discuss situations which indicate that immobilization of the neck and spine is required. 6. Describe measures to immobilize the neck and spine. 7. Demonstrate lifting and transporting a patient who must remain immobile. 8. Explain why all fractures should be referred to a higher level facility for management. 9. Describe prevention measures which should be included in community education, such as the use of a safety harness when working at great heights.	1. Define fracture and types of fracture. 2. Mention the sign and symptoms of fracture. 3. Assessment of fractures and dislocations. 4. Immobilization techniques. 5. Pathology of spinal injury. 6. Principles of safe lifting, body mechanics, patient stability.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play, First Aid Manual

Unit 14: First Aid	**Hrs. theory 17 Hrs. lab/practical 12**
Sub-unit 14.1: Principles of First Aid	**Hrs. theory 1 Hrs. lab/practical 1**
Objectives:	Content:
1. Discuss the aims of first aid and the responsibility of the first aider. 2. Describe the initial actions of the first aider. 3. List the essential principles of first aid. 4. Describe the steps of assessment, management and disposal of the casualty case.	1. Purpose of first aid 2. Essential principles of first aid 3. Procedures for assessment and intervention in first aid 4. Disposal and communication responsibilities 5. Principles of triage with multiple casualties
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return

	demonstration, models, videos, role play, self-study from First Aid Manual
Unit 14: First Aid	**Hrs. theory** **Hrs. lab/practical**
Sub-unit 14.2: Dehydration, heat reaction, altitude sickness, hypothermia, frostbite	**Hrs. theory 2 Hrs. lab/practical** 1
Objectives:	Content:
1. State examples of when persons might be at risk for dehydration, heat reaction, altitude sickness, hypothermia, frostbite. 2. Describe the signs and symptoms of dehydration, heat reaction, altitude sickness, hypothermia, frostbite. 3. Describe the recommended immediate treatment for each of these. 4. Describe indications that immediate referral to a higher level facility is necessary. 5. Explain how community education can prevent occurrences of dehydration, heat reaction, altitude sickness, hypothermia, frostbite or ensure a safe recovery.	1. Clinical features of mild, moderate and severe dehydration, heat reaction, altitude sickness, hypothermia, frostbite. 2. Correct use of rehydration salts and other treatments for dehydration, heat reaction, altitude sickness, hypothermia, frostbite. 3. Indications of severe cases of dehydration, heat reaction, altitude sickness, hypothermia, frostbite which require expert management.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play, First Aid Manual
Unit 14: First Aid	**Hrs. theory** **Hrs. lab/practical**
Sub-unit 14.3: Animal andsnake bite, and insect stings	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Discuss the incidence of injury due to snake bites, animal bites, Insect stings and poisoning. 2. Explain the pathophysiology, types of snake poison (Neuro toxic and Hemato toxic), sign and symptoms, emergency and emergency management of poisons snake bites. 3. Explain aetilogy, reservoir, and mode of transmission, incubation period of rabies and management of suspected rabid animal bites. 4. Discuss prevention and control of rabies in animal and human population including vaccinations. 5. Discuss common insect bites, complications, and management.	1. Discussion on the incidence of injury due to snake bites, animal bites, Insect stings and poisoning. 2. Explanation of the pathophysiology, types of snake poison (Neuro toxic and Hemato toxic), sign and symptoms, emergency and emergency management of poisons snake bites. 3. Methods of proper diagnosis of snake bites 4. Explanation of aetilogy, reservoir, and mode of transmission, incubation period of rabies and management of suspected rabid animal bites. 5. Discussion on prevention and control of rabies in animal and human population

6. Discuss indications that a casualty is or may have a severe allergic reaction to an insect sting. 7. Describe the appropriate management for cases of animal bites, stings or pois**o**ning. 8. Discuss why a tourniquet is no longer used for snakebite, and describe the recommended management. 9. Describe the recommended use of emergency medications for bites and stings. 10. Describe indications that the casualty should be removed to a higher level medical facility immediately. 11. Discuss ways to reduce the incidence of bites, stings and poisonings through community education.	including vaccinations (Pre exposure and Post exposure). 6. Discussion on common insect (Wasp, Hornet and Bee) bites, complications (including laryngeal oedema), and management. 7. Indications that a casualty is or may have a severe allergic reaction to an insect sting. 8. Explanation of "tourniquet" is no longer used for snakebite. 9. Description on the recommended use of emergency medications for bites, stings and poisons. 10. Indications of the casualty should be removed to a higher level medical facility immediately. 11. Ways to reduce the incidence of bites, stings and poisonings through community education.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play, First Aid Manual
Unit 14: First Aid	**Hrs. theory Hrs. lab/practical**
Sub-unit 14.4: Wounds, burns and bandaging	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe closed and open wounds, lacerations, contusions, and abrasions. 2. Describe how to manage a laceration, puncture wound, or gunshot wound. 3. Demonstrate selected types of bandaging. 4. Describe procedures for controlling hemorrhage: pressure dressings, pressure point constriction. 5. Tell indications for selecting to approximate a wound with "butterfly" taping, versus suturing. 6. Differentiate between different kinds of burns: chemical, friction, thermal, electrical. 7. Identify the characteristics of 1^{st}, 2^{nd} and 3^{rd} degree burns. 8. Describe the management of each degree burn. 9. Describe indications that a person with a wound should be transported to a higher level facility.	1. Terminology for various types if injury. 2. Recommended first aid treatment of closed or open wounds (abrasions, contusions, lacerations, puncture wounds, or burns). 3. Techniques of bandaging. 4. Control of hemorrhage. 5. First aid assessment and treatment of burns.

Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Unit 14: First Aid	**Hrs. theory Hrs. lab/practical**
Sub-unit 14.5: Hemorrhage	**Hrs. theory 1 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe the appropriate interventions for severe hemorrhage from: an extremity, abdominal wound, scalp wound, neck laceration. 2. Explain why a tourniquet is harmful for most circumstances of hemorrhage. 3. Describe the signs/symptoms of internal hemorrhage: abdominal, subdural, intracranial, and thoracic. 4. Discuss primary, reactionary and secondary hemorrhage. 5. Describe blood grouping and cross matching. 6. Explain blood transfusion, its storage, indication, complication & contraindication. 7. State the interventions for stabilization. 8. Describe the precautions on transporting a patient.	1. The difference between arterial versus venous bleeding. 2. Symptoms and implications of hemorrhagic shock. 3. Interventions for controlling internal and external hemorrhage. 4. Discussion on primary, reactionary and secondary hemorrhage. 5. Description of blood transfusion, its storage, indication, complication & contraindication.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Unit 14: First Aid	**Hrs. theory Hrs. lab/practical**
Sub-unit 14.6: Management of severe breathlessness/COPD and Status asthmaticus.	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Identify the common causes for breathlessness (shortness of breath). 2. Identify the distinguishing features characteristic of each cause of breathlessness. 3. Describe measures available at the primary level to relieve breathlessness. 4. Identify the questions to ask to analyze the causes of breathlessness in the person. 5. Identify indications for referral to a higher level facility.	1. Causes of breathlessness: a. Asthma b. Pulmonary embolism c. Pneumothorax d. Pulmonary edema e. Heart failure f. Chronic obstructive pulmonary disease g. Hysteria h. Uremia 2. Distinguishing characteristics of common causes of breathlessness. 3. Management and referral.

Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Unit 14: First Aid	**Hrs. theory** **Hrs. lab/practical**
Sub-unit 14.7: Heart attack	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe the path physiology of myocardial infarction (M.I.) 2. Differentiate between angina and M.I. 3. Describe the common symptoms of M.I. 4. Identify immediate treatment for M.I. available at the primary level. 5. Identify indications for immediate referral to a higher level facility.	1. Recall: Anatomy and physiology of the heart; pathology of myocardial infarction. 2. Clinical features of myocardial infarction and angina. 3. Stabilization of M.I. case for transport to higher level facility.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Unit 14: First Aid	**Hrs. theory** **Hrs. lab/practical**
Sub-unit 14.8: Epileptic seizure	**Hrs. theory 1 Hrs. lab/practical 1**
Objectives:	Content:
1. Identify the causes and clinical features of epileptic seizure (fits). 2. Differentiate between epileptic seizure and hysterical fits. 3. Describe the appropriate management of a seizure (fit) for adults and children. 4. Tell when an emergency medication should be administered to the person experiencing unrelenting seizure (fit), and discuss the type, dosage and route of administration. 5. Demonstrate correct positioning to maintain the airway of an unconscious person. 6. Describe indications for immediate transport of the casualty for higher level care. 7. Discuss measures to educate the community about prevention and treatment for seizures.	1. Clinical features of grand mal or other epileptic seizure (fit) 2. Positioning for airway maintenance 3. Recommended emergency medications for status epilepticus
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Unit 14: First Aid	**Hrs. theory** **Hrs. lab/practical**
Sub-unit 14.9: Concussion and Stroke (CVA)	**Hrs. theory** 1 **Hrs. lab/practical** 1
Objectives:	Content:
1. Describe the clinical features of a skull fracture. 2. Define concussion.	1. signs and symptoms and management of mild, moderate and severe concussion

3. Describe the signs and symptoms of mild, moderate and severe concussion. 4. Identify the appropriate initial management of mild, moderate and severe concussion. 5. Describe the pathology of a stroke, or cerebral vascular accident (CVA). 6. Describe the signs and symptoms of mild, moderate or severe stroke. 7. Identify the immediate actions to take for the person who has had a mild, moderate, or severe stroke. 8. Identify indications that the person who has had a concussion or stroke should be transported to a higher level facility immediately.	2. procedure for evaluating brain damage at 15 minute intervals (Central Nervous System Check) a. Alertness & orientation b. Voluntary movement/equilateral strength c. Pain or numbness d. Pupils equal and reactive to light e. Reflexes normal f. Vital signs g. Vomiting/projectile vomiting
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Unit 14: First Aid	**Hrs. theory** **Hrs. lab/practical**
Sub-unit 14.10: Assessment of unconscious person	**Hrs. theory 1 Hrs. lab/practical 1**
Objectives:	Content:
1. Define the terms related to assessment of level of consciousness. 2. Describe how to assess the ABC's of vital functions: a. Airway clear b. Breathing adequate c. Circulation and cardiac function good 3. Identify the signs of common causes of unconsciousness. 4. Demonstrate placement of the unconscious person in recovery position or in shock position. 5. Identify important information to ask of the persons accompanying the casualty. 6. Describe how to examine the body for evidence of injury or bites. 7. Identify emergency medications to use in the management of each of the causes of unconsciousness listed above. 8. Identify indications for immediate transfer to a higher level facility. 9. Discuss measures to ensure safe transport.	1. Definition of terms: a. Full consciousness b. rowsiness c. Stupor d. Coma 3. Principles of emergency assessment. 4. Common causes of unconsciousness: a. Asphyxia b. Head injury c. Shock d. Fainting e. Stroke f. Poisoning g. Heart attack h. Convulsions i. Diabetic emergency j. Conversion disorder (hysteria) 5. Management of different causes of unconsciousness. 6. Indications and procedures for transfer.

Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: textbook self-study, classroom instruction and demonstration, return demonstration, models, videos, role play.
Unit 14: First Aid	**Hrs. theory** **Hrs. lab/practical**
Sub-unit 14.11: Choking and obstructed breathing	**Hrs. theory 1 Hrs. lab/practical 1**
Objectives:	Content:
1. Describe the symptoms of partial or complete airway obstruction due to choking. 2. Identify other common causes for airway obstruction. 3. Demonstrate how to position an unconscious person to maintain an airway. 4. Demonstrate how to assist the conscious and unconscious person with partial or complete airway obstruction by foreign body. 5. Identify indications for immediate referral to a higher level facility. 6. Describe the features of a community education program designed to prevent choking and teach the Heimlich maneuver.	1. Signs and symptoms of complete and partial airway obstruction. 2. Oedema of throat, laryngospasm, obstruction by tongue with unconsciousness. 3. Positioning the unconscious patient. 4. Principles and procedure for performing the Heimlich maneuver. 5. Preventive measures and community education.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Unit 14: First Aid	**Hrs. theory** **Hrs. lab/practical**
Sub-unit 14.12: Cardiopulmonary Resuscitation (CPR)- drowning, cardiac arrest	**Hrs. theory 1 Hrs. lab/practical 1**
Objectives:	Content:
1. Identify the conditions which require CPR. 2. Give examples of causes of asphyxiation or cardiac arrest. 3. Differentiate between “dry drowning” and “wet drowning”. 4. State how many minutes a child or adult may survive without oxygenation to the brain. 5. Describe the symptoms of choking which indicate application of the Heimlich maneuver. 6. Describe the steps in assessment and intervention for the adult without respiration, pulse, or both	1. Conditions which require CPR, and those which do not. 2. The process and principles of CPR 3. The process and principles of the treatment of choking with the Heimlich maneuver 4. Circumstances which require modification of these procedures **5.** The anatomy and physiology of the heart and lungs .

7. Tell the difference between CPR procedure for adult, child, infant, pregnant woman. 8. Describe ways to safely remove the source of electricity from a victim of electrocution before administering CPR. 9. Describe how to remove stomach contents from the victim of drowning, in order to increase ventilation by CPR.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.

First Clinical Exposure in Hospital Setting

After completion of 16 weeks of second year theory and simulation practice in institution, student will be placed in 48 working days equal to 8 weeks (8*48=384 hours) clinical practice in hospital setting.

Objective:

The students would be able to

- History taking
- Physical examination:
    - General examination
    - Systematic examination
- Provisional diagnosis
- Differential diagnosis
- Investigation:
    - Laboratory and radiological
- Final diagnosis
- Management:
    - Treatment
    - Referral
    - Rehabilitation
    - Prevention and control measures
    - Follow up

Note: Each student will perform a minimum of 10 history taking, physical examination with provisional diagnosis, differential diagnosis, final diagnosis and case management in detail.

Students would be able to learn by self-study, group discussion and problem based learning.

Philosophy of Naturopathy

Hours Theory: 105
Hours Practical: 70

Course Description:
This course begins with the introduction of Naturopathy to make the students to 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 in Naturopathy.

Course Objectives:
On completion of the course the studenrts will be able to:

- Elucidate the history of Naturopathy including major contributors to the field and their work;
- Understand the evolution and composition of the human body according to different schools of medicine such as Naturopathy, Yoga, Ayurveda, Homeopathy, Modern Medicine, etc.
- Firmly establish his/her diagnostic and therapeutic thought processes in the fundamental principles of Naturopathy:
- Concepts of health and disease according to Naturopathy
- Concept of Panchamahabhuthasand Naturopathy
- Foreign matter, toxin accumulation, theory of Toxemia, Unity of disease and Unity of Cure
- Concept of vitality
- Holistic approach of Naturopathy
- Modern perspectives of Naturopathy
- Natural rejuvenation
- Understand Natural Life style, including healthy daily routine, food and diet, exercise, rest and relaxation, positive mental attitude, stress management, detoxification, bodily urges, free from addiction, weight control, social adjustment and contribution regular health checkup.
- 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
- Understand Principles behind using the diagnostic procedures of Naturopathy, like spinal diagnosis, facial diagnosis, iris diagnosis, and chromo diagnosis.
- Demonstrate knowledge of recent advances and research in Naturopathy principles/theories.

Reference Books

- Singh, S. J. *My nature cure or practical naturopathy*.
- Kuhne, L. *The science of facial expression*.
- Gandhi, M. K. *The story of my experiments with truth*.
- Garde, R. K. *Ayurveda for health and long life*.
- Udupa, K. N.*Fundamentals of Ayurveda*.
- Kent, J. T.*Homeopathic philosophy*.
- Benjamin, H. *Everybody's guide to nature cure*.
- Gandhi, M. K.*Prayer*.
- Gandhi, M. K. *Diet and diet reforms*.

- Rao, V. *Panchatantra*.
- Jussawalla, J. N. *Nature cure*.
- Pizzorno, J. E., & Murray, M. T. *The encyclopedia of natural medicine*

Course: Philoshophy of Naturopathy	**Hrs. theory 105 Hrs. lab/practical 70**
Unit 1: Introduction and Historical Highlight of Naturopathy	**Hrs. theory 14 Hrs. lab/practical 4**
Sub-unit 1.1: General Introduction	**Hrs. theory 5 Hrs. lab/practical**
Objectives:	Content:
1. Introduce Naturopathy 2. Define and Concept of Health & Disease 3. Famalarize Role of Nature to the evolution of human being. 4. Know Composition of the human body, according to Ayurveda, Naturopathy, Yog, Modern Medicine.	1. Introduction to Naturopathy 2. Definition and Concept of Health & Disease 3. Role of Nature to the evolution of human being. 4. Composition of the human body, according to Ayurveda, Naturopathy, Yog, Modern Medicine.
Evaluation methods: written exam, viva.	**Teaching / Learning Activities / Resources:** classroom lecture,tutorial, text book study
Unit 1: Introduction and Historical Highlight of Naturopathy	**Hrs. theory 14 Hrs. lab/practical 4**
Sub-unit 1.2: Introduction to various systems of Medicine	**Hrs. theory 4 Hrs. lab/practical 4**
Objectives:	Content:
1. Define different system of medicines and describe their basic principle, scope and limitations. 2. Compare Naturopathy with other system of medicene in respect to principle, strength and weakness.	Definition, basic principle, scope and limitations of Modern Medicine, Ayurveda, Homeopathy and Sowarigpa Comparative study of Naturopathy with other systems of Medicine with Modern Medicine, Ayurveda, Homeopathy and Sowarigpa.
Evaluation methods: written exam, viva	Teaching / Learning Activities / Resources: classroom instruction / observstion, tutorial.
Unit 1: Introduction and Historical Highlight of Naturopathy	**Hrs. theory 14 Hrs. lab/practical 4**
Sub-unit 1. 3: History of Naturopathy	**Hrs. theory 5 Hrs. lab/practical**
Objectives:	Content:
1 Introduce the famous Naturopaths and thier contribution in the field of Naturopathy. 2 Describe how naturopathy developed in Nepal 3 Introduce main contributors for development of Naturopathy in Nepal	1. History of Foreign Naturopaths. a Aesculapius b Hippocrates c Vincent Priessnitz d Sebastian Kneipp e Louis Kuhne

4 Describe present situation of Natropathy in Gverment, Community and private sectors in Nepal. 5 Understan future scope of Naturopathy	f Dr. John Harvey Kellogg g Dr Benedict Lust h Adolf Just i John H Tilden j Henry Lindlahr k Vittal Das Modi l Mahatma Gandhi. 2. Past history, Present condition and future scope of Naturopathy in Nepal
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, tutorial , Text book study
Unit 2: Fundamental principles, concepts & theories of Naturopathy.	**Hrs. theory 11 Hrs. lab/practical**
Sub-unit 2.1: Fundamental Theories of Naturopathy	**Hrs. theory 5 Hrs. lab/practical**
Objectives:	Content:
1. Explain the classical theory of PanchamahabhootasPanchabhautikChikitsa. 2. Define foreign matter theory and explain how the toxins enter and the causes of accumulate in the body, its impact on health. 3. Describe about the different chhanel of elimination and the importance toxin elimination through these channels. 4. Define vitality &vital economy and explain its impottance on health and metheds to preserve and increase vitality 5. Explain the principle of "Unity of disease, Unity of cure" and how this theory is applied in treatment. 6. Define Toxins and anti-toxins and explain how theyare generated in the body, ttheir impact on health and the method of detoxification. 7. Explain each of the basic principles of Naturopathy with example and rationale. 8. Define homeostasis, xenobiotic, Free Radicals and Antioxidants and corelate with the classical theories of morbid matter, Vitality and toxemia.	1. Theory of PanchamahabhootasPanchabhautikChikitsa . 2. Foreign matter Theory: Definition, toxins accumulation in the body, its impact on health and importance toxin elimination through different ways or channels. 3. Theory of Vitality & Vital economy – Definition, imprtance, conditions that decrease vitality and method of increasing vitality. 4. Unity of disease, Unity of cure and way of treatment. 5. Theory of Toxemia- Toxins and anti-toxins, their generation, mitigation in nature cure way 6. The basic principles of Naturopathy a The healing power of nature b Identify and treat the causes c First do no harm d Doctor as teacher e Treat the whole person f Prevention g Herring‘s law of cure 7. Modern perspectives of Naturopathic Medicine Definition, mechanism, importance of a Homeostasis b Metabolism of Xenobiotic. c Free Radicals and Antioxidants

Evaluation methods: written exam, viva	Teaching / Learning Activities / Resources: classroom instruction, tutorial , text book study
Unit 2: Fundamental principles, concepts & theories of Naturopathy.	**Hrs. theory Hrs. lab/practical**
Sub-unit 2.2: Naturopathy prospective of Health , Diseases and treatment approach	**Hrs. theory 6 Hrs. lab/practical**
Objectives: 1. Introduce Henry Lindlahar and his contribution to Naturoathy 2. Explain Laws of Nature according to Henry Lindlahr 3. Explain catechism of Nature Cure according to Henry Lindlahr. 4. Explain Naturopathic concepts of health &its dimension. 5. Explain concepts of disease according to Naturopathy. 6. Define inflammation; explain different stage andsigniance in self healingprocess. 7. Explain Naturopathy is not single system of medicine but it is a blend of Harmless Therapies. 8. Define holism and explain holistic approach of Naturopathy. 9. Explain Natural healing mechanisms with examples.	Content: 1. Introduction to Henry Lindlahrand his ontribution in the field of Naturopathy 2. Laws of Nature according to Henry Lindlahr 3. Catechism of Nature cure according to Henry Lindlahr 4. Concepts & dimension of health according to Naturopathy 5. Concepts of Disease according to Naturopathy 6. Inflammation- Definition, stages and its significance in naturopathic perspective. 7. Naturopathy: a blend of harmless therapies 8. Holistic approach of Naturopathy 9. How Nature Cures- The Natural healing mechanisms
Evaluation methods: written exam, spotting, viva, performance observation in clinical setting	**Hrs. theory 20 Hrs. lab/practical 30**
Unit 3: Introduction to the Diagnostic procedures in Naturopathy	**Hrs. theory 5 Hrs. practical 7**
Sub Unit 3.1: Physical Diagnosis	Content:
Objectives: 1. Define physical diagnosis and explain its basic principle 2. Perform the technique of physical examinatin step by step. 3. Perform a minimum of 5 history taking and physical examinations with provisional diagnosiss.	1.Physical Diagnosis a Introduction, b Definition c Basic Principle d Methodology
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 3: Introduction to the Diagnostic procedures in Naturopathy	**Hrs. theory Hrs. lab/practical**

Sub Unit 3.2: Spinal Diagnosis	**Hrs. theory 4 Hrs. lab/practical 6**
Objectives:	Content:
1. Define spinal diagnosis and explain its basic principle 2. Perform the technique of spinal examinatin step by step.	1.Spinal Diagnosis a Introduction b Basic Principle c Anatomy of spine
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 3: Introduction to the Diagnostic procedures in Naturopathy	Hrs. theory Hrs. lab/practical
Sub Unit 3.3: Facial diagnosis	**Hrs. theory 3 Hrs. lab/practical 6**
Objectives:	Content:
1. Define facial diagnosis and its explain basic principle 2. Perform the technique of facial examinatin step by step.	1. Facial Diagnosis a Introduction, b Definition c Basic Principle
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 3: Introduction to the Diagnostic procedures in Naturopathy	**Hrs. theory Hrs. lab/practical**
Sub Unit 3.4: Iris diaginosis	**Hrs. theory 5 Hrs. lab/practical 6**
Objectives:	Content:
1. Define iris diagnosis and its explain basic principle 2. Explain about Iris chart and its uses.	Iris Diagnosis a Introduction, b Definition c Basic Principle d Iris chart
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 3: Introduction to the Diagnostic procedures in Naturopathy	**Hrs. Theory Hrs. lab/practical**
Sub Unit 3.5: Chromo diagnosis	**Hrs. theory 3 Hrs. lab/practical 5**
Objectives:	Content:
1. Define Chromodiagnosis and its explain basic principle 2. Demonstrate the technique of color examinatin step by step.	Chromo Diagnosis a Introduction b Definition c Basic Principle d Color changes in different conditions
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Unit 4: Natural Therapies: Introduction, Understanding and Application	**Hrs. theory: 30 Hrs. lab/practical: 30**
Objectives:	Content:
1. Define each each of the theraputic technique used in Naturopathy. 2. Explain the basic principle of each technique and explin how it works 3. Explain the procedure step by step. 4. Explain scope and limitations. 5. Explain the indication and contra- indication 6. Demonstration of basic techniques	1. Acupressure 2. Acupuncture 3. Auriculotherapy 4. Balneotherapy 5. Chiropractice 6. Chromotherapy 7. Cupping 8. Dietetics 9. Electromagnetic therapy 10. Fasting 11. Five elements Therapy 12. Heliotherapy 13. Holistic medicine 14. Home remedies 15. Hydrotherapy 16. Life style Medicine 17. Magnetic healing 18. Manipulative therapy 19. Meditation 20. Moxibustion 21. Music therapy 22. Mud Therapy 23. Nutrition 24. Reflexology 25. Shiatsu 26. Traditional Nepal Medicine
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, tutorial, supervised clinical practice, observation
Unit 5: Natural Life style	**Hrs. theory 20 Hrs. lab/practical 6**
Objectives:	Content:
1. Define life style medicine and explain the importance in modern era. 2. Explain the role of proper diet, regular exercise, aduquate rest and relaxation, developing positive mental attitude in life style medicine. 3. Define Stress, its type, causes and impact on health.Exlpain natural ways to manage and minimise stress.	1. Life style – Definition, healthy and unhealthy life style, its modification and its importance for maintenance of good health and prevention of diseases. 2. Basis of Health – Diet, Exercise, Rest, Relaxation, Recreation, positive mental attitude. 3. Stress: Definition, types, Symptomes, cause, impact on health and natural management.

4. Define toxins, explain the cause of accumulation of toxins, need of detoxification and natural method of detoxification. 5. Define Immunity, Natural Immunity &explain the natural ways to acquire immunity and its importance to prevent diseases. 6. Define physical and mental hygiene & importance of physical and mental hygiene in health and disease. 7. Describe Naturopathic view about vaccinations and inoculation and discusses whether it is necessary or not. 8. Define rejuvenation and explain the natural ways to rejuvenate body and mind. 9. Define Geriatrics medicine, list out the geriatric problems and naturopathy treatment for geriatric problems and natural life style to prevent geriatric problems. 10. Explain about the importance of personal life for the prevention of diseases and promotion of positive health. 11. Define addiction and explain addiction to different substances, their impact on health and role of natural therapies to get rid from addiction. 12. Define Ideal weight, over weight and under weight and importance of ideal weight on health. 13. Explain about Socialsocialdinention of health and contribution of social relation to health. 14. Explain the need of specific seasonal regimen toprotces from disesases. 15. Explain need regular health check up to detect risk factors, early daignosis and to modefy necessary lifestyle. Also describe about important paameters for regular health check up. 16. Define physical and mental urges and their relation with health and diseases.	4. Detoxification – Definition, cause of accumulation impact on health and natural method of detoxification. 5. Natural Immunity- Definition, importance & ways to acquire natural immunity. 6. Hygiene - Definition& importance of physical and mental hygiene in health and diseases. 7. Vaccinations and inoculation – The Naturopathic view. 8. Natural rejuvenation – definition, importance and natural methods. 9. Personal life and prevention of diseases 10. Geriatrics medicine and Naturopathy – definition, geriatric problems, natural treatments and life style. 11. Addiction – Definition, addition to different substances, impact on health and natural method of deaddiction. 12. Weight- Definition of ideal weight, over weight, under weight, risk of over / under weight, natural method to maintain ideal weight. 13. Social Relation and contribution to health 14. Seasonal regimen and Precaution 15. Regular health check up – parameters and significance 16. Physical and mental urges and relation with health.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, tutorial, supervised clinical practice
Unit 6: Essentials of a Naturopathy assistant	**Hrs. theory 4 Hrs. lab/practical**
Objectives:	Content:

1. List out and explain the essential Qualities to be successful Naturopathyassistance. 2. Explain how to approach to the Patient. 3. Define ethical practice and explain about the importance ethical practice. 4. Explain the the Scope & Limitations of naturopathy assistant.	1. Qualities of a Naturopathy assistant 2. Approach to the Patient with a Naturopathy view 3. Ethical considerations, 4. Scope & Limitations of Naturopathy practice 5. Scope & Limitations of Naturopathy assistant
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, tutorial.
Unit 7: Recent Advances in Naturopathy	**Hrs. theory 6 Hrs.**
Objectives:	Content:
1. Explain the relatinon between Mind and Body Medicine and discuss about the concept of mind- body medicine. 2. Define Psychosomatic Diseases, explain the mechanism of psychosomatic disese and list out the major manifastation of psychosomatic diseases. 3. Define Psychoneuroimmunology &Psychoneuroendochrinology and explain the pathway 4. Explain the role Lifestyle & psychosocial factors for the health and diseses. 5. Define Integrative Medicine and explain its importance and techniques.	1. Mind-Body Medicine – Concept, mechanism and importance 2. Psychosomatic Diseases – Definition, mechanism, major diseases and natural management. 3.Definition, pathways and importance Psychoneuroimmunology&Psychoneuroendo chrinology 4. Lifestyle& psychosocial behaior on health and diseases. 5. Integrative Medicine – Definition, need and importance.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, tutorial, text book study

General Yoga, Exercise & Fitness

Hours Theory: 105
Hours Practical: 70

Course Description:
This course is designed to provide students concept about the history, definitions, philosophy, knowledge, skillsand practicesof General Yoga, Exercise & Fitness.It is designed to make students understandphilosophical basis of the system of Yoga, basic principles and actions.It also will help students to understand and learn the general principles &practices of Yoga, exercises & various fitness concepts and the differences.It incorporates the concepts of healthand uses of Yoga, postural care, physical culture, various exercises & fitness in general.

Course Objective:
After completion of the course students will be able to:

- Explain the various definitions of Yoga, origin &history of Yoga and branches of Yoga and also ofExercises & Fitness Concepts
- Describe kinds of Yogasanas, Exercises, Fitness Concepts its importance, methods, rules, regulations, difference, and limitations.
- Illustrate the various limbs of Ashtanga Yoga.
- Demonstrate knowledge of pranayamas, lifestyle, breathing techniques, exercisesand fitness concepts
- Demonstrate various types of Warmups, Loosening exercises, Yogasanas&Pranayamas.
- Demonstrate various Exercises, Fitness Conceptsin their correct method of performance.
- Instruct and teach Yoga, pranayamas, various exercises & concepts of back, neck & spine care.

Reference books:

- Svatmarama, S. *Hatha Yoga Pradipika*.
- Vivekananda, S.*Raja, Hatha, Jnana, Bhakti Yoga*.
- Pathik, A.*Yoga path*.
- Bijlani, R. N.*Medical physiology*.
- Schwarzenegger, A., & Dobbins, B.*The new encyclopedia of modern bodybuilding*.
- Starrett, K. *Becoming a supple leopard*.

Course: General Yoga, Exercise & Fitness	
Unit 1: Introduction	**Hrs. theory: 14 Hrs. lab/practical : 0**
Sub-unit 1.1: Introduction	**Hrs. theory : 4 Hrs. lab/practical : 0**
Objectives:	Content:

1 Define: Yoga, Exercise & Fitness 2 History of Yoga	1. Meaning and Definitions of Yoga, Exercise & Fitness 2. Relative chronology, Yoga before & after the time of Patanjali and modern history. 3. Difference: Yoga, Exercise & Fitness.
Sub-unit 1.2: Branches of *Yoga*	**Hrs. theory: 10 Hrs. lab/practical: 0**
Objectives:	Content:
1. Outline and describe branches of *Yoga*	1 Introduction to the branches of Yoga – a Mantra Yoga, b Laya Yoga, c Hatha Yoga/Natha Yoga, d Raja Yoga, e Karma Yoga, f Jnana Yoga, g Bhakti Yoga, h Shata Chakra and Kundalini Yoga, *i* Maha Yoga
Evaluation methods: written exam, viva	**Teaching / Learning Activities / Resources:** Classroom instruction, teacher led discussion, textbook, hand-outs
Unit 2: *Ashtanga Yoga*	**Hrs. theory: 5 Hrs. lab/practical: 0**
Sub-unit 2.1: *Ashtanga Yoga*	**Hrs. theory: 5 Hrs. lab/practical : 0**
Objectives:	Content:
1.Classify & describe *Ashtanga Yoga* Mudras & Bandhas 4. Chakras	1. Introduction to *Ashtanga Yoga* 2. Classify *Ashtanga Yoga* 3. Introduction to: *a Yama* *b Niyama* *c Asana* *d Pranayama* *e Pratyahara* *f Dharana* *g Dhyana* *h Samadhi* 4. Introduction to Nadi 5. Introduction, techniques, precuations, benefits & practice of Mudras& Bandhas
Evaluation methods: written exam, viva	**Teaching / Learning Activities / Resources:** Classroom instruction, teacher led discussion, textbook, hand-outs, charts.
Unit 3: *Yogasanas*	**Hrs. theory: 20 Hrs. lab/practical: 21**
Sub-unit 3.1: *Yogasanas*	**Hrs. theory: 20 Hrs. lab/practical: 21**
Objectives:	Content:

1. Introduce Yogasanas 2. Classify *Yogasanas* 3. *Asanas*– Importance, methods, rules, regulations, and limitations 4. Learn different types of asanas. 5. Describe & classify the different of styles of asanas.	1. Introduction to *Yogasanas* a Definition of Yogasanas b Yogasanas and the mind-body connection c Yogasanas and Exercises 2. Procedures (Pre, During and Post) of Yogasanas 3. Classifications of *Yogasanas*– a Beginners group, b Intermediate group, c Advanced group, d Dynamic and Static *Yogasanas*. *6.* Asanas– a Summary: Effects & importance b Summary: rules, regulations, and limitations 7. Asanas: Description & Demonstration of methods of practice i. Suryanamaskara ii. Meditative postures a Padmasana a Siddhasana b Swastikasana c Vajrasana d Sukhasana iii. Cultural postures a Halasana b Dhanurasana c Sarvangasana d Paschimottanasana e Trikonasana iv. Relaxation postures a Shavasana b Makarasana c SithilDandasana d SithilTadasana e Global practice of Yogasana
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 4: Pranayama	**Hrs. theory: 15 Hrs. lab/practical: 15**
Sub-unit 4.1: Pranayama	**Hrs. theory: 15 Hrs. lab/practical : 15**
Objectives:	Content:
1 Define Pranayama 2 Classify Pranayama 3 History of Pranayama	1. Introduction, Technique, Precuation and Benefits of Pranayama 2. Meaning and Definition

	3. Swaravigyan 4. Breath, health, and Pranayama 5. Rule of Pranayama *6.* Pranayama and it's types: a. Nadisodhan (Surya vedan, Chandra Vedan and AnulomaViloma) b. Bhastrika c. Sheetkari d. Sheetali e. Ujjayi f. Bhramari
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos.
Unit 5: Kriyas	**Hrs. theory: 15 Hrs. lab/practical: 10**
Sub-unit 5.1: Kriyas	**Hrs. theory: 15 Hrs. lab/practical: 10**
Objectives:	Content:
1. Define Kriyas 2. Classify Kriyas 3. Define Mudras & Bandhas 4. Classify Mudras & Bandhas	1. Introduction to Kriya and Shatkarmas 2. Meaning and Definitions of Kriya&Shatkarmas 3. Classification& description of Kriyas& Shatkarmas 4. Rule, Introduction, Technique, Precutation and Benefits of Kriyas and Shatkarmas 5. Describe & Demonstrate a Jalaneti b Sutra neti c Vamanadhauti 6. Meaning, Definitions, Classification & description Technique, Mudras & Bandhas
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 6: Exercise	**Hrs. theory: 24 Hrs. lab/practical : 16**
Sub-unit 6.1: Exercise	**Hrs. theory: 3 Hrs. lab/practical : 0**
Objectives:	Content:
1. Introduce Exercises 2. Explain Effects of Exercises 3. Describe Types of Exercises	1. Meaning, Definition &Introduction to Exercises 2. Benefits & Physiological Effects of Exercises 3. Types of Exercises a Stretching Exercises b Strengthening Exercises c Endurance Building Exercises 4. Describe Exercises for health & fitness

Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Sub-unit 6.2: Stretching Exercises	**Hrs. theory: 7 Hrs. lab/practical: 5**
Objectives:	Content:
1. Describe Different Stretching Exercises for different parts 2. Describe Different Stretching Exercises for different muscles	1. Introduction, Techniques, Precutations, demonstration, caution & benefits of Different Stretching exercises a Abdominal muscles, b Arms, c Chest, d Ankles, e Legs, f Knee, g Thigh, h Forearm i Upper back j Face k Legs, l Feet and ankles. m Hips, n Hamstrings, o Low back
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Sub-unit 6.3: Strengthening exercises	**Hrs. theory: 7 Hrs. lab/practical: 5**
Objectives:	Content:
1. Describe Different StrengtheningExercises for different parts 2. Describe Different StrengtheningExercises for different muscles	1. Techniques, demonstration, caution & benefitsof Different strengthening exercises for a Abdominal muscles, b Arms, c Chest, d Ankles, e Legs, f Knee, g Thigh, h Forearm i Upper back, j Face k Legs, l Feet and ankles. m Hips,

	n Hamstrings, o Low back
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Sub-unit 6.4: Cardio Exercises	**Hrs. theory : 7 Hrs. lab/practical : 6**
Objectives:	Content:
1. Describe Different Cardio Exercises for different people 2. Describe Different Cardio Exercises for different groups, time & procedures	1 Different cardioexercises & techniques for different age groups a Children b Adolescents c Adults d Old age 2 Different cardioexercises & techniques for different fitness groups a Beginners b Intermediate c Advance
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos.
Unit 7: Wellness & Fitness	**Hrs. theory: 8 Hrs. lab/practical: 6**
Sub-unit 7.1: Wellness & Fitness	**Hrs. theory: 8 Hrs. lab/practical :6**
Objectives:	Content:
1. Define Wellness &Fitness 2. Describe Health, Nutrition, Rest & Exercise for Fitness 3. Define & Describe the Types, Techniques of Different Exercises for Fitness	1. Concepts and definitions of wellness & fitness: 2. Concept of holestic health 3. Nutrition, Rest & Exercise for Fitness 4. Description & Demonstration of Types, Techniques & caution of Different Exercises for Fitness: a Gym, b Pilates, c Aerobics, Jumba and dance d Sports Fitness, e Yoga, f Walking and hiking g Running, h Cycling, i Swimming, j Free Exercises

Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 8: Back Care & Exercises	**Hrs. theory: 4** **Hrs. lab/practical: 2**
Sub-unit 8.1: Back Care & Exercises	**Hrs. theory: 4** **Hrs. lab/practical: 2**
Objectives:	Content:
1. Describe Back, Neck & Spine Care& Exercises	1. Description, Concepts & techniques of Back, Neck & Spine Care 2. Different Exercises for Back, Neck & Spine Care 3. Exercise Therapy for spinal pain
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Minimum standards: achieved at 40% accuracy (theory) and 60% accuracy (Practical) by end of course.	

Dravyaguna Vigyan

(Herbology, Pharmacology and Pharmacognosy)

Hours Theory: 105
Hours Practical: 35

Course Description:

This course is designed to provide students the knowledge and skills about Herbology, Pharmacology and Pharmacognosy. It deals with basic principles and concepts of pharmacology as well as identification, properties, actions and uses of medicinal plants. It also incorporates general knowledge about essential drugs used in primary health care level.

Course Objectives:

After completion of the course the students will be able to:

1. Define Dravyaguna Vigyan, Pharmacology, Dravya, Guna, Karma
2. Explain the origin, historical background, scope and importance of Dravyaguna Vigyan.
3. Define and explain Rasa, Veerya, Vipaka, Prabhava with their types
4. Define and explain mechanism of drug action and factors responsible for the action of a drug, classify the actions of drugs.
5. Define and explain aims and objectives of using medicines, factors to be considered before and during the use of drugs, describe absorption, distribution, metabolism and excretion of drugs.
6. Define and explain combination, suitability, incompatibility, synergism, antagonism, reaction and side effects of drugs, describe routes, method, time and duration of drug administration.
7. Define & explain dosage, common & specific dose, factors to be considered for determination of dose, Pathya-Apathya, contra-indications, precautions for drug administration.
8. Define the essential drugs, describe the concept and importance of essential drugs, enlist essential drugs for health post, sub-health post & primary health care level, explain indications, contra-indications, dose, uses and side effects of the essential drugs

Reference Books:

- द्रव्यगुण विज्ञान भाग १-५: आचार्य प्रियव्रत शर्मा, चौखम्भा भारती अकादमी, वाराणसी, भारत ।
- द्रव्यगुण विज्ञानम् (पूर्वार्द्ध र उत्तरार्द्ध) : श्री यादवजी त्रिकमजी आचार्य, वैद्यनाथ आयुर्वेद भवन, भारत ।
- स्थानीय जडीबुटीद्वारा स्वास्थ्य-रक्षा : डा. श्याममणि अधिकारी, नेपाल संस्कृत विश्वविद्यालय, नेपाल ।
- क्रियात्मक औषधि परिचय विज्ञान : श्री विश्वनाथ द्विवेदी, चौखम्भा विद्याभवन, वाराणसी, भारत ।
- जडीबुटी सङ्कलन, संरक्षण, सम्वर्द्धन विधि (जडीबुटी परिचयमाला) सम्पूर्ण भाग : वनस्पति विभाग, नेपाल
- Sapkota, C. R., & Adhikari, S. M. (n.d.). *Ayurveda pharmacology (Bheshajaguna Vigyan)*. Singhadurbar Vaidyakhana Vikas Samiti.
- Satoskar, R. S., & Bhandarkar, S. D. *Pharmacology and pharmacotherapeutics*.
- Department of Drug Administration. *Essential drug list*. Kathmandu, Nepal.

- Department of Ayurveda. *Essential Ayurveda drug list*. Kathmandu, Nepal.
- Department of Drug Administration. *Standard treatment schedules for health posts & sub-health posts*. Kathmandu, Nepal.

Course: Dravyaguna Vigyan (Herbology, Pharmacology and Pharmacognosy)	**(Practical hours are also mentioned in theoretical portion as well as practical)** **Hrs. theory 105 Hrs. lab/practical 35**
Unit 1: Introduction to Dravyaguna-Vigyan and Pharmacology:	**Hrs. theory 8 Hrs. lab/practical 2**
Objectives:	Content:
1. Define Dravyaguna Vigyan and Pharmacology. 2. Explain the origin and historical background of Dravyaguna Vigyan. 3. Explain the scope and importance of Dravyaguna Vigyan and Pharmacology 4. Introduction to botany, types of plant, parts of plants	1. Introduction, historical background, scope and importance of Dravya Guna Vigyan and Pharmacology 2. Introduction to botany. Types of plant, parts of plants 3. History and use of herbs in traditional medicine 4. Definition and basic principles of Pharmacology and Pharmacognosy
Evaluation methods: written exam, viva, performance observation in clinical setting	**Teaching / Learning Activities / Resources:** classroom instruction, supervised clinical practice
Unit 2: Study on Dravya (Drugs):	**Hrs. theory: 8 Hrs. lab/practical 3**
Objectives:	Content:
1. Define and explain Dravya, its medicinal value and Panchabhautic attributes 2. Define a drug, Classify and explain	1. Drabya: Definition, classification, Panchabhautic attributes 2. Drugs: Definition, types and classification 3. Names, main uses and dose of the following group: Triphala, Trikatu,Trijataka, Chaturjata Chaturushana,Chaturbeeja ,Chatusneha, Panchakola, Panchatikta
Evaluation methods: written exam, viva, performance observation in class room setting	**Teaching / Learning Activities / Resources**: classroom instruction

Unit 3: Study of Properties of drugs	**Hrs. theory: 5 Hrs. lab/practical 3**
Objectives:	Content:
1. Define & explain the various types & importance of Guna, general & specific meaning of Guna 2. Define and explain Veerya, 2 types of Veerya 3. Define and explain Vipaka, 3 types of Vipaka 4. Define and explain Prabhava with examples	1. Guna: Definition, type and importance, classification 2. Rasa: Definition, type and importance, classification 3. Veerya: Definition, type and importance, classification 4. Bipak: Definition, type and importance, classification 5. Prabhava: Definition, type and importance, classification
Evaluation methods: written exam, viva, performance observation in field trip	**Teaching / Learning Activities / Resources:** classroom instruction, question-answer session during class room activities
Unit 4: Study of Actions and Effects of Drugs	**Hrs. theory: 8 Hrs. lab/practical 5**
Objectives:	Content:
1. Define and explain Karma, describe the types of Karma. 2. Describe the mechanism of drug action and factors responsible for the action of a drug, classify the actions of drugs. 3. Define the following terms with examples of Dravya:	**1. Karma:** Definition and type of karma. Various 2. Terminology used to describe the karma and its modern scientific co relations. Pachana, Grahi, Anulomana, Sramsana, Bhedana, Chedana, Brimhana, Rasayana, Vajikaran Snehana, Swedana,
Evaluation methods: written exam, viva, performance observation in field trip	**Teaching / Learning Activities / Resources:** classroom instruction, practice in a simulated setting, question-answer session during class room activities
Unit 5: Study on Use of Drugs:	**Hrs. theory: 8 Hrs. lab/practical 2**
Objectives:	Content:
1. Define and explain ideal drug and its uses, describe aims and objectives of using medicines 2. Describe the factors to be considered before and during the use of drugs, 3. Describe absorption, distribution, metabolism and excretion of drugs. 4. Define and explain combination, suitability, incompatibility, synergism, antagonism, reaction and side effects of drugs.	1. Definition and aim and objective of Ideal Drug, time, route of administration, Dosage and posology 2. Pathya and Apathya, contra-indications and precautions for drug administration 3. Drugs: combination, suitability, incompatibility, synergism, antagonism, reaction and side effects of drugs.

5. Define and explain routes and methods of drug administration, describe the basis of selection of the routes of drug administration. 6. Define and explain dosage and posology, common dose and specific dose, the factors to be considered for determination of dose and precautions for drug administration.	
Evaluation methods: written exam, viva, performance observation in field trip	**Teaching / Learning Activities / Resources:** classroom instruction, practice in a simulated setting, question-answer session during class room activities
Unit 6: Essential Drugs:	**Hrs. theory: 18 Hrs. lab/practical 5**
Objectives:	Content:
1. Define the essential drugs, Describe the concept and importance of essential drugs. **2.** Enlist essential drugs	**1.** Essential drugs: Importance, Name, uses and dose (modern medicine) 2. Common herbal dugs used as food supplements 3.Briefly explain indications, contra-indications, dose, uses and side effects of the essential drugs:
Evaluation methods: written exam, viva, performance observation in field trip	**Teaching / Learning Activities / Resources:** classroom instruction, practice in a simulated setting, question-answer session during class room activities
Unit 7: Medicinal Plants (Herbology):	**Hrs. theory: 50 Hrs. lab/practical 15**
Objectives:	Content:
1. Explain the classical Sanskrit, Latin and local names, family, general introduction (identifying characteristics), geographical distribution, parts used, actions, indications, doses, uses & common preparations of different medicinal plants. 2. Medicinal plants working in various systems of human body.	1. Classical Sanskrit, Latin and local names, family, general introduction, geographical distribution, parts used, actions, indications, doses, uses in various system of human body: Ashwagandha, Amalaki, Aragvadha, Eranda, Kanchanara, Kutaja, Kumari, Khadira, Guggulu, Guduchi, Jyotishmati, Tulasi, Daruharidra, Nimba, Pashanabheda, Pippali, Punarnava, Bhumyamalaki, Mandukaparni, Yashtimadhu, Rasona, Vacha, Varuna, Vasaka, Shatavari, Haridra, Haritaki, Apamarga, Ashoka, Ardraka/ Shunthi, Kantakari, Kapikachchhu, Gokshura, Chakramarda, Chitraka, Jatiphala, Jiraka, Dronapushpi, Nirgundi, Parijata, Bibhitaka, Bilva, Bhringaraja, Manjishtha, Maricha, Mustaka, Madhunashini, Lavanga, Shigru, Trivrit, Kasamarda, Durva, Devadaru, Draksha, Narikela, Patola, Mahanimba, Mushali, Methika,

	Yarsagumba, Lajjalu, Raktachandana, Karaveera, Kupilu, Gunja, Dhattura, Palasha, Bhanga, Bhallataka, Sarpagandha, Snuhi, Hingu
Evaluation methods: written exam, viva, performance observation in field trip	**Teaching / Learning Activities / Resources:** classroom instruction, practice in a simulated setting, question-answer session during class room activities

Practical

[Dravyaguna Vigyan (Herbology, Pharmacology and Pharmacognosy)]

Unit 1: Observation and Drawing: 15 hrs

Perform microscopical examination and drawing of following medicinal plants:

Ashwagandha	Amalaki	Eranda	Khadira	Guduchi	Gokshura	Chakramarda
Jatamansi	Jyotishmati	Tumburu	Daruharidra	Haritaki	Pashanabheda	Pippali
Punarnava	Manjishtha	Madanaphala	Maricha	Mustaka	Yashtimadhu	
Rohitaka	Vacha	Vatsanabha	Varuna		Vidanga	Shatavari
Shirisha	Shunthi	Sarpagandha	Haridra			

Unit 2: Field trip, Report Writing and Herbarium Preparation: 20 hrs

2.1: Perform field trip of minimum of 4 days visiting herbarium and herbal gardens or farms and write report on it.

2.2: Collect specimens of locally available medicinal plants and prepare herbarium sheets of minimum of 20 medicinal plants included in theory course.

Massage & Manipulative Therapies

Hours Theory: 70
Hours Practical: 105

Description

This course provides with comprehensive understanding of science and modes of applications of different manipulative modalities like Massage, Chiropractic, Osteopathy, myotherapy, manual therapy, manipulations and Aromatherapy in preventive, curative and rehabilitative therapy. This course is designed to impart the knowledge and skills necessary for naturopathic, ayurvedic, physiotherapy hospitals, spas, health clubs, micro enterprise or a business unit of self-employment startup. The entire course intends to explain the practice, procedures, precautions & understanding of different applications of various eastern & western approaches to massages & various manipulative therapies.

Course Objectives

- After completion of this course, students will be able understand the principles and historical highlights of massage and manipulative techniques;
- Demonstrate basic understanding of principles and procedures of different types of massage, their physiological effects, indications, and contraindications;
- Delineate the principles and procedures of various manipulative therapies like chiropractic, osteopathy and aromatherapy;
- Describe essential oils with respect to the extraction, uses and combinations that are therapeutically used
- Perform different types of massage and manipulative therapies, such as Osteopathy. Chiropractic, Aromatherapy, Swedish massage, Kellogg‘s massage, Shiatsu, Geriatric Massage, Pediatric massage, Antenatal massage, Ayurvedic massage;
- Use Myo& manipulative therapies in their professional practice for Neurological &Musculoskeletal disorders.
- At the completion of training, the student should be able to comprehend the basic principles of Manipulative Therapies and apply it in clinical practice

Reference Books

- Salvo, S. G. *Massage therapy*.
- Podder, T. *Magic of massage*.
- Kellogg, J. H. *Art of massage*

Unit 1. Introduction and history	**Hrs. theory 4**
Sub-unit 1.1: Introduction and history	**Hrs. theory 4**

Objectives:	**Content:**
1. Define massage& manipulative therapies 2. Understand the principles and historical highlights of massage & manipulative therapies 3. Discuss the physiological effects of massage & manipulative therapies 4. Identify the indications and contraindications of massage & manipulative therapies	1. Definitions of massage & manipulative therapies 2. History of massage & manipulative therapies 3. Physiological effects of massage & manipulative therapieson different systems 4. Indications and contraindications of massage & manipulative therapies
Evaluation methods: written exam, viva, performance observation in clinical setting and field.	Teaching / Learning Activities / Resources: classroom instruction, practice in a simulated setting, and supervised clinical practice in related field.
Unit 2: Basic Techniques of massage	**Hrs. theory: 15**
Sub-unit 2.1: Basic Techniques of massage	**Hrs. theory 15**
Objectives:	**Content:**
1. Prepare for massage 2. Apply the main procedure of massage 3. Explain the Care, Precautions & conclude massage 4. Define Basic Techniques of massage 5. Perform & apply Basic Techniques of massage on different parts of the body 6. Understand the principles and Physiological effects of different techniques of massage	1. Preparation for massage a Learn to keep Massage record & appointments b History taking for massage c Preparation of surrounding & room, d Preparation of oils, e Preparation of equipments f Preparation of Masseur & Client, (patient) 1. Application of the main procedure of massage a Full body massage & part massages b Special area to focus 3 .Care, Precautions & concluding a Position of patient b Position of therapist c Duration d Allergies e Draping techniques f Safety protocol g Precautions h Concluding a massage 4. Define Basic Techniques & Procedures of massage a Touch b Stroking c Friction

	d Vibration e Kneading f Percussion g Joint movements 5. Application of Basic Techniques of massage on different parts of the body 6. Understanding of principles and Physiological effects of different techniques of massage
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice in related field.
Unit 3: Classification	**Hrs. theory 20**
Subunit: 3.1: Classification	**Hrs. theory 20**
Objective	**Content**
1. Classify Massage according to medium 2. Classify Massage according to lubricants 3. Classify Massage according to age & conditions 4. Classify Massage according to culture, races &geography 5. Classify Massage according to systems	1 Classification of Massage according to medium a Salts & muds b Stones c Oils d Milk, buttermilk e Powder f Dry g Water h Underwater pressure i Friction 2 Classification of Massage according to lubricants a Oils of plant origin b Oils & fats of animal origin c Different kinds of aromatherapy &essential oils 3 Classification&demonstration of Massage according to age & conditions a Neonatal &baby massage b Antenatal and postnatal massage c Geriatric Massages d Trekkers Massage 4 Massages in Various diseases conditions a Spinal pain b Joint pain c Neck, upper, Mid, Low Back pain d Shoulder pain e Scoliosis, Kyphosis f Sciatica

	g Poor Circulation h Connective tissue disorders i Oedema j Osteoarthritis & Rheumatoid Arthritis k Headache, Migraines, depression, insomnia l Stroke m Muscle Spasm, Whiplash n Peripheral Neuropathy o Paralysis, Muscular Weakness p Facial Palsy q Fatigue, Anxiety, Stress r IBS, Constipation s Post-surgery 5 Classificationof Massage according to culture, races & geography Introduction, History, principles, theories, modalities, procedure, advantages and disadvantages of different indigenous massages in Nepal a Khas b Newari c Tharu d Aryan e Mongolian f Muslims g Buddhist h Tamang i Tibetan 6 Classification &conceptsof Massage according to systems a Swedish Massage b Ayurvedic massages c Thai Yoga massage d Hot stone massage e Shiatsu f Deep tissue Massage

	g Massage with mechanical & electrical equipments h Aromatherapy Massages 7 Differentiation of above various massages
Unit 4: Major systems of Massages	**Hrs. theory 16**
Sub-unit 4: Major systems of Massages	**Hrs. theory 16**
Objective	**Contents**
1. Apply & demonstrate major types of massages 2. Massage to different local areas	1. Introduction, History, principles, theories, Application, demonstration, procedure, advantages and disadvantages of a Swedish Massage b Ayurvedic massages c Thai massage d Hot stone massage e Shiatsu f Deep tissue Massage g Massage with mechanical & electrical equipments 2. Demonstration of all the previous Massages to the different local areas a Head b Face c Neck d Hands e Legs f Back g Chest h Abdomen
Unit 5: Manipulation-therapies	**Hrs. theory 10**
Sub-unit 5.1: Manipulation-therapies	**Hrs. theory 10**
Objectives:	**Content:**
1 Introduce different manipulative therapies 2 Explain History, principles, theories, application, procedures, advantages and disadvantages of different manipulative therapies 3 Demonstrate the procedure & process of different manipulative therapies	1. Introduction, History, principles, theories, Application, demonstration, procedure, advantages and disadvantages of a Craniosacral therapy b Joint & Spinal Manipulations c Myofascial Release d Myotherapy e Anma & Shiatsu 2. Demonstration of various manipulations to the different local areas

	a Head b Face c Neck d Hands e Legs f Back g Chest h Abdomen
Evaluation methods: written exam, spotting, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice in related field.

Practical: **Total 105 hours**

Unit 1: Major systems of Massages	**Hrs. lab/practical: 40**
Sub-unit 1.1: Major systems of Massages	**Hrs. lab/practical: 40**
Objective	**Contents**
1. Apply, practice & demonstrate major types of massages	Application, practice& demonstration of major types of massages: full body massages a Swedish Massage: b Hot-stone Massages: c Thai massage : d Shiatshu: e Deep tissue Massage: f Massage with mechanical & electrical equipments:
Evaluation methods: performance observation in clinical setting	Teaching/Learning Activities/ Resources: supervised clinical practice in related field.
Unit 2: Partial Massages	**Hrs. lab/practical: 24**
Sub-unit 2.1: Partial Massages	**Hrs. lab/practical: 24**
Objective	**Contents**
Apply, practice & demonstrate major types of massages in partial forms:	1 Application, practice & demonstration of major types of massages in partial forms: partial massages to head, face, neck, hands, legs, back, chest&abdomen a Swedish partial Massage: b Ayurvedicpartial massages: c Hot-stone partial Massages: d Thai partial massage : e Shiatsu partial: f Deep tissue partial Massage:

	g Partial Massage with mechanical & electrical equipments:
Evaluation methods: performance observation in clinical setting	Teaching / Learning Activities / Resources: supervised clinical practice in related field.
Unit 3: Manipulation-therapies	**Hrs. lab/practical: 30**
Sub-unit 3.1: Manipulation-therapies	**Hrs. lab/practical: 30**
Objectives:	**Content:**
1 Demonstrate the procedure & process of different manipulative therapies 2 Demonstrate the procedure & process of 20 Manipulations to different parts of the body	Demonstration& practice of Mixed Techniques of these manipulations a Craniosacral therapy b Joint & Spinal Manipulations c Myofascial Release d Myotherapy To the following local areas a neck b hands c legs d upper back e mid back f lower back
Evaluation methods: performance observation in clinical setting	Teaching / Learning Activities / Resources: supervised clinical practice in related field.
Unit 4: Observations	**Hrs. lab/practical: 11**
Sub-unit 4.1: Observations	**Hrs. lab/practical: 11**
Objectives:	**Content:**
1 Observe, explain & demonstrate the procedure & process of Panchakarma 2 Identify different mediums, oils, oil preparation 3 Visit different Massage set ups	1 Observation & demonstration of the procedure & process of Panchakarma 2 Identification of different mediums, oils, oil preparation 3 Visiting different Massage set ups
Evaluation methods: performance observation in clinical setting	Teaching / Learning Activities / Resources: supervised clinical practice in related field.

Preventive and Community Medicine

Hours Theory: 140
Hours Practical: 35

Course Description:

This course introduces the student to the specialized skill and knowledge needed to provide adequate knowledge regarding preventive and community medicine. The content is taught using classroom instruction and practical experiences in community based programs and primary health care services during field practice at the Health Post and home visits. This course includes information about the relationship between environment and health, water resource management and conservation, waste management, food hygiene, healthful and sanitary housing, air quality management, and occupational health.

Course Objectives:

At the end of the course, the learner will able to:

1. Describe the relationship between the environment and health, and show the impact of environment on health.
2. Describe water resources conservation and water quality management.
3. Explain proper waste management in urban and in rural areas.
4. Describe how to maintain food hygiene.
5. Describe standards of safe housing and effects of poor housing.
6. Explain air pollution and its management.
7. Identify occupational diseases and strategies for their prevention.

Course: Preventive and Community Medicine	**Hrs. theory 160 Hrs. lab 40**
Unit 1: Environmental Health	**Hrs. theory 6 Hrs. lab 2**
Sub-unit 1.1: Definition of Terminologies	**Hrs. theory 4 Hrs. lab**
1. Define different terms and terminology regarding Environmental Health 2. Evaluate and describe the environmental health of your home community. 3. Give examples of environmental sanitation efforts in Nepal. 4. Describe examples of local, national, and global pollution.	1. Definition of Environment, Environmental Health, Environmental Sanitation and Environmental Pollution. 2. Introduction of Environment, Environmental Health, Environmental Sanitation and Environmental Pollution with examples. 3. Individual and collective efforts to promote environmental health.
Evaluation methods:	**Teaching / Learning Activities:**
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs.
Unit 1: Environmental Health	**Hrs. theory 6 Hrs. lab**
Sub-unit 1.2: Environmental hazards and effects	**Hrs. theory 2 Hrs. lab**
1. Define environmental hazards and give examples. 2. Differentiate between biological and chemical hazards. 3. Describe the long term and short term effects of environmental hazards.	1. Definition and Introduction of environmental hazards 2. Classification of environmental Hazards 3. Effects of environmental hazards.
Evaluation methods:	Teaching / Learning Activities:
Written examination, viva, practical	Classroom instruction, teacher led discussion, textbook, hand-outs, Case Study
Unit 2: Water	**Hrs. theory 9 Hrs. lab 1**
Sub-unit 2.1: Water	**Hrs. theory 2 Hrs. lab**
1. Know about water and water cycle. 2. State the daily requirement, nature and cycle of water 3. Define safe and wholesome water 4. Identify the uses of water	1. Water, and Water Cycle. 2. Importance of water, its functions daily requirement. 3. Safe and wholesome water. 4. Uses of water
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion
Unit 2: Water	**Hrs. theory Hrs. lab**
Sub-unit 2.2: Source of water	**Hrs. theory 2 Hrs. lab**
1. Identify various sources of water 2. Identify features and qualities of different sources of water. 3. To know about the Vedic Concept of Kshirasagar and Nira Sagara.	1. Feature and Qualities of Rain , Surface water , Ground water, Shallow wells, Deep wells, Springs, Sea water, Himalayan Glacier Water. 2. Concept of Kshir sagar and Nir sagar.

Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, project report.	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, Problem base learning.
Unit 2: Water	**Hrs. theory** **Hrs. lab**
Sub-unit 2.3: Water pollution	**Hrs. theory 3 Hrs. lab**
1. Define water pollution 2. Describe causes of water pollution 3. Explain the prevention of water pollution 4. Identify important water borne diseases.	1. Causes, Types of pollutants. 2. Prevention of water pollution 3. Common water borne diseases of Nepal.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit
Unit 2: Water	**Hrs. theory** **Hrs. lab**
Sub-unit 2.4: Purification of water	**Hrs. theory 2 Hrs. lab 1**
1. Describe different methods of water purification at the household level. 2. Describe how to disinfect well water. 3. Mention the methods of water purification on a large scale. 4. Describe the features of a sanitary well. 5. State the criteria and standards for water quality according to WHO and the Ministry of Health.	1. Methods and methodologies of water purifications. 2. Small and large scale water purification. 3. Features of sanitary well 4. Criteria and standards of water quality
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical

Unit 3: Waste	**Hrs. theory 8 Hrs. lab 2**
Sub-unit 3.1: Introduction of waste	**Hrs. theory 2 Hrs. lab**
1. Define waste 2. Illustrate solid waste and identify their sources, liquid wastes and identify their sources. 3. Illustrate hazardous wastes and identify their sources.	1. Types and sources of waste with examples -Solid waste, Liquid waste, Gaseous waste 2. Hazardous waste.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Unit 3: Waste	**Hrs. theory Hrs. lab**
Sub-unit 3.2: Solid waste	**Hrs. theory 2 Hrs. lab**
1. Identify examples of biodegradable and non-biodegradable solid wastes in Nepal.	1. Biodegradable and non-biodegradable solid wastes 2. Strategies (managerial and technical) to reduce solid waste problems.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Unit 3: Waste	**Hrs. theory Hrs. lab**
Sub-unit 3.3: Hazards of solid waste	**Hrs. theory 2 Hrs. lab**
1. Denitrify both health hazards and environmental hazards created by solid waste mismanagement. 2. Give examples when solid waste mismanagement resulted in health problems. 3. Identify an example of solid waste mismanagement in your own community.	1. Health hazards and environmental impact of unhygienic or careless disposal of solid waste. 2. Methods of solid waste management. 3. Solid waste mismanagement in your own community
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Unit 3: Waste	**Hrs. theory Hrs. lab**
Sub-unit 3.4: Hospital waste management	**Hrs. theory 2 Hrs. lab**
1. Identify different kinds of hospital waste. 2. Describe the communicable disease risks from improper disposal of excreta, vomit, urine, contaminated dressings, blood, used needles and other sharp instruments, broken glass, mercury.	1. Types Hospital waste 2. Management of hospital waste 3. Hospital waste management guideline according to WHO
Evaluation methods:	Teaching / Learning Activities:

Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Unit 4: Food hygiene	**Hrs. theory 12 Hrs. lab 2**
Sub-unit 4.1: Food hygiene	**Hrs. theory 2 Hrs. lab**
1. Define food hygiene. 2. Identity different food hygiene methods.	1. Definition and importance and types of food hygiene 2. Hand washing & Sanitation of eating place.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Unit 4: Food hygiene	**Hrs. theory Hrs. lab**
Sub-unit 4.2: Food borne diseases	**Hrs. theory 4 Hrs. lab**
1. Discuss the incidence of food poisoning. 2. Identify common food borne diseases. 3. Identify foods which carry a high risk of containing toxins.	1. Introduction of Food borne disease. 2. Types and epidemiology of FBD. 3. Causes of Food intoxication. 4. Food borne infection
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Unit 4: Food hygiene	**Hrs. theory Hrs. lab**
Sub-unit 4.3: Sources of food contamination.	**Hrs. theory 2 Hrs. lab**
1. Define food contamination. 2. Identify and describe sources of food contamination.	1. Definition of food contamination 2. Sources of food contamination: Human factors, Environmental factors.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical

Unit 4: Food safety	**Hrs. theory** **Hrs. lab**
Sub-unit 4.4: Milk hygiene / vegetable/ Meat/ Fruit	**Hrs. theory 2 Hrs. lab**
1. Define milk hygiene. 2. Identify milk borne diseases. 3. Describe the processes/components of milk hygiene. 4. Define and understand the different types of food borne disease and its naturopathic management	1. Definition of food safety (Hygiene) 2. Impact of hygiene in health and disease. 3. Food contamination. 4. Milk, meat, fruit and vegetable hygiene, 5. Types of food contamination. 6. Handling of milk, vegetable, meat before consumption.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Unit 5: Air	**Hrs. theory 6 Hrs. lab**
Sub-unit 5.1: Air pollution.	**Hrs. theory 6 Hrs. lab**
1. Describe air and its composition. 2. Define air pollution. 3. Describe effects of air pollution on health and society. 4. Describe sources air pollution. 5. Describe indicators of air pollution. 6. Identify persons who are at risk when air pollution is high. 7. Describe measures for the prevention and control of air pollution.	1. Air & its composition 2. Definition of air pollution 3. Air pollutants an their source. 4. Indicators of air pollution. 5. Effects of air pollution in human and environments. 6. Measures of air pollution control and prevention.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical
Unit 6: Sound and Noise pollution	**Hrs. theory 4 Hrs. lab 1**
Sub-unit 6.1: Noise and radiation pollution	**Hrs. theory 4 Hrs. lab**
1. Discuss causes, effects, and control of noise pollution. 2. Describe the types, sources and effects of radiation exposure. 3. Discuss ways to reduce exposure to natural radiation and the harmful effects of the sun.	1. Definition of noise pollution, 2. Effects of chronic exposure to noise, 3. Safe noise levels, control of noise. 4. Sources, types, effects, and protection from radiation exposure.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical

Unit 7: Occupational Health	**Hrs. theory 4 Hrs. lab 2**
Sub-unit 7.1: Occupational health	**Hrs. theory 4 Hrs. lab**
1. List the common occupational diseases in Nepal. 2. Describe three forms of prevention of occupational diseases and give an example of each.	1. Common occupational diseases. 2. Protection of health in occupational settings
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit
Unit 8: Health Education	**Hrs. theory 14 Hrs. lab 4**
Sub-unit 8.1: Overview of health education	**Hrs. theory 2 Hrs. lab**
Objectives: Students will be able to	Content:
1. Discuss the aims of health education.	1. Definition of health education. 2. The aims, objectives and importance of health education.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Unit 8: Health Education	**Hrs. theory Hrs. lab**
Sub-unit 8.2: Principles and scope of health education	**Hrs. theory 2 Hrs. lab**
Objectives: Students will be able to	Content:
1. Describe the scope of health education. 2. Explain the principles of health education; give an example for each one.	1. Principles of health education 2. Scope of health education.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Unit 8: Health Education	**Hrs. theory Hrs. lab**
Sub-unit 8.3: Individual and Group Methods	**Hrs. theory 4 Hrs. lab**
Objectives: Students will be able to	Content:
1. Describe the advantages and disadvantages of the different types of health education methods. 2. Select the suitable health education method for successful implementation of selected health education programmes. 3. Describe ways to make each method more successful.	1. Methods of health education. 2. Advantages and disadvantages of each method. 3. Individual methods. 4. Group methods

Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, Group discussion, Demonstration, Role play, Field trip, brainstorming, symposium, workshop and mini-lecture
Unit 8: Health Education	**Hrs. theory Hrs. lab**
Sub-unit 8.4: Mass methods	**Hrs. theory 2 Hrs. lab**
Objectives:	Content:
1. Describe the methods for providing education to large groups of people	1. Mass method: Lecture, Exhibition , Campaign 2. Criteria for the selection of appropriate methods.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Unit 8: Health Education	**Hrs. theory Hrs. lab**
Sub-unit 8.5: Media	**Hrs. theory 4 Hrs. lab**
Objectives:	Content:
1. Describe the advantages and disadvantages of the different types of health education media. 2. Identify criteria used for selecting appropriate media for a method of providing education. 3. Select the appropriate media for health education programmes.	1. Definition and Meaning of each media. 2. Uses of each media. 3. Criteria for the selection of media. 4. Measures to use each media effectively.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Unit 9: Primary Health Care (PHC)	**Hrs. theory 12 Hrs. lab 3**
Sub-unit 9.1: Health care of people: Concept of health	**Hrs. theory 4 Hrs. lab**
Objectives: Students will be able to	Content:
1. Define the concept of health as given by WHO. 2. Explain the differences between physical, mental and social dimensions of health. 3. Discuss the characteristic features of physically, mentally and socially healthy person.	1. Definition of health and health care. 2. Concept of health given by WHO. 3. Dimensions of health. 4. Characteristic features of physically, mentally and socially healthy person with examples.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self-study, related charts and handouts
Unit 9: Primary Health Care	**Hrs. theory Hrs. lab**

Sub-unit 9.2: Health care of people: determinants of health	**Hrs. theory 3 Hrs. lab**
Objectives: Students will be able to	Content:
1. List determinants of health by category. 2. Explain how a particular determinant is related to a disease /health problem. 3. State definitions of the levels of health care: 4. Mention the purposes of public health. 5. Discuss the concept of prevention.	1. Determinants of health. 2. Promotive, preventative, curative, rehabilitative health care 3. Level of health care: primary, secondary and tertiary
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self-study, related charts and handouts
Unit 9: Primary Health Care	**Hrs. theory Hrs. lab**
Sub-unit 9.3: Health care of people: indicators of health	**Hrs. theory 2 Hrs. lab**
Objectives: Students will be able to	Content:
1. Discuss the various health indicators and give an example of each. 2. Explain how health indicators are used. 3. Identify the categories of health indicators.	1. Different types of health indicators. 2. Uses of health indicators.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self-study, related charts and handouts
Unit 9: Primary Health Care	**Hrs. theory Hrs. lab**
Sub-unit 9.4: Challenges of PHC in Nepal	**Hrs. theory 3 Hrs. lab**
Objectives: Students will be able to	Content:
1. Identify major challenges of PHC in Nepal. 2. Interpret in Nepalese context the following challenges of PHC:	1. Major challenges of PHC in context of Nepal: Population overgrowth , Malnutrition. Poor environmental sanitation, Infectious diseases, Economic status, Educational status, Gender discrimination, Health service delivery, Infrastructures, Prevailing social values, norms and belief.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self-study, related charts and handouts
Unit 11: Family Planning	**Hrs. theory 14 Hrs. lab 3**
Sub-unit 11.1: Introduction of family planning	**Hrs. theory 2 Hrs. lab**
Objectives:	Content:
1. State the WHO definition of family planning (FP). 2. Describe the scope of family planning services. 3. Discuss the various rights of the client who seeks family planning counseling.	1. Definition of family planning and CPR. 2. Need, scope, and importance of family planning .

4. Explain individual and community health benefits of family planning. 5. Explain how family planning helps promote child-women's health.	
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts
Unit 11: Family Planning	**Hrs. theory 14 Hrs. lab 3**
Sub-unit 11.2: Classifications of contraceptive methods.	**Hrs. theory 2 Hrs. lab**
Objectives:	Content:
1. Explain the chief differences between the commonly used contraceptive methods 2. List examples of spacing and terminal methods. 3. Identify methods classified as clinical and non-clinical methods.	1. Classifications of contraceptive methods.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts
Unit 11: Family Planning	**Hrs. theory Hrs. lab**
Sub-unit 11.3: Condom and Foaming tablets and spermicides	**Hrs. theory 2 Hrs. lab**
Objectives:	Content:
1. List the different varieties of foaming tablets and spermicides available in Nepal. 2. Explain why these methods have limited effectiveness and can cause increased risk of sexually transmitted infections.	1. Condom , foaming tablets and spermicides as methods of contraception: limitations of effectiveness, increased risks, correct use
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts
Unit 11: Family Planning	**Hrs. theory Hrs. lab**
Sub-unit 11.4: Natural methods and coitus interruptus	**Hrs. theory 2 Hrs. lab**
Objectives:	Content:
1. State the aims, effectiveness, limitations and eligibility of natural family planning methods. 2. Describe how to determine the "safe period" for coitus when pregnancy is not wanted.	1. Common Natural family planning methods its effectiveness, advantage and dis advantage.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts
Unit 11: Family Planning	**Hrs. theory Hrs. lab**
Sub-unit 11.5: Hormonal contraceptives	**Hrs. theory 2 Hrs. lab**

Objectives:	Content:
1. Interpret the client screening checklist for hormonal methods recommended by National Reproductive Health Care Guideline. 1	a. Common hormonal contraceptive. b. Types, uses, safety, side effects.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study

Unit 11: Family Planning	**Hrs. theory Hrs. lab**
Sub-unit 11.6: Voluntary surgical contraception (VSC)	**Hrs. theory 2 Hrs. lab**
Objectives:	Content:
1. Describe the procedures of vasectomy, laparoscopy and minilap. 2. State the modes of action, effectiveness, eligibility, precautions and complications of each.	1. Vasectomy and tubectomy with Common methods of surgical contraception.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts role play, observation of sterilization procedures
Unit 11: Family Planning	**Hrs. theory Hrs. lab**
Sub-unit 11.7: Emergency contraception	**Hrs. theory 2 Hrs. lab**
Objectives:	Content:
1. Describe aims, types, eligibility, clinical procedure, client instructions and common side effects of emergency treatment with COCs and other hormonal methods. 2. Describe when IUD insertion may be used for emergency contraception. 3. Discuss how the current legal rulings regarding termination of unwanted pregnancy apply to the role of Health Post Incharge.	1. Definition of emergency contraception. 2. Common measure of emergency contraception.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts
Unit 12: Demography	**Hrs. theory 10 Hrs. lab 3**
Sub-unit 12.1: Introduction of Population Science	**Hrs. theory 2 Hrs. lab**
Objectives:	Content:
1. Define population science/demography. 2. List the names of demographic processes.	1. Definition, use and importance of population science. 2. Demographic processes Population composition:
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts

Unit 12: Demography	**Hrs. theory**	**Hrs. lab**
Sub-unit 12.2: Population distribution, population size	**Hrs. theory** **2**	**Hrs. lab**
Objectives:	Content:	
1. List principal measurements used in the study of population distribution. 2. Identify the current population distributions of Nepal. 3. Compare population growth between developed countries and Nepal.	1. Common measurements of population distribution and its size, 2. Comparative study of Nepalese and world Population distribution, and its size.	
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts	
Unit 12: Demography	**Hrs. theory**	**Hrs. lab**
Sub-unit 12.3: Population Growth	**Hrs. theory** **2**	**Hrs. lab**
Objectives:	Content:	
1. Discuss the concepts of positive and negative population growth. 2. Calculate annual population growth rate by- i) Rate of natural increase method ii) Balancing equation iii) Arithmetical progression or linear growth function, geometrical progression	1. Positive and negative aspects of population growth. 2. Calculation of annual population growth rate.	
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts	
Unit 12: Demography	**Hrs. theory**	**Hrs. lab**
Sub-unit 12.4: Effects of population overgrowth	**Hrs. theory** **2**	**Hrs. lab**
Objectives:	Content:	
1. Discuss what characteristics constitute a condition of over population. 2. List different categories of population growth rates (declining to explosive) 3. Describe in brief effects of population overgrowth on economy and per-capita income, health, education and environment.	1. Definitions and concepts of overpopulation 2. Classification of population growth rates. 3. Effects of population overgrowth on economy and per-capita income, health, education and environment..	
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts	
Unit 12: Demography	**Hrs. theory**	**Hrs. lab**
Sub-unit 12.5: Population education in community	**Hrs. theory** **2**	**Hrs. lab**
Objectives:	Content:	

1. Describe what is meant by "population education." 2. Describe the important components of population education for community people. 3. Describe in brief the scope of population education for different social settings.	1. Concepts, need and scope of population education. 2. Components of population education for community people.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self-study, charts
Unit 13: Communicable diseases	**Hrs. theory 16 Hrs. lab 8**
Sub-unit 13.1:Gastrointestinal disorders	**Hrs. theory 3 Hrs. lab**
1. Explain in detail about acute gastrointestinal diseases: diarrhea, enteritis, cholera.	1. Detail study about acute gastrointestinal diseases: diarrhea, enteritis, cholera
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Unit 13: Communicable diseases	**Hrs. theory Hrs. lab**
Sub-unit 13.2: Respiratory disorders	**Hrs. theory 3 Hrs. lab**
Objectives:	Content:
1. Explain detail of communicable respiratory illness including common cold, acute rhinitis, cervical adenitis, ARTI, tuberculosis, Covid-19	1. Detail study of communicable respiratory illness including common cold, acute rhinitis, cervical adenitis, ARTI, tuberculosis, Covid-19
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Unit 13: Communicable diseases	**Hrs. theory Hrs. lab**
Sub-unit 13.3: Infectious diseases - fever	**Hrs. theory 3 Hrs. lab**
1. Explain common infectious diseases including HIV/ AIDS, Hepatitis, Malaria, Filariasis, dengue fever,	1. Common infectious diseases including HIV/ AIDS, Hepatitis, Malaria, Filariasis, dengue fever,
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Unit 13: Communicable diseases	**Hrs. theory Hrs. lab**
Sub-unit 13.4: Infectious diseases – Measles, chickenpox and rubella	**Hrs. theory 3 Hrs. lab**
1. Explain about Measles, chickenpox and rubella.	1. Detail study about Measles, chickenpox and rubella.
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting

Unit 13: Communicable diseases	**Hrs. theory Hrs. lab**
Sub-unit 13.5: Skin disorders	**Hrs. theory 3 Hrs. lab**
1. Describe the etiologies, clinical features, and management of diaper rashes (napkin rash). 2. Discuss health education and family counseling to prevent the incidence and spread of contagious skin disorders.	1. Describe the etiology, diagnosis, clinical features and management of impetigo, eczema, scabies, lice, fungal dermatitis among children. 2. Prevention and management of child skin disorders.
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting

Unit 13: Communicable diseases	**Hrs. theory Hrs. lab**
Sub-unit 13.6: Helminthes infestations	**Hrs. theory 1 Hrs. lab**
1. Describe the incidence and etiologies of commonly occurring helminthes infestations.	1. Incidence, etiologies, diagnosis, treatment, complications and prevention of common helminthes infestations:
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Unit 14: Non-communicable diseases	**Hrs. theory 2 Hrs. lab 1**
Sub-unit 14.1: Nutritional disorders	**Hrs. theory 2 Hrs. lab**
Objectives:	Content:
1. Identify the common nutritional disorders of Nepali children. 2. Discuss the chief causes and malnutrition and anemia among Nepali	1. Incidence, causes and evidence of malnutrition among Nepali children. 2. Assessment of nutritional status 3. Disease related to malnutrition and their managements 4. Disease related to over nutrition.
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Unit 15: Basic Epidemiology	**Hrs. theory 12 Hrs. lab**
Sub-unit 15.1: Concepts of Disease	**Hrs. theory 8 Hrs. lab**
Objectives:	Content:
1. Define the term disease (simple concept of disease) and give examples. 2. Explain the concepts of disease causation. 3. Describe risk factors and risk groups. 4. Explain in brief the natural history of disease. 5. Describe epidemiological traid and its related factors.	1. Definition with example: infection and infectious disease, epidemic, endemic, sporadic, pandemic, exotic, opportunistic infection, source of infection, reservoir of infection, iatrogenic infection,rate, ratio andproportion, surveillance, control, eradication, elimination. 2. Concepts of disease causation, Epidemiological triad 3. Concept of risk factors and risks groups.
Evaluation methods: Written examination, Performance observation, oral test.	Teaching / Learning Activities: Demonstration and practice in handling of microscope.

Unit 15: Basic Epidemiology	**Hrs. theory Hrs. lab**
Sub-unit 15.2: Investigation and management of an epidemic	**Hrs. theory 4 Hrs. lab**
Objectives:	Content:
1. Describe the characteristic features of different types of infectious disease epidemics. 2. Describe in brief the steps/process of investigation and management of an infectious disease epidemic.	1. Characteristics of infectious disease epidemics. 2. Investigation and management of infectious disease epidemics.
Evaluation methods: Written examination, Performance observation, oral test	Teaching / Learning Activities: Demonstration and practice in handling of microscope
Unit 16: Chronic, Degenerative and life style diseases	**Hrs. theory: 6 Hrs. lab/practical 1**
Sub-unit 16.1: Common Non communicable diseases	**Hrs. theory 6 Hrs. lab/practical**
Objectives:	Content:
1. Discuss the morbidity and mortality rates of commonly prevalent non communicable diseases in Nepal. 2. State the general principles of non communicable disease control. 3. Define selected terms relating to the study of non communicable disease. 4. Discuss how to diagnose, treat and prevent prevalence of communicable diseases.	1. Introduction, epidemiology, Diagnosis, management and prevention of common non communicable diseases. Type 2 Diabetes, Hypertension, Coronary Artery Disease, Obesity, Chronic Obstructive Pulmonary Disease, Arthritis, Asthma Osteoporosis, Alzheimer's Disease Depression, Anxiety Disorders Stroke paralysis, Chronic Kidney Disease Chronic Liver Disease, Cardiovascular Disease
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Minimum standards: achieved at 40% accuracy (theory) and 60% accuracy (lab) by end of course.	
Unit 17:	**Hrs. theory: 5 Hrs. lab/practical 3**
Sub-unit 17.1: Common communicable diseases	**Hrs. theory 5 Hrs. lab/practical**
Objectives:	Content:
1. Discuss the morbidity and mortality rates of commonly prevalent communicable diseases in Nepal. 2. State the general principles of communicable disease control. 3. Define selected terms relating to the study of communicable disease. 4. Discuss how to diagnose, treat and prevent prevalence of communicable diseases.	1. Classify disease according to causative agents. 2. Diagnosis, management and prevention of common communicable diseases. Malaria,Kala-azar, Filariasis, Dengue fever, Enteric, fever, Dysentery (Amoebic & Bacillary), Cholera, Giardiasis, Brucellosis, Rabies, Food poisoning, Influenza, Swine flu (H1N1), SARS, Bird flu, Typhus fever, Worm infestations
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Minimum standards: achieved at 40% accuracy (theory) and 60% accuracy (lab) by end of course.	

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Reference Texts:

- Park, K. *Park's textbook of preventive and social medicine*. M/S Banarasidas Bhanot.
- Adhikari, R. K., & Krantz, M. E. *Child nutrition and health*. Health Learning Materials Center, Tribhuvan University, Institute of Medicine.
- Ghai, O. P., & Gupta, P. *Essential preventive medicine*. Vikas Publishing House.
- World Health Organization (WHO) & United Nations International Children's Emergency Fund (UNICEF). (1978). *Primary health care: Health for all* (Series #1).
- Shrestha, D. R.*Reproductive health: National and international perspectives*.
- Ministry of Health, Nepal.*National health policy*.

Acupuncture, Acupressure & Reflexology

Hours Theory: 70
Hours Practical: 105

Course Description:
This course is designed to provide students in brief about the history, definitions, philosophy, knowledge, skillsand practicesof Acupuncture & Chinese medicine. It is designed to make students understandbasic principles and effects of acupuncture, cupping, moxibustion, acupressure & reflexology. This course will help the students in diagnosing various diseases, selecting specific points & tools, treating and managing various disorders thru acupuncture, cupping, moxibustion, acupressure & reflexology.

Course Objective:
After completion of the course, students will be able to:

- Understand the principles and historical highlights of Acupuncture;
- Explain the concepts and theories behind the mechanism in which Acupuncture works, both traditional and modern
- 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;
- Describe basic and advanced tools used in Acupuncture, Acupressure;
- Be aware of the contraindications and dangers of Acupuncture, so as to avoid these in his/her professional practice;
- Diagnose common diseases and disorders using diagnostic techniques employed in Acupuncture, such as Tongue Diagnosis, Pulse Diagnosis, etc;
- Demonstrate skill in topographically locating meridians and Acupuncture, Acupressure& reflexology points on the human body;
- Perform Needling and other essential skills in delivering Acupuncture therapy to a patient;
- Plan, implement and evaluate Acupuncture, Acupressure& Reflexology sessions with expertise in his/her professional practice;

Reference books:

- Wang, L. G. *Clinical acupuncture and moxibustion.*
- Wang, L. G., & Hyodo, A. *Fundamentals of acupuncture and moxibustion*.
- Porkert, M., & Hempen, C. H.*Classical acupuncture: The standard textbook.* China Academy.
- Aggarwal, A. L.*Clinical practice of acupuncture*.
- Jayasurya, A.*Clinical acupuncture*.
- Vora, D. *Health in your hands*

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Course: Acupuncture, Acupressure & Reflexology.	
Unit 1: Basics & Principles of Acupuncture	**Hrs. theory: 3 Hrs. lab/practical: 0**
Sub-unit 1.1: Basics & Principles of Acupuncture	**Hrs. theory: 3 Hrs. lab/practical: 0**
Objectives:	**Content:**
1. Describe history of Acupuncture 2. Describe Principles, practice & basics of Acupuncture 3. Explain Theory of Zang Fu organs, Qi & pathogenic factors& pathogenesis of Acupuncture	1. History of acupuncture, Acupressureand Moxibustion 2. Theory of Yin and Yang in oriental Medicine and its application 3. The theory of the five elements 4. The pathological Changes of and their relationship of following organs • The heart • Pericardium • Lung • Spleen • Liver • Kidney 5. Classification of Qi according to its source, functions & distribution 6. Six exogenous Factors, their characteristics& pathogenicity • Wind • Cold • Summer Heat • Damp • Dryness • Fire (mild heat & heat) 7. Description of Abnormal Qi, Basic pathogenesis and Disharmony of yin & yang
Evaluation methods: written exam, viva	Teaching / Learning Activities / Resources: Classroom instruction, teacher led discussion, textbook, hand-outs

Unit 2: Meridians & Acupuncture Points	**Hrs. theory: 14 Hrs. lab/practical: 27**
Sub-unit 2.1: Meridians & Acupuncture Points	**Hrs. theory: 14 Hrs. lab/practical: 27**
Objectives:	**Content:**
1. Locate acupuncture, Acupressure& reflexologypoints 2. Demonstrate Measurement methods 3. Demonstrate the location of points 4. Describe, locate &identify the Acupuncture Acupressure & reflexologypoints of different Meridians	Location of Acupoints 1: Proportional measurement Proportional measurement of human body (heads, chest, abdomen, back, lateral side of chest, upper extremities, and lower extremities.) 2: Finger measurement • Middle finger measurement & its conversion in metric system. • Thumb measurement & its conversion in metric system. • Four finger measurements & its conversion in metric system. 3: Location of the points • Location of the points with proper measurement methods from twelve regular Meridian methods of puncture and regional anatomy. **The Meridian and thieri collateral's** Location of the major points in the following meridians 1: Lung Meridian (Lu) 2: Large intestine Meridian (LI) 3: Spleen Meridian (Sp) 4: Stomach Meridian (St) 5: Heart Meridian (H) 6: Small intestine meridian (SI) 7: Urinary bladder meridian (UB) 8: Kidney Meridian (K) 9: Triple warmer meridian (TW) 10: Pericardium (P) 11: Gall bladder meridian (GB) 12: Liver Meridian (Liv) 13: Governing vessel Meridian (GV) 14: Conceptional vessels Meridian (CV) 15: The extra-ordinary points
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos

Unit 3: Moxibustion	**Hrs. theory: 3 Hrs. lab/practical: 8**
Sub-unit 3.1: Identification, Collection, Processing& application of Moxa	**Hrs. theory: 3 Hrs. lab/practical: 8**
Objectives:	**Content:**
1. IdentifyMoxa 2. CollectMoxa 3. ProcessMoxa 4. ApplyMoxa	1. Identification moxa plant, Identification, Familiarization with the morphology, botanical name & characteristics of moxa plant. 2. Demonstration appropriate way of collecting moxa plant&appropriate season, parts of the plant to be collected & precautions to be taken. Techniques to transport themoxa 3. Prepare moxa stick for use 4. Use of moxa for treatment 5. Application & use of moxa Listing out the method of applying or using moxa Pointing out the precaution apply method Indication and contra indication
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 4: Method of Acupuncture, Moxibustion, Cupping & their Application	**Hrs. theory: 12 Hrs. lab/practical: 20**
Sub-unit 4.1: Method of Acupuncture, Moxibustion, Cupping & their Application	**Hrs. theory: 12 Hrs. lab/practical: 20**
Objectives:	**Content:**
1. Describe the structure of and specification of filiform Needle 2. Explain Precaution/ contraindication & management in acupuncture treatment. 3. Describe different kinds of needles & their use & cautions	1: Structure and specification of filiform Needle a Structure and specification of fill form needle b Angle and depth of insertion c Manipulation and arrival of Qi d Retaining and withdrawing the needle e Method and essential things for needling practice f Pointing out the preparation prior to treatment g Inspection of the instrument h Posture of the patient i Sterilization of needle & human body j Basic & comprehensive reinforcing & reducing Methods. 2: Precaution/ contraindication & management in acupuncture treatment. a Identificationof different types of needles

	b Identificationof three edge needle, describe indication, manipulation & precautions c Identificationof the cutaneous needle, indication, manipulation & precautions d Carrying out the intra dermal needle intradermal needling, describe indication, manipulation & precautions e Performing ear acupuncture, point-location, describe indication & techniques f Introducing& performing Electro acupuncture, describe techniques, indication, contraindications & precautions g Performing Scalp acupuncture, techniques, description of indication, contraindications & precautions h Identification the materials and function of moxibustion, introduce about Artemisia Vulgaris, Explaining properties, use, function, indication & contraindication i Introducing& performingMoxibustion process, &Identificationof indications, contraindications & precautions j Introduction, classification & performing cupping methods, techniques, indication, contraindications & precautions
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 5: Therapeutics of Acupuncture &Moxibustion	**Hrs. theory: 25 Hrs. lab/practical: 35**
Sub-unit 5.1: Therapeutics of Acupuncture &Moxibustion	**Hrs. theory: 25 Hrs. lab/practical: 35**
Objectives:	**Content:**
Therapeutics of Acupuncture &Moxibustion 1: Treat disease according to basic principles 2: Perform therapeutic method 3: Explain basic principle for prescription & selecting points 4: Apply on specific Points	Therapeutics of Acupuncture &Moxibustion 1: Treating disease according to basic principles a Yin & Yang & general principles. b Strengthening the body resistance & eliminating the pathogenic factors. c Distinguishing the primary from secondary. d Description the treatment of disease according to climatic & seasonal condition,

	geographical location & the individual conditions. 2: Performing therapeutic method a Explain reinforcing, reducing, warming, clearing, ascending & descending methods. 3: The basic principle for prescription & selecting points a Selection of the point from related meridian. b Selection of the point from several meridians. c Selection ofthe point from distant points d Selection ofthe point by symptomatic points. 4: Application on specific Points a The Specific points & the four extremities. b The specific on the head & trunk. The specific points for the following disorders. a Respiratory diseases • COPD, Chronic Bronchitis, Asthma, Hoarseness of voice b Digestive system diseases • Hiccups, APD, vomiting, Abdominal Pain, IBS, Constipation, abdominal distension, Hypochondriac pain, general Toothache c CNS diseases • Insomnia, Depression, Epilepsy, Melancholia, Headache & Migraine, Dizziness, Trigeminal Neuralgia & Facial pain, Bells Palsy, Wei syndrome, manic-depressive disorder, CerebroVascular Accidents - Stroke, Peripheral Neuropathy,Gullian Barre Syndrome, Transverse Mylitis, Multiple Sclerosis, Paralysis, (Plegia& Paresis), Aphasia d Cardio Vascular system • Palpitation, high blood pressure, low blood pressure e Locomotors system • Bi syndrome, Torticollis, Peri arthritis of shoulder, Cervical, Lumber pain & radiculopathy, TMJ, Spinal Pain, Arthritis, Musculoskeletal pain f Gynecological Disease

	• Irregular menstruation, Dysmenorrhea, Amenorrhea, Leucorrhoea, Premenopausal-postmenopausal syndromes, Infertility, Polycystic Ovarian disease g Urino genital system • impotence Incontinence, Nocturnal enuresis h ENT Disease • Tinnitus, Rhinitis, sinusitis, Myopia, Optic atrophy, pigmentosa. i Drug & other addictions disease • Drug addiction, Alcohol addiction, Smoking addiction
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 6: Acupressure	**Hrs. theory: 8 Hrs. lab/practical: 10**
Sub-unit 6.1: Acupressure	**Hrs. theory: 8 Hrs. lab/practical: 10**
Objectives:	**Content:**
Define, Introduce, Demonstrate and describe:techniques, indication, contraindications & precautions of acupressure	1. Definition of acupressure. 2. Description, introduction, principle, history, origin & development of acupressure 3. Manipulation of acupressure. 4. Application of acupressure. 5. Importance of acupressure. 6. Acupressure chart. 7. Physiological effects of acupressure 8. Techniques of acupressure 9. Indication, Therapeutic uses of acupressure 10. Contraindications of acupressure 11. Precautions during acupressure
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 7: Reflexology	**Hrs. theory: 5 Hrs. lab/practical: 5**
Sub-unit 7.1: Reflexology	**Hrs. theory: 5 Hrs. lab/practical: 5**
Objectives:	**Content:**
Define, Introduce, Demonstrate and describe :techniques, indication, contraindications & precautions of Reflexology	1. Definition of Reflexology. 2. Introduction, principle, history, origin & development of Reflexology 3. Manipulation of Reflexology. 4. Application of Reflexology.

	5. Importance of Reflexology. 6. Reflexology points & charts.. 7. Physiological effects of Reflexology 8. Techniques of Reflexology 9. Indication, Therapeutic uses of Reflexology 10. Contraindications of Reflexology 11. Precautions of Reflexology
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Minimum standards: achieved at 40% accuracy (theory) and 50% accuracy (Practical) by end of course.	

Health Care System, Health Management, Ethics and Jurisprudence

Hours Theory: 70
Hours Practical: 35

Course Description:
This course aims to familiarize students with the fundamental principles of management. This course also introduces the student to concepts about management of health care services, as it applies to the operations of a Yoga and Naturopathy health care center with a view to develop their understanding of health care system in Nepal, fundamental principles of management, National health policy and health programmes, Health Planning, health manpower in Nepal, health related organizations and agencies, organization Relation, health issues and professional practice. The student will acquire the necessary knowledge and skill to deal effectively with the diverse challenges and emerging concepts in health service management, Health care Evaluation, hospital Planning and Administration, principle of marketing. This course also provides knowledge on national and international professional ethics and Jurisprudences.

Course Objectives:
This course is devoted to impart both theoretical foundation and practical knowledge in Health care management. Up on the successful completion of the course the students will be able to:

1. Develop necessary foundation in management, especially in Health & Hospital Management (health care management).
2. Identify Different concept of health and health care delivery system in Nepal.
3. Organize simple Hospital organization & administration functions in the real setting.
4. State management principles and their application to the practice of Yoga and Naturopathy.
5. Describe issues of professional development and autonomy relevant to Yoga and Naturopathy.
6. Support the basis of accounting process of hospital and health management.
7. Prepare plan for various health projects and programs and implement the plan.
8. Plan and manage the various departments of a hospital.
9. Critically analyze the development plan of Nepal particularly heath Plans and national health policy.
10. Familiarize with the basic concepts and functions of Human Recourse Management in the context of Nepal.
11. Plan, formulate & implement various types of Health programs.
12. Identify current national and international health issues.
13. Evaluate hospital & health services in terms of quality, efficiency and equity.
14. Explain the goals and functions of the health related governmental organizations, nongovernmental organizations (NGO's), international non-governmental organizations (INGO's) and international agencies which serve in Nepal.
15. Understand professional ethics of Yoga and Naturopathy discipline.

Reference Books:

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- Francis, C. M. (2000). *Hospital administration*. Jaypee Brothers Medical Publishers (P) Ltd.
- Department of Health Services. *Annual reports of Department of Health Services*. Teku, Kathmandu.
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- Macaulay, M. *Principles of hospital planning and administration*. HMC.
- His Majesty's Government of Nepal (HMGN). (n.d.). *Health policy of Nepal*.
- Pant, P. R. *Principles of management*. Buddha Academic Enterprises.
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- Francis, C. M., & Souza, M. C. (2000). *Hospital administration*. Jaypee Brothers Medical Publishers (P) Ltd.
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- Geel, S. L. (2001). *Healthcare system & management: Healthcare policies & programmers* (Vol. 2). Deep & Deep Publications Pvt. Ltd.
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- Gupta, S., Kant, S., & Daave, P. K. (2000). *Hospital stores management*. Jaypee Brothers Medical Publishers (P) Ltd.

Course Contents:

Course: Health Care System, Management, Ethics and Jurisprudence	**Hrs. theory 80**	**Hrs. lab 40**
Unit 1: Principles of Health Care System.	**Hrs. theory 10**	**Hrs. lab**
Sub-unit 1.1: Concept of Health & Holistic Health.	**Hrs. theory 3**	**Hrs. lab**
Objectives:	Content:	
1. Compare the medical and wellness models of health andDiscuss the	1. Introduction, Concept of man & medicine, Dimensions of health, Concept of well-being and holistic health.	

changing concept of health and its dimensions. 2. Different theories of diseases	2. Germ theory of diseases, Theory of toxemia, Energy and Prana theory of health and disease.	
Unit 1: Principles of Health Care System	**Hrs. theory 10**	**Hrs. lab**
Sub-unit 1.2: Health Care	**Hrs. theory 2**	**Hrs. lab**
Objectives:	Content:	
1. To introduce student to the historic development, organization and characteristics of the health care delivery system 2. Explain different concept of health and health care delivery system.	1. Introduction, Characteristics and Level of health Care. 2. Health system and Health Care Systems 3. Health Care services and Health Care delivery 4. Health status & Health problems 5. Health Care Revolutions	
Unit 1: Principles of Health Care System.	**Hrs. theory 10**	**Hrs. lab**
Sub-unit 1.3: Determining of Health	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Critically appraise and evaluate the Indicators of health 2. Describe and discuss the dynamic aspect of health and its determining factors.	1. Determinants, Spectrum and Ecology of health. 2. Right to health. 3. Responsibility for health. 4. Introduction and Importance of Health Indicators 5. Classification and Characteristics of indicators 6. Health Development	
Unit 1: Principles of Health Care System.	**Hrs. theory 10**	**Hrs. lab**
Sub-unit 1.4: Primary Health Care	**Hrs. theory 2**	**Hrs. lab**
Objectives:	Content:	
1. Define the concept of Primary Health Care and explain the role of government in Primary Health Care. 2. Select and identify the PHC approach and risk factors of disease. 3. Describe at least one major government initiative to protect the public's health.	1. Introduction, Definition, Principles & elements of PHC 2. Alma – Ata Recommendation 3. Assessment of primary Health Care. 4. National strategy for health for all	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - “On Being in Charge,” classroom instruction	
Unit 1: Principles of Health Care System.	**Hrs. theory 10**	**Hrs. lab**
Sub-unit 1.5: Health care system in Nepal	**Hrs. theory 2**	**Hrs. lab**
Objectives:	Content:	
1. Define “health care system” and tell the purpose and characteristics of a health care system.	1. The definition, characteristics, and purpose of a health care system. 2. History of health system in Nepal.	

2. Describe the history of the development of health services in Nepal. 3. Describe allopathic and other alternative approaches to health care. 4. Identify situations when the most appropriate type of treatment might be ayurvedic care, homeopathic care, allopathic care, Naturopathic and Yogaic care or a combination of these.	3. Meaning & concept of Health system , Healthcare Vs medical care, Evolution of modern health system Models of Health systems 4. Health care approaches: • Ayurvedic • Homeopathic • Allopathic • Naturopathic and Yogaic. 5. Philosophy, origin, strengths and weaknesses of these health care approaches.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," classroom instruction	
Unit 2: Fundamentals of Health Management	**Hrs. theory 12**	**Hrs. lab**
Sub-unit 2.1: Introduction to Health Management	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Define management and health management 2. Differentiate between management & administration. 3. Describe the function of management.	1. The definitions of management & health management. 2. Principles of management. 3. Concepts of management versus administration. 4. Function of management in the Health Post context.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," - Instructor led discussion, reference study assignment	
Unit 2: Fundamentals of Health Management	**Hrs. theory 12**	**Hrs. lab**
Sub-unit 2.2: Planning of Health service	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Describe the process and purpose of planning. 2. Describe different types of planning. 3. Explain the planning cycle. 4. Describe the steps of planning. 5. Explain the health planning system in Nepal.	1. Definition of planning. 2. Types of planning. 3. Planning cycle (PIE cycle) 4. Planning steps. 5. Current health planning system of Nepal.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," classroom instruction	
Unit 2: Fundamentals of Health Management	**Hrs. theory 12**	**Hrs. lab**

Sub-unit 2.3: Organizing of Health Service	**Hrs. theory 2**	**Hrs. lab**
Objectives:	Content:	
1. Describe the process and purpose of organization. 2. Identify different types of health service organizations.	1. Definition of organization. 2. Types of organizations and their organograms. 3. Organograms of MoH, DoHS, PHCC, HP.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Classroom instruction, field visit	
Unit 2: Fundamentals of Health Management	**Hrs. theory 12**	**Hrs. lab**
Sub-unit 2.4: Principles of leadership	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Discuss the characteristics and advantages/disadvantages of each of the leadership styles: - autocratic - democratic - laissez faire 2. Explain why an autocratic leadership style has historically been most commonly used in Nepal. 3. Discuss ways that the Health centre incharge builds mutual respect and trust with the centre staff. 4. Describe characteristics and remedies for low motivation of workers. 5. Apply the theories of change to a situation of high absenteeism among staff. 6. Discuss the importance of having written policy for staff.	1. Characteristics, benefits and disadvantages of styles of leadership, circumstances when each style is most appropriate. 2. Relationship between chosen leadership styles and cultural history (feudalism, recent development of representative government) 3. Responsibility of the leader as role model; ways to demonstrate consistency, transparency, integrity and fairness. 4. Characteristics and remedies for low motivation of workers. 5. Principles of management by policy.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Classroom instruction, discussion, field visit	
Unit 2: Fundamentals of Health Management	**Hrs. theory 12**	**Hrs. lab**
Sub-unit 2.5: Staffing	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Define staffing and state the purpose of using a job description. 2. Identify the elements of a job description. 3. Identify the staffing patterns of different health institutions Nepal	1. Definition and purpose of staffing. 2. Essential elements of a job description. 3. Staffing patterns of a Primary Health Care Center and Health Post.	

Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Classroom instruction, field visit	
Unit 2: Fundamentals of Health Management	**Hrs. theory 12**	**Hrs. lab**
Sub-unit 2.6: Directing	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Describe the meaning and purpose of directing. 2. Mention the ways of directing.	1. Definition of directing. 2. Purpose of directing. 3. Ways of directing.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Classroom instruction, field visit	
Unit 2: Fundamentals of Health Management	**Hrs. theory 12**	**Hrs. lab**
Sub-unit 2.7: Supervision	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Describe the purpose and methods of supervision. 2. Explainthe quality of a good supervisor. 3. Describe the techniques of supervision. 4. Explain the purpose and tools of monitoring. 5. Describe the process of monitoring.	1. Supervision: definition, purpose, importance, techniques and tools 2. Quality of a good supervisor 3. Monitoring: definition, purpose, importance, process and tools	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge", Classroom instruction, field visit	
Unit 2: Fundamentals of Health Management	**Hrs. theory 12**	**Hrs. lab**
Sub-unit 2.8: Coordination	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Define coordination in terms of health management. 2. Identify different types of coordination. 3. Identify the techniques and processes of coordination. 4. Explain the types of coordination to be used at the health centre.	1. Definition of coordination. 2. Types of coordination - External and internal - Horizontal and vertical 3. Techniques and processes of coordination. 4. Selecting styles of coordination in health centre.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Classroom instruction, field visit	
Unit 2: Fundamentals of Health Management	**Hrs. theory 12**	**Hrs. lab**

Sub-unit 2.9: Disaster coordination	**Hrs. theory 2**	**Hrs. lab**
Objectives:	Content:	
1. Discuss historical events and potential for future disasters from these causes: earthquake, flooding, nuclear explosion. 2. Identify the health risks created by each of these disasters. 3. Describe the policies and procedures developed by the earthquake preparedness committee in Kathmandu. 4. Identify the major points of the national guidelines for disaster management. 5. Identify the civil organizations of a community for preserving community welfare in a disaster situation. 6. Describe the role of the centre Incharge in coordinating a disaster preparedness response.	1. Historical events and potential for future disasters from earthquakes, flooding and nuclear explosion. 2. Definition, concepts and types of disasters. 3. Risks to public health created by these disasters. 4. National activities for earthquake, landslide, wildfire storms. preparedness. 5. Disaster management cycle. 6. National guidelines for the management of major disasters. 7. Coordination of community resources and leadership responsibility for disaster management. 8. Structure and responsibility of District Disaster Coordination Committee 9. Composition, role and mobilization mechanism of Rapid response team in disaster preparedness and response activities.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Classroom instruction, field visit	
Unit 2: Fundamentals of Health Management	**Hrs. theory 18**	**Hrs. lab**
Sub-unit 2.10: Reporting	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Discuss the purpose of reporting. 2. Describe the qualities of an effective report. 3. Prepare a simulated report from a case example.	1. Definition and purpose of reporting. 2. Types of report 3. Characteristics of reporting: Complete, accurate, sequential, timely and understandable.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Classroom instruction, field visit	
Unit 3: Naturopathy Yoga Centre, fitness and spa Management	**Hrs. theory 16**	**Hrs. lab**
Sub-unit 3.1: Training	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. State the purpose and definition of training.	1. Definition of training. 2. Different types of training. 3. Training Need Assessment (TNA).	

2. Describe different types of training and tell the advantages and disadvantages of each. 3. Explain the process for assessing the need for training. 4. Describe planning, conduction & evaluation of the training program of subordinate & volunteers	4. Training plan, training conduction & training evaluation.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Classroom instruction, field visit	
Unit 3: Naturopathy Yoga Centre, fitness and spa Management	**Hrs. theory 16**	**Hrs. lab**
Sub-unit 3.2: Conduct staff meeting	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Identify the need for a meeting. 2. Describe planning and organizing for an effective meeting. 3. Tell how to decide what to include on a meeting agenda.	1. Importance of maintaining good communication through meetings. 2. Planning and organizing a meeting.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Samples of meeting minutes/invitation letters, practice writing minutes from a simulated meeting Classroom instruction, Demonstration / Practicum	
Unit 3: Naturopathy Yoga Centre, fitness and spa Management	**Hrs. theory 16**	**Hrs. lab**
Sub-unit 3.3: Financial Management	**Hrs. theory 2**	**Hrs. lab**
Objectives:	Content:	
1. Ensure planning, directing, organizing and controlling a capital resource 2. Serve in a support capacity to provide business owners with relevant information on the centre business operations. 3. To ensure optimum funds utilization. Once the funds are procured, they should be utilized in maximum possible way at least cost 4. To ensure safety on investment, i.e, funds should be invested in safe ventures so that adequate rate of return can be achieved.	1. Discuss the purpose and procedures for financial management. 2. Prepare an annual budget from a simulated example. 3. Demonstrate how to maintain records of income and expenditure. 4. Demonstrate how to prepare monthly / quarterly and annual financial Statements. 5. Budgeting: Definition and functions 6. Types of budgets (capital and recurrent) and characteristics of various budgets. 7. Components of budget sheet 8. Tools for financial management (Voucher, ledger, daybook, audit)	

5. Budgeting. And discuss the purpose for using a budget in health management. 6. Identify and compare different types of budgets. And discuss the components of budget sheet.		
Unit 3: Naturopathy Yoga Centre, fitness and spa Management	**Hrs. theory 16**	**Hrs. lab**
Sub-unit 3.4: Leave Management	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Procedure of leave and maintaining the records 2. Proper format of leave letter. 3. Managing the staff in absence of co staff in operating the treatment.	1. Identify different types of employee leaves. 2. Describe the procedure for making a request for leave. 3. Demonstrate how to maintain records of staff leave. 4. Discuss the reasoning used before giving approval of staff leave.	
Unit 3: Naturopathy Yoga Centre, fitness and spa Management	**Hrs. theory 16**	**Hrs. lab**
Sub-unit 3.5: Logistic Management	**Hrs. theory 2**	**Hrs. lab**
Objectives:	Content:	
1. Explain the purpose of logistics management. 1. Describe the Logistic Management Information System (LMIS) practice in Nepal. 2. Describe the "six rights" of logistic management. 3. Explain logistic cycle. 4. Describe the procedure for using the various records and forms of the LMIS.	1. Definition and function of logistic management. 2. Components and procedures of Nepal's LMIS. 3. Six" rights of logistic management. 4. Logistic cycle (Serving customer, product selection forecasting and procurement and inventory management). 5. Procedures for LMIS forms and records use (Auditor General Form (AGF)# 45, 46, 47, 48, 49, 50, 51, 52 & 57).	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Classroom instruction, group discussion, Resources: booklets for process of filling logistics related forms, actual logistic forms.	
Unit 3: Naturopathy Yoga Centre, fitness and spa Management	**Hrs. theory 16**	**Hrs. lab**
Sub-unit 3.6: Health Care Inventory Management	**Hrs. theory 2**	**Hrs. lab**
Objectives:	Content:	
1. Introduction of Material Management 2. Describe the purpose and process of physical inventory.	1. Concept, Function and Objectives of material Management, Material cycle,Elements of Material Management system 2. Inventory goals and procedures.	

3. Differentiate between expendable and non-expendable goods. 4. Define storage and store standard. 5. Describe the procedure for Cold Chain storage of medical supplies. 6. Discuss the essential data of logistics information. 7. Describe the process of calculating and demanding items, for both regular and emergency needs. 8. Describe the process of distributing commodities.	3. Classifications of materials. 4. Specialized storage treatment for vaccines, essential drugs, contraceptives, equipment/instruments. 5. Essential data concepts: a. Maximum/minimum stock levels b. Authorized stock level and emergency order point c. Lead time stocking d. Losses/adjustments 6. Managements of Hospital use non-Consumables and Consumables 7. Hazardous/ Mom Hazards 8. Equipment Management: a Purchase of Equipments, Instruments, Tools & Accessories b Preventive Maintenance and Corrective Maintenance.	
Examination methods: written exams (short answer questions	Teaching / Learning Activities: Classroom instruction, discussion, Acts and Regulations related to financial and administrative matters.	
Unit 3: Naturopathy Yoga Centre, fitness and spa Management	**Hrs. theory 16**	**Hrs. lab**
Sub-unit 3.7: Performance Evaluations of Staff.	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Discuss the purposes and benefits of regular staff performance evaluations. 2. Develop a staff performance evaluation checklist based on the job description. 3. Role-play ways to counsel the staff, which has poor job performance.	1. Explain the importance of writing a clear and complete staff job description. 2. Develop staff job descriptions for a simulated example. 3. Describe how to effectively give a job assignment. 4. Identify indicators of a good job performance.	
Unit 3: Naturopathy Yoga Centre, fitness and spa Management	**Hrs. theory 16**	**Hrs. lab**
Sub-unit 3.8: Quality assurance	**Hrs. theory 4**	**Hrs. lab**
Objectives:	Content:	
1. Compare different definitions of quality health care. 2. Identify reasons for using the quality assurance (QA) program. 3. Identify the chief characteristics of a quality assurance program. 4. Define the term “standards” and give examples of health care standards.	1. Components and concepts of quality health care. 2. Rationale for quality assurance implementation. 3. Characteristics of quality at the centre: a. technical competence b. effective service c. efficient service	

<table>
<tr><td>5. List the ways that standards help to close the gap between actual performance and desired outcomes.
6. Give examples of ways to reduce the costs caused by poor quality health care.
7. Give examples of ways to improve patient satisfaction with services.
8. List the 4 “focus areas” of quality assurance principles.
9. Explain why the process of quality assurance is viewed as a cycle.
10. Use the methods and principles of QA to identify and plan a solution to a real health care problem.</td><td>d. accessible site
e. good interpersonal relationships
f. continuity of services
g. safe environment
h. pleasant environment
i. team approach
4. Using standards to improve service:
a. Write standards (performance rules/measurements) for quality health care.
b. Communicate these standards to all workers.
c. Plan ways to regularly check if standards are being met.
d. Identify and solve the problems that interfere with “high standard quality.”
5. The focus of quality assurance principles:
a. Focus on patient/staff needs
b. Focus on <u>how</u> things are done (process/systems) – do not blame the individual.
c. Focus on facts (don’t make assumptions or guesses).
d. Focus on team approach to problem solving.
6. The cycle of quality improvement.</td></tr>
<tr><td>Examination methods: written exams (short answer questions)</td><td>Teaching / Learning Activities: textbook self-study - “On Being in Charge,” Classroom instruction, group discussion, practice exercises.</td></tr>
<tr><td>Unit 3: Naturopathy Yoga Centre, fitness and spa Management</td><td>Hrs. theory 16</td><td>Hrs. lab</td></tr>
<tr><td>Sub-unit 3.9: Time and Space Management</td><td>Hrs. theory 1</td><td>Hrs. lab</td></tr>
<tr><td>Objectives:</td><td>Content:</td></tr>
<tr><td>1. Describe how to compute staff work load.
2. Describe ways to arranging space as per activities.
3. Prepare a timetable of health unit activities.
- Weekly
- Monthly
- Quarterly
- Yearly</td><td>1. Concept of time management.
2. Tools of time management with example.
3. Discuss how to assess workspace required for various units of Yoga and Naturopathy activities.
4. Demonstrate how to arrange a flow chart of each activity.</td></tr>
</table>

Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Classroom instruction, Practicum, visit institution, Classroom practice.	
Unit 3: Naturopathy Yoga Centre, fitness and spa Management	**Hrs. theory 16**	**Hrs. lab**
Sub-unit 3.10: Letter writing	**Hrs. theory 1**	**Hrs. lab**
Objectives:	Content:	
1. Identify different types of letters and discuss the purposes of each. 2. Able to write the standard letter.	1. Types of letter. 2. Identify the good and poor attributes of a letter. 3. Write selected official letters based on a simulated example.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self-study - "On Being in Charge," Classroom instruction, Practicum, visit institution, Classroom practice.	
Unit: 4 Health related organization	**Hrs. theory 2**	**Hrs. lab**
Sub-unit 4.1: International Non-Governmental Organizations (INGO's) and National Non-Governmental Organizations (NGO's)	**Hrs. theory 2**	**Hrs. lab**
Objectives:	Content:	
1. Mention the names of multilateral, bilateral, INGOs and NGOs activating in the health sector of Nepal 2. Identify their roles in promotion of the health care system.	1. Identify the activities and goals of INGO and NGO working in health sectors. 2. Concept of NGOs, INGOs, Bilateral and Multilateral organization.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Classroom instruction, filed visit to concerned organization	
Unit 5: National Health Policy and Health Programs	**Hrs. theory 7**	**Hrs. lab**
Sub-unit 5.1: National Health Policy and Plan	**Hrs. theory 2**	**Hrs. lab**
Objectives:	Content:	
1. Describe the components of National Health Policy 2070 and describe the current periodic plan. 2. Describe health profile of Nepal according to the latest Nepal Demographic and Health Survey.	1. National Health Policy 2070 (Objective, targets and components). 2. Current periodic (three/five-year) plan (targets and area covered). 3. Health strategy, formulation, approval & implementation, Acts (Rules, Procedures in Health Care; formulation approval & implementation.) 4. Health profile of Nepal according to the latest Nepal Demographic and Health Survey	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Classroom instruction, field visit, annual report of DOHS	

Unit 5: National Health Policy and Health Programs	**Hrs. theory 7**	**Hrs. lab**
Sub-unit 5.2: Priority Health Programmes	**Hrs. theory 5**	**Hrs. lab**
Objectives:	Content:	
1. Identify the objectives, targets and activities of national health programmes. 2. Details of Nutrition program, programme on immunization.	1. Objectives, targets and activities (to be carried out at health post level) of National health programs including: a. Definition & Classification of Nutrition, Nutritional problem of Children and adult b. Expanded Programme on Immunization - Introduction, Objective and strategies - Indicators, activates and problem and constraints - Six major killer disease and hepatitis B - Vaccine available in Nepal - Immunization, Schedule and cols chain c. Family Health Program - Safe Motherhood - Family Planning - Adolescent Sexual and Reproductive Health (ASRH) d. Disease Control - Malaria - Kalaazar - Dengue - Tuberculosis - HIV/AIDS e. Supportive Programs - National Health Education, Information and communication(NHEICC) 2. Introduction of FCHV and PHC/ORC (Primary Health Care/Outreach Clinic) program	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Text book self-study "On being in charge," classroom instruction, field visit to selected divisions of D.H.S., DOHS annual report, National Planning System in Health Section.	
Unit 6: Health Issues and Professional Practice	**Hrs. theory 5**	**Hrs. lab**
Sub-unit 6.1: Entrepreneurship	**Hrs. theory 3**	**Hrs. lab**
Objectives:	Content:	
1. Discuss the concept of entrepreneurship. 2. Discuss how the community and Health centre might benefit if the in -	1. Goals and process of small business establishment and management. 2. Complimentary goals of small business and community welfare.	

charge began a private profit making business in addition to his role as Yoga and naturopathy centre incharge. 3. List types of businesses Yoga and naturopathy centre incharge might operate. 4. Identify the potential opportunities for unethical actions to occur when the Yoga and naturopathy centre incharge works simultaneously at two jobs. 5. Discuss ways to prevent unethical occurrences by the Yoga and naturopathy centre incharge /entrepreneur.	3. Business opportunities which meet community needs. 4. Ethical considerations of entrepreneurship and Yoga and naturopathy centre incharge role. 5. Principles for moral examination to avoid conflict of interest situations
Examination methods: written exams (short answer questions) need to discuss few issues.	Teaching / Learning Activities: textbook self-study - "On Being in Charge", Classroom instruction, field visit
Unit 6: Health Issues and Professional Practice	**Hrs. theory 5** **Hrs. lab**
Sub-Unit 6.2: Professional Councils	**Hrs. theory 2** **Hrs. lab**
Objectives:	Contents
Students will be able to: 1 List the professional council in health sector 2 Mention the role of NHPC 3 Explain the function of NHPC	1. List different professional councils in health sector 2. Establishment and Formation of NHPC 3. Explain the objectives, role and function of NHPC 4. Describe professional ethics and Code of conduct of a Yoga & Naturopaths.
Unit 7: Ethics	**Hrs. theory 4** **Hrs. lab**
Sub-unit 7.1: Ethics	**Hrs. theory 4** **Hrs. lab**
Objectives:	Content:
1. Achieve familiarity with some basic ethical frameworks and understand how these ethical frameworks can help us think through contemporary questions in medical ethics. 2. Think clearly and carefully through your own positions on important issues in contemporary medical ethics and the compatibility of these positions with broader philosophical commitments (i.e.what is a person, what rights do	1. Explain Legal & Ethical aspects of Healthcare. 2. Explain ethics and professionalism, including Yoga and Naturopathy, code of ethics of Nepal Health Professions Council. 3. Describe duties and responsibilities of a Yoga and Naturopathy, professional at different level of health care delivery system. 4. Doctor-Patient Relationship Confidentiality and Disclosure in the Physician-Patient Relationship,

persons have, what constitutes human flourishing etc.) 3. Express your own views clearly in class discussion and engage the views of you Classmates	5. Autonomy, Paternalism & Informed Consent, Euthanasia, Medical Experimentation	
Unit 8: Jurisprudence	**Hrs. theory 10**	**Hrs. lab**
Sub-unit 8.1: Jurisprudence	**Hrs. theory 10**	**Hrs. lab**
Objectives:	Content:	
1. Providing students with knowledge and understanding of physicians' legal obligations sufficient to enable legally effective medical practice with minimum legal risk. 2. Enabling students to appreciate the intellectual satisfaction of discussion within health law and that "legal reasoning and critical reflection are natural and integral components in their clinical decision making and practice 3. Specifying, discussing, and applying the significant issues in health care law 4. Recognizing legal issues and increase confidence in clinical decision making. 5. National/International Authorities in Naturopathy and Yogaic Practices.	1. Introduction and Classification of Laws 2. Right(Legal Rights, Human Rights, Patient Rights) 3. Iatrogenic problems, Procedure errors during treatments. 4. Liability of Health Care Professionals 5. Licensing, Patient Safety Accidents caused in centre 6. Malpractice & quackery, Fraud & Crimes and Compensation cases 7. Sexual crimes & harassments caused by professionals 8. Nepal Health Professional Council, Australian Naturopathic association, American Naturopathic association, AYUSH India, world Yoga alliance World Health Organization.	
Practical Tasks: Students will perform at least following performance in class room settings.	**Hrs Practical 35 hrs.**	
1 Conduct meeting and write a minute in simulative situation 2 Write an official letter (invitation, demand for commodity, leave and submission letter). 3 Prepare a duty roster 4 Prepare a weekly/monthly report. 5 Prepare the tools for supervision, 6 Prepare a monitoring tool 7 Prepare a evaluation tool 8 Demonstrate journal voucher 9 Prepare simple budget sheet 10 Prepare a sample job description 11 Make a goods register(JinsiKhata)		

12 Formation of Health Facility Operation and Management Committee. 13 Leave and process of having leave at centre. -	

THIRD YEAR

Clinical Naturopathy

Hours Theory: 120
Hours Practical: 80

Course Description:

This course introduces the student to provide them with the comprehensive knowledge ofEtiology, Incidence, Pathophysiologyits sign & symptoms, stages andgrading, types, risk factors andnatural treatments of commonproblems in clinical settings. At the completion of training, thestudent shouldbe able to integrate knowledge ofNatural medicine to manage related ailmentsand educate the people forpreventing, treating and rehabilitating the diseases aswell aspromoting the positive health.

Course Objectives

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

- Understand the basic principle of history taking and clinical examinations.
- Understand the various manifestations of non-communicable chronic and degenerative diseases. Perform through physical examination.
- Understand Etiology, Incidence, pathophysiology, sign & symptoms, stages and grading, types, risk factors &natural treatment of undermentioned diseases:
- Correlate the clinical symptoms and physical sign to make a provisional, anatomical physiological and etio-pathological diagnosis along with the functional disability and to suggest relevant intervention.
- Interpret reasonably the relevant investigations.
- Professionally present and discuss the principle involved in the management of the patient's problems including immediate short term and long intervention policies.
- Recognize complications of various diseases and provide appropriate care and referral if needed.
- Make the outline of the treatment protocol for individual diseases.

Reference books

- Pizzorno, J. E., & Murray, M. T. (n.d.). *Textbook of natural medicine* (4th ed.
- Wardle, J., & Sarris, J. (n.d.). *Clinical naturopathy: An evidence-based guide to practice.*
- Pizzorno, J. E., & Murray, M. T. (n.d.). *Encyclopedia of natural medicine.*
- Hechtman, L. (n.d.). *Clinical naturopathic medicine*.
- Pizzorno Jr., J. E. (n.d.). *The clinician's handbook of natural medicine*.
- Cott, A. (n.d.). *Fasting: The ultimate diet*.

Course: Clinical Naturopathy	**Hrs. theory 120 Hrs. lab/practical 80**
Unit 1: Philosophy of Natural medicine	**Hrs. theory 26 Hrs. lab/practical**
Objectives:	Content:
1. Define Natural medicine and explain how the science of Natural medicine developed 2. Explain the importance of natural medicine in modern era. 3. Describe about medical ethic and ethical practice 4. Explain the principle of prevention of disease and role of Natural medicine for prevention of diseases 5. Explain the principle of unity of disease and unity of cure on the basis ofmorbid matter theory and vitalism. 6. Explain about the importance of Naturopathy assistant and patient relationship and how to develop it. 7. Define Placebo and role in effective treatment 8. Explain the importance of positive mental attitude and how to develop it.	1. Natural medicine – Definition, and its brief history 2. Natural medicine & its modern application 3. The art & science of natural medicine 4. Medical ethics and esthetic practice 5. Principles of prevention of disease 6. Theory of morbid matter 7. Unity of disease & Unity of cure 8. Vitalism Versus mechanism 9. Naturopathy assistant and patients relationship 10. Placebo – definition and significancr 11. Positive mental attitude
Evaluation methods: written exam, viva, performance observation in clinical setting	**Teaching / Learning Activities / Resources:** classroom instruction, practice in a simulated setting, supervised clinical practice
Unit 2: Approaches to the patients	**Hrs. theory: 10 Hrs. lab/practical 10**
Objectives:	Content:
1. Establish trust with the client/family by making introductions, showing respect, listening attentively, and remaining non-judgmental. 2. Perform detail history taking to find out the root cause. 3. Perform thorough clinical (Physical and Psychological) examination. 4. Explain why it is essential to ask about and examine all systems of the subject, rather than only the system. 5. Use a diagnostic decision diagram to develop a provisional diagnosis. 6. Explain the purpose of investigations in differentiating diagnosis. 7. Discuss the meaning and implication of “false positive” and “false negative” findings.	1. Understanding the history of present illness 2. The art of history taking 3. Physical & psychological examination 4. Clinical diagnostic reasoning 5. Laboratory investigation 6. Identification of root causes 7. Assessment and enlisting the risk factors 8. Diagnostic decision making in naturopathy 9. Provisional diagnosis 10. Differential diagnosis 11. Final diagnosis 12. Treatment plan 13. Education to patients 14. Use of Stethoscope, Sphygmomanometer, Tuning-fork, Hammer while performing general physical examination.

8. Explanation regarding instruments and apparatus (Stethoscope, Sphygmomanometer, Tuning-fork, Hammer) used while performing general physical Examination. 9. Explain the importance of educating patient regarding root cause, risk factor and treatment plan. 10. Perform a minimum of 10 history taking and physical examinations with provisional diagnosis and case management details.	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 3: Principles of treatment	**Hrs. theory 5 Hrs. lab/practical**
Objectives:	Content:
1 Explain Naturopathic treatment approach and the rationale behind it. 2 Explain importance of each treatment approach and specific life style modification / intervention. 3 Explain the importance of elimination root cause rather than symptoms of diseases. 4 Explain in detail about each component of life style intervention – Dietary modification, Exercise, rest, stress management and behavior modification. 5 Describe the importance of positive mental attitude for the effective treatment.	1. Elimination of root cause 2. Modifying the risk factors 3. Alleviation of symptom and suffering through natural modalities 4. Life style intervention 5. Dietary modification according to disease 6. Exercise 7. Induction of Rest, relaxation and alter state of consciousness 8. Physical and mental stress management 9. Personalities and behavioral modification 10. Inducing positive mental attitude. 11. Elimination of morbid matters 12. Increasing Vitality
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 4: Cardiovascular Conditions	**Hrs. theory 6 Hrs. lab/practical 5**
Sub-unit 4.1: Hemostatic& atherosclerotic disorders	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Describe the incidence and pathology of common hemostatic disorders and atherosclerotic occlusive disorders. 2. Describe major modifiable risk factors and non-modifiable risk factors for heart diseases. 3. Describe the clinical features and differential diagnosis. 4. Discuss the treatment and complications of hemostatic disorders and atherosclerotic occlusive disorders.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and indication of referral of hemostatic disorders and atherosclerotic occlusive disorders. 2. Integrated comprehensive natural treatments for prevention and control of hemostatic disorders and atherosclerotic occlusive disorders. a Natural diet and nutrition b Yoga and Exercise therapy

5. Identify indications for referral to a higher level facility. 6. Ask the student to make treatment plane and life style modification plan and discuss in class.	c Massage therapy d Hydrotherapy e Fasting therapy f Herbal g Other natural therapies h Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 4: Hematological & Cardiovascular Conditions	**Hrs. theory 6 Hrs. lab/practical 5**
Sub-unit 4.2: Cardiovascular disorders – Hypertension	**Hrs. theory 3 Hrs. lab/practical 3**
Objectives:	Content:
1. Define hypertension, tell the cardinal signs, and explain the different classifications. 2. Discuss the incidence of hypertension and complications of untreated hypertension. 3. Identify the etiologies and clinical features of common forms of hypertension. 4. Identify investigations necessary for differential diagnosis. 5. Able to measure Blood pressure. 6. Discuss Natural treatment of hypertension and life style management. 7. Explain the role of life style & Yoga in prevention and control of hypertension. 8. Identify indications for referral. 9. Ask the student make treatment plan and discuss in classroom.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, hypertensive emergency management and referral indications. 2. Measurement of the blood pressure in mid- upper arm and interpretation. 3. Integrated comprehensive natural treatments for prevention and control a Natural diet and nutrition b Yoga and Exercise therapy c Massage therapy d Hydrotherapy e Fasting therapy f Herbal g Acupuncture h Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 5: Respiratory Disorders	**Hrs. theory 6 Hrs. lab/practical 5**
Sub-unit 5.1: Sinusitis, Nasal polyp, Allergic rhinitis, Deviated nasal septum	**Hrs. theory 2 Hrs. practical 2**
Objectives:	Content:
1. Define Sinusitis and nasal polyp and discuss the incidence. 2. Identify the etiologies, pathology and clinical features. 3. Discuss about the complication if not treated. 4. Explain role of environmental and life style modification for prevention.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, natural and life style management of Sinusitis and Nasal polyp and referral indications. 2. Integrated comprehensive natural treatments for prevention and control a Hydrotherapy – Jalaneti b Yoga - Pranayam

5. Ask the student make treatment plan and discuss in classroom.	c Acupuncture d Massage therapy e Herbal therapy f Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 5: Respiratory Disorders	**Hrs. theory 6 Hrs. lab/practical 5**
Sub-unit 5.2:Asthma	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Define bronchial /allergic asthma and tell the cardinal signs. 2. Identify the etiology, pathology and clinical features of bronchial /allergic asthma. 3. Discuss the relationship between extrinsic and intrinsic asthma. 4. Identify the investigations necessary for differential diagnosis. 5. List complications of asthma. 6. Identify indications for referral. 7. Role of natural treatments and life style to prevention of bronchial asthma. 8. Ask the student make treatment plan and discuss in classroom.	1. Definition, etiology, pathology, clinical features, differential diagnosis, diagnosis, complication, & natural management of bronchial/ allergic asthma and indication of referral. 2. Integrated comprehensive natural treatments for prevention and control a Hydrotherapy – Jalaneti, Kunjal, Steam Bath and steam inhalation b Yoga –Kriyas and Pranayam c Natural diet and nutrition d Massage therapy e Herbal f Acupuncture g Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 5: Respiratory Disorders	**Hrs. theory 6 Hrs. lab/practical 5**
Sub-unit 5.3: Obstructive sleep apnea	**Hrs. theory 1 Hrs. lab/practical 1**
Objectives:	Content:
1. Define obstructive sleep apnea. 2. State the etiology, pathology, cardinal signs and clinical features of obstructive sleep apnea. 3. Identify the investigations necessary for differential diagnosis. 4. Describe complications of obstructive sleep apnea. 5. Role of natural treatments and life style to prevention. 6. Ask the student make treatment plan and discuss in classroom.	1. Definition, etiology, pathology, clinical features, diagnosis, investigation, complications, referral indications natural management and prevention of obstructive sleep apnea. 2. Integrated comprehensive natural treatments for prevention and control. a Hydrotherapy – Kunjal b Yoga – Asana, Pranayam c Natural diet and nutrition d Massage therapy e Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 6: Gastrointestinal Disorders	**Hrs. theory: 9 Hrs. lab/practical 8**

Sub-unit 6.1: Gastritis, Reflux Esophagitis and Peptic Ulcer Diseases	**Hrs. theory: 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Define peptic ulcer (PUD) diseases and discuss the incidence. 2. Distinguish between gastritis, gastric ulcer, duodenal ulcer and esophageal ulcer. 3. Identify the etiologies, pathology, cardinal signs and clinical features of PUD. 4. Explain the relationship of Food habits and Helicobacter pylori to peptic ulcers. 5. Identify investigations necessary for differential diagnosis. 6. Describe integrated comprehensive and natural treatments for PUD. 7. Identify complications of untreated PUD. 8. Role of natural treatments and life style to prevention. 9. Ask the student make treatment plan and discuss in classroom.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and indication of referral. 2. Integrated comprehensive natural treatments for prevention and control a Hydrotherapy – Kunjal, Enema, Hip Bath, Cold packs b Yoga – Asana ,Pranayam c Natural diet and nutrition d Fasting therapy e Massage therapy f Herbal g Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 6: Gastrointestinal Disorders	**Hrs. theory 9 Hrs. lab/practical 8**
Sub-unit 6.2: Constipation, Piles, Colitis and Irritable Bowel Syndrome	**Hrs. theory 3 Hrs. lab/practical 3**
Objectives:	Content:
1. Define Constipation, piles, colitis and Irritable bowel syndrome. 2. Discuss the causes of Constipation, piles, colitis and Irritable bowel syndrome. 3. Explain the natural management Constipation, piles, colitis and Irritable bowel syndrome. 4. Discuss the importance of fiber diet and dietary modification. 5. Explain the food habits to prevent Constipation, piles, colitis and Irritable bowel syndrome. 6. Discuss complication of Constipation, piles, colitis and Irritable bowel syndrome. 7. Ask the student make treatment plan and discuss in classroom. 8. Role of natural treatments and life style to prevention.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referralindications. 2. Integrated comprehensive natural treatments for prevention and control a Hydrotherapy – Kunjal, Enema, Hip Bath, Packs b Yoga –Asana, Pranayam c Natural diet and nutrition d Fasting therapy e Massage therapy f Herbal g life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 6: Gastrointestinal Disorders	**Hrs. theory 9 Hrs. lab/practical 8**

Sub-unit 6.3: Dysphagia, Dyspepsia and Indigestion	**Hrs. theory 3 Hrs. lab/practical 3**
Objectives:	Content:
1. Describe the condition and cardinal signs of Dysphagia, Dyspepsia and Indigestion 2. Identify the aetiology and pathology and clinical features of Dysphagia, Dyspepsia and Indigestion 3. Identify investigations necessary for differential diagnosis. 4. Role of natural treatments and life style to prevention. 5. Ask the student make treatment plan and discuss in classroom.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referralindications 2. Integrated comprehensive natural treatments for prevention and control a Hydrotherapy – Kunjal, Enema, Hip Bath, Cold packs b Yoga – Asana ,Pranayam c Natural diet and nutrition d Fasting therapy e Massage therapy f Herbal g Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice.
Unit 7: Endocrine and Metabolic Disorders	**Hrs. theory: 8 Hrs. practical: 7**
Sub-unit 7.1: Type 1 & 2 Diabetes Mellitus	**Hrs. theory 3 Hrs. practical 3**
Objectives:	Content:
1. Identify the cardinal signs for type 1 and type 2 diabetes mellitus. 2. Describe the patho-physiology of diabetes mellitus. 3. Differentiate between type 1 and type 2 diabetes. 4. Explain the production and action of insulin. 5. Identify the signs and symptoms of each type of diabetes mellitus. 6. Discuss the incidence and contributing factors for type 1 & 2 diabetes mellitus in Nepal. 7. Describe the health consequences of chronic hyperglycemia. 8. Explain the health teaching points for a diabetic patient including the role of diet & exercises in preventing and controlling diabetes. 9. Describe the signs and symptoms of ketoacidosis. 10. Explain complications of diabetes mellitus. 11. Role of natural treatments and life style to prevention.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications 2. Pharmacologic effects of oral/insulin hypoglycemic medicines 3. Methods for assessing hyperglycemia 4. Treatment for ketoacidosis and hypoglycemia 5. Preventive health care for diabetics 6. Demonstrate the blood glucose level of diabetic subjects. 7. Drugs used in diabetes, their contraindications and side effects. 8. Integrated comprehensive natural treatments for prevention and control a Hydrotherapy – Hip Bath, Foot bath, Steam Bath, Cold packs b Yoga and exercise c Natural diet and nutrition d Massage therapy e Herbal f Life style modification.

12. Ask the student make treatment plan and discuss in classroom.	
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 7: Endocrine and metabolic Disorders	**Hrs. theory 8 Hrs. lab/practical 7**
Sub-unit 7.2: Thyroid disorders	**Hrs. theory 2 Hrs. lab/practical 2**
Objectives:	Content:
1. Discuss the incidence and causes of hypo- and hyper-thyroidism in Nepal. 2. Identify the cardinal signs and clinical features of each of these disorders. 3. Describe the management and complications of hypo and hyper-thyroidism. 4. Identify health education programs for the prevention of thyroid disorder. 5. Ask the student make treatment plan and discuss in classroom. 6. Role of natural treatments and life style to prevention.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications of hypo- and hyper-thyroidism. 2. Integrated comprehensive natural treatments for prevention and control. a Hydrotherapy b Yoga and exercise c Natural diet and nutrition d Massage therapy e Herbal f Life style modification.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 7: Endocrine and metabolic Disorders	**Hrs. theory: 8 Hrs. lab/practical: 7**
Sub-unit 7.3 Obesity	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Describe the about the types of fat cells. 2. Describe the pathophysiology of obesity and different types of obesity. 3. Identify complications of obesity. 4. Ask the student make treatment plan and discuss in classroom. 7. Role of natural treatments and life style to prevention.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Correlate obesity with hypertension, diabetes and other health problems. 3. Integrated comprehensive natural treatments for prevention and control. a Hydrotherapy b Yoga and exercise c Natural diet and nutrition d Fasting therapy e Massage therapy f Herbal g Life style modification.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 8: Disorders of Nervous System	**Hrs. theory: 19 Hrs. lab/practical: 16**
Sub-unit 8.1: Bell's Palsy	**Hrs. theory 1 Hrs. lab/practical 1**

Objectives:	Content:
1. Explain the cause, pathology and clinical features of Bell's Palsy 2. Describe the investigations and differential diagnosis of Bell's Palsy 3. Ask the student make treatment plan and discuss in classroom. 4. Role of natural treatments and life style to prevention.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Integrated comprehensive natural treatments for prevention and control. a Acupuncture b Electric Muscle stimulation c Massage therapy d Exercise therapy
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 8: Disorders of Nervous System	**Hrs. theory 19 Hrs. lab/practical 16**
Sub-unit 8.2: Paralysis	**Hrs. theory 4 Hrs. lab/practical 3**
Objectives:	Content:
1. Define paralysis and identify the causes of paralysis.. 2. Describe the cardinal signs and clinical features of different paralysis. 1. Discuss the differential diagnosis of paralysis. 2. Describe the treatment and expected outcomes for each type of paralysis. 3. Discuss advice and counseling for the family of this patient, to promote rehabilitation. 5. Identify indications for referral of a patient for higher level or specialty care. 6. Role of natural treatments and life style to prevention. 7. Ask the student make treatment plan and discuss in classroom.	1. Definition, incidence,etiology, types, cause, clinical features, investigation, complications, Natural therapies and rehabilitation of paralysis. 2. Integrated comprehensive natural treatments for prevention, control and rehabilitation. • Physiotherapy • Acupuncture • Massage therapy • Speech therapy • Occupational therapy • Nursing care • Yoga • Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 8: Disorders of Nervous System	**Hrs. theory 19 Hrs. lab/practical 16**
Sub-unit 8.3: Peripheral Neuropathies	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Explain the Cause, pathology and clinical features of Peripheral neuropathies. 2. Explain the indications of nerve conduction test and investigation. 3. Role of natural treatments and life style to prevention. 4. Ask the student make treatment plan and discuss in classroom.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Integrated comprehensive natural treatments for prevention, control and rehabilitation. • modification • Teaching / Learning Activities / Resources: classroom Physiotherapy • Acupuncture • Massage therapy
Evaluation methods: written exam, viva, performance observation in clinical setting	

	• Life style instruction, supervised clinical practice
Unit 8: Disorders of Nervous System	**Hrs. theory 19 Hrs. lab/practical 16**
Sub-unit 8.4: Cerebro-vascular accident (CVA)	**Hrs. theory 4 Hrs. lab/practical 3**
Objectives	Content:
1. Identify the causes and incidence of cerebral vascular accidents. 2. Describe the classifications of CVA based on pathology. 3. Describe the cardinal signs and clinical features of mild, moderate and severe CVA. 4. Discuss the differential diagnosis of CVA. 5. Describe the treatment and expected outcomes for each type of CVA. 6. Discuss advice and counseling for the family of this patient, to promote rehabilitation. 7. State the risk behaviors for CVA which you would include in preventive education. 8. Identify indications for referral of a CVA patient for higher level or specialty care. 9. Ask the student make treatment and rehabilitation protocol and discuss in classroom. 10. Role of natural treatments and life style to prevention.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Difference between ischemic and hemorrhagic stroke. 3. Comprehensive treatment and rehabilitation program include a Physiotherapy b Massage therapy c Acupuncture d Hydrotherapy e Nursing care f Speech therapy g Counselling h Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 8: Disorders of Nervous System	**Hrs. theory 19 Hrs. lab/practical 16**
Sub-unit 8.5: Chronic disorders of CNS	**Hrs. theory 7 Hrs. lab/practical 7**
Objectives:	Content:
1. Identify chronic central nervous system disorders seen in Nepal, their etiologies and incidence. 2. Discuss the cardinal signs and clinical features of each. 3. Identify recommended treatment and prognosis for each. 4. Discuss family counseling for each diagnosis. 5. Describe strategies to prevent or give Natural treatment for these disorders.Ask the student make treatment and rehabilitation protocol and discuss in classroom. 6. Role of natural treatments and life style to prevention.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. a. Multiple sclerosis b. Cerebral palsy c. Muscular dystrophy d. Mental Retardation e. Parkinsonism f. GB Syndrome g. Alzheimer disease 2. Comprehensive Natural treatment and rehabilitation a Physiotherapy b Massage therapy c Acupuncture d Hydrotherapy

	e Nursing care f Speech therapy g Occupational therapy h Counselling i Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 9: Musculoskeletal Disorders	**Hrs. theory: 14 Hrs. lab/practical 13**
Sub-unit 9.1: Osteoarthritis ,Rheumatic arthritis, Gout	**Hrs. theory 4 Hrs. lab/practical 3**
Objectives:	Content:
1. Identify the incidence of osteoarthritis and rheumatoid arthritis. 2. Explain septic arthritis and gout. 3. Describe the cardinal signs, clinical features and pathology of each. 4. Explain the investigations for differential diagnosis. 5. Describe the advice and management for osteoarthritis, rheumatoid arthritis and Gout. 6. Identify indications for referral to a higher level facility. 7. Discuss contributing factors in the development of these types of arthritis. 8. Discuss the components of education programs to reduce the incidence of arthritis. 9. Ask the student make treatment protocol and discuss in classroom. 10. Role of natural treatments and life style to prevention.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Integrated comprehensive natural treatments for prevention, control. a Massage therapy b Acupuncture c Physiotherapy d Hydrotherapy e Diet therapy f Yoga therapy g Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 9: Musculoskeletal Disorders	**Hrs. theory: 14 Hrs. lab/practical 13**
Sub-unit 9.2 Back and Neck Pain	**Hrs. theory 4 Hrs. lab/practical 4**
Objectives:	Content:
1. Describe the anatomy and physiology of the spine. 2. Discuss physical examination of the back and neck. 3. Discuss the causes and clinical features of acute and chronic back and neck pain. 4. Identify indications for referral. 5. Discuss the role of exercise and posture for back and neck pain.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Integrated comprehensive natural treatments for prevention, control and rehabilitation. a Physiotherapy b Massage therapy c Acupuncture d Hydrotherapy e Yoga therapy

6. Role of natural treatments and life style to prevention. 7. Ask the student make treatment protocol and discuss in classroom.	f Postural care g Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 9: Musculoskeletal Disorders	**Hrs. theory: 14 Hrs. lab/practical 13**
Sub-unit 9.3: Problems of ligaments , tendons, Fascia and muscles	**Hrs. theory 6 Hrs. lab/practical 6**
Objectives:	Content:
1. Define De Quervain's Diseases, Carpal Tunnel Syndrome, Golfer's Elbow, Tennis Elbow, Frozen Shoulder &Planter Facitis, Torlicollis, Costochondritis, Fibromyalgia, Sprain, Strain and Bursitis. 2. Explain the etio-pathology, clinical feature, differential diagnosis of each diseases 3. Explain the natural treatment of each disease and prognosis.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. a De Quervain's Diseases b Carpal Tunnel Syndrome c Golfer's Elbow d Tennis Elbow e Frozen Shoulder f Planter Fascitis g Torlicollis h Costochondritis i Fibromyalgia j Sprain, Strain k Bursitis 2. Integrated comprehensive natural treatments for prevention and cure a Physiotherapy b Massage therapy c Acupuncture d Hydrotherapy e Yoga therapy f Postural care g Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Unit 10: Psychological Disorders	**Hrs. theory 14 Hrs. lab/practical 11**
Sub-unit 10.1: Depression	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Define depression and describe its incidence and clinical features. 2. Explain the causes and how it is becoming a major health problem in modern society. 3. Identify complications of depression 4. Describe the role of counselor and family member for the treatment of depression.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Integrated comprehensive natural treatments for prevention and cure a Yoga Therapy b Massage therapy and shirodhara

5. Role of natural treatments and life style to prevention. 6. Ask the student make treatment protocol and discuss in classroom.	c Acupuncture d Hydrotherapy e Psychotherapy and counselling f Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 10: Psychological Disorders	**Hrs. theory 14 Hrs. lab/practical 11**
Sub-unit 10.2: Anxiety Disorder	**Hrs. theory 2 Hrs. lab/practical 2**
Objectives:	Content:
1. Define Anxiety Disorder and explain the cardinal signs of panic attack. 2. Identify the etiology, pathology and clinical features of Anxiety Disorder 3. Identify complications of Anxiety Disorder 4. Identify indications for referral to a higher level facility. 5. Discuss methods of prevention. 6. Role of natural treatments and life style to prevention. 7. Ask the student make treatment protocol and discuss in classroom.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Integrated comprehensive natural treatments for prevention and cure a Yoga Therapy b Massage therapy and shirodhara c Acupuncture d Hydrotherapy e Psychotherapy and counselling f Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Unit 10: Psychological Disorders	**Hrs. theory 14 Hrs. lab/practical 11**
Sub-unit 10.3: Mood Disorder	**Hrs. theory 2 Hrs. lab/practical 2**
Objectives:	Content:
1. Define Mood Disorderhepatitis and discuss the incidence. 2. Identify the etiology, pathology, cardinal signs and clinical features of the different types of Mood Disorder. 3. Identify complications of Mood Disorder. 4. Role of natural treatments and life style to prevention. 5. Ask the student make treatment protocol and discuss in classroom.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Integrated comprehensive natural treatments for prevention and cure a Yoga Therapy b Massage therapy and shirodhara c Acupuncture d Hydrotherapy e Psychotherapy and counselling f Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 10: Psychological Disorders	**Hrs. theory 14 Hrs. lab/practical 11**
Sub-unit 10.4: Sleep disorders	**Hrs. theory 2 Hrs. lab/practical 2**
Objectives:	Content:

1. Describe Sleep Disorders 2. Identify the etiology, pathology and clinical features of different types of Sleep Disorders. 3. Identify complications of Sleep Disorders. 4. Role of natural treatments and life style to prevention. 5. Ask the student make treatment protocol and discuss in classroom.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Integrated comprehensive natural treatments for prevention and cure a Yoga Therapy b Massage therapy and shirodhara c Acupuncture d Hydrotherapy e Psychotherapy and counselling f Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 10: Psychological Disorders	**Hrs. theory 14 Hrs. lab/practical 11**
Sub-unit 10.5: Chronic Fatigue Syndrome	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Define Chronic Fatigue Syndrome. 2. Identify the etiology, pathology and clinical features ofChronic Fatigue Syndrome. 3. Identify indications for referral to a higher level facility. 4. Discuss methods of prevention. 5. Role of natural treatments and life style to prevention. 6. Ask the student make treatment protocol and discuss in classroom.	1. Definition, incidence, etiologies, classifications, clinical features, investigations, complications, management and referral indications. 2. Integrated comprehensive natural treatments for prevention and cure a Yoga Therapy b Massage therapy and shirodhara c Acupuncture d Hydrotherapy e Psychotherapy and counselling f Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Unit 10: Psychological Disorders	**Hrs. theory 14 Hrs. lab/practical 11**
Sub-unit 10.6: Psychosomatic Disorders	**Hrs. theory 3 Hrs. lab/practical 2**
Objectives:	Content:
1. Define Psychosomatic Disordersand list out the major Psychosomatic Disorders. 2. Identify the etiology, pathology, cardinal signs and clinical features of the different types of Psychosomatic Disorder. 3. Role of natural treatments and life style to prevention. 4. Ask the student make treatment protocol and discuss in classroom.	1. Definition, incidence, etiology, pathology, clinical features, differential diagnosis, investigation, complication, management. 2. Integrated comprehensive natural treatments for prevention and cure a Yoga Therapy b Massage therapy and shirodhara c Acupuncture d Hydrotherapy e Psychotherapy and counselling f Life style modification
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Unit 11: Gynecological Disorder	**Hrs. theory 14 Hrs. lab/practical 11**
Sub-unit 11.1: Menstrual disorders	**Hrs. theory 7 Hrs. lab/practical 5**
Objectives:	Content:
1. Identify the symptoms and treatment of menstrual disorders. 2. Discuss the common causes for menstrual irregularity. 3. Identify causes of abnormal vaginal bleeding, which are unrelated to pregnancy. 4. Tell how to differentiate and treat the causes of vaginal bleeding (unrelated to pregnancy). 5. Describe the common disorders associated with menopause and the natural treatments for each. 6. Discuss the factors, which indicate that a woman should be referred for expert treatment. 7. Role of natural treatments and life style to prevention. 8. Ask the student make treatment protocol and discuss in classroom.	1. Definition, incidence, etiology, pathology, clinical features, differential diagnosis, investigation, complication, managementand referral indications common menstrual disorders (Dysmenorrhea, premenstrual syndrome, menorrhagia, metrorrhagia, dysfunctional uterine bleeding, menopausal disorder). 2. Integrated comprehensive natural treatments for prevention and cure a Yoga Therapy b Massage therapy c Acupuncture d Hydrotherapy e Life style modification
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, case observation.
Unit 11: Gynecological disorder	**Hrs. theory 14 Hrs. lab/practical 11**
Sub-unit 11.2: Genital Prolapse	**Hrs. theory 2 Hrs. lab/practical 1**
Objectives:	Content:
1. Identify sign and symptoms of genital prolapsed. 2. List factors affecting genital prolapsed. 3. List the stages of genital prolapsed. 4. Describe the advice and treatment for genital prolapsed 5. Role of natural treatments and life style to prevention. 6. Ask the student make treatment protocol and discuss in classroom.	1. Definition, incidence, etiology, pathology, clinical features, differential diagnosis, investigation, complication, management and referral indications 2. Integrated comprehensive natural treatments for prevention and cure a Yoga Therapy b Physiotherapy c Acupuncture d Hydrotherapy e Life style modification
Unit 11: Gynecological disorder	**Hrs. theory 14 Hrs. lab/practical 11**
Sub-unit 11.3: Infertility	**Hrs. theory 5 Hrs. lab/practical 5**
Objectives:	Content:
1. Define infertility. 2. Describe common causes of infertility in females (including males) 3. Discuss the causes and treatment of infertility. 4. DiscussIn Vitro fertilization (IVF). 5. Indication for referral of women/men or both.	1. Definition, incidence, etiology, pathology, clinical features, differential diagnosis, investigation, complication, management and referral indications. 2. Discussion on In Vitro fertilization (IVF). 3. Semen analysis. 4. Integrated natural treatments for prevention and cure

6. Interpret the findingof semen analysis. 7. Role of natural treatments and life style to prevention. 8. Ask the student make treatment protocol and discuss in classroom.	a Yoga Therapy b Acupuncture c Hydrotherapy d Life style modification
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, case observation.

Therapeutic Yoga

Hours Theory: 120
Hours Practical: 80

Course Description:

This course is designed to provide students with comprehensive knowledge of *Yoga* and the physiological effects of various *Yogaic* practices and utilization of the same for therapeutic purposes. It is designed to make students understand principles, practical basis of the system of Yoga and its actions on different systems of our body. It also will help students to understand and learn the general prescription& formulation of Yogaic food, asanas, pranayamas, kriyas, meditations, lifestyle protocol for different diseases.

Course Objective:

After completion of the course students will be able to;

a. Describe the physiological effects of various *Yogaic* practices like *kriyas*, *asanas*, *pranayamas*, *mudras*, *bandhas*, *drishtis*, *relaxation and Meditation*;
b. Define rules and regulations of *Yoga* to be followed;
c. Understand the therapeutic aspects of *Yoga* as applied to different disease conditions & mental health;
d. Understand contra indications and indications of *Yogaic* practices in order to efficiently use *Yoga* as a therapy;
e. Understand the concept of health and disease in *Yogaic* wisdom and role of stress in disease causation and management of the same with *Yoga* ;
f. Understand importance of food according to *Yoga*;
g. Utilise knowledge of *Yoga* therapy in managing various diseases;
h. Demonstrate usage of therapeutic aspect of *Yoga* in promotive, preventive, curative and rehabilitative therapy.
i. Able to remedial measures in *Yoga* for various disease conditions.

Reference books

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- Nagarathana, R., & Nagendra, H. R. (2001). *Integrated approach of yoga therapy for positive health* (5th ed.). Swami Vivekananda Yoga Prakashan.
- Iyengar, B. K. S. (2015). *Sabhi ke liye yoga*. Prabhat Prakashan.
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- Suman, K., & Ahluwalia, V. K. (2006). *Yoga therapy*. Lotus Press.
- Rao, P. N. (2011). *Medicine for yoga therapist*. Jaypee Publications.
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- Vasu, S. C. (2007). *Gheraṇḍasaṃhitā* (5th ed.). Munshiram Manoharlal Publishers Pvt. Ltd.
- Muktibodhananda, S. (1998). *Hatha Yoga Pradipika* (3rd ed.). Yoga Publications Trust.
- Saraswati, S. S. (2009). *Asanas, pranayama, bandhas, mudras* (9th ed.). Yoga Publications Trust.
- Saraswati, S. S. (1998). *Yoga Nidra* (6th ed.). Yoga Publications Trust

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Course: Therapeutic Yoga	
Unit 1: Introduction & Basis	**Hrs. theory 13**
Sub-unit 1.1: Introduction & Basis	**Hrs. theory 13**
Objectives:	**Content:**
1. Introduce *Yogaic* Therapy 2. Describe the basis of *Yogaic* Therapy	1. Introduction of Yogaic Therapy 2. Principles of practice of Yogaic therapy 3. The basis of *Yogaic* Therapy a Panchkosha theory (5 Sheaths of human being) b Role of *Asanas* in management of diseases c Role of *Pranayamas, mudras, bandhas&kriyas*in management of diseases d Role of *mudras, bandhas & kriyas*in management of diseases e Stress, lifestyle & Disease management through Yoga
Evaluation methods: written exam, viva	**Teaching / Learning Activities / Resources:** Classroom instruction, teacher led discussion, textbook, hand-outs
Unit 2: Physiological effects of *Yogaic* practices	**Hrs. theory: 15**
Sub-unit 2.1: Physiological effects of *Yogaic* practices	**Hrs. theory 15**
Objectives:	**Content:**
1 Physiological effects of various *Yogaic* practices on different systems	1 The physiological effects of *Yogaic* practices (Asana, Pranayama, Mediation, Mudra, Bandha, Kriyas & Diet) for different disorders of different systems) on different systems a Skeletal system,

	b Endocrine system, c Nervous system, d Digestive system, e Respiratory system, f Excretory system, g Cardiovascular system, h Muscular system, i Reproductive system
Evaluation methods: Written exam, Viva	**Teaching / Learning Activities / Resources:** Classroom instruction, teacher led discussion, textbook, hand-outs
Unit 3: Comparative study: Yoga versus Exercise	**Hrs. theory 4**
Sub-unit 3.1: Comparative study: Yoga versus Exercise	**Hrs. theory 4**
Objectives:	**Content:**
1. Compare Yoga versus Exercise therapy for diseases	1 Comparative physiological effects of Yoga & Exercise 2 Comparative therapeutic effects of Yoga versus Exercise for different diseases
Evaluation methods: Written exam, Viva	**Teaching / Learning Activities / Resources:** Classroom instruction, teacher led discussion, textbook, hand-outs, charts
Unit 4: Yoga Therapy for different disorders	**Hrs. theory 42**
Sub-unit: 4.1 Yoga Therapy for different disorders	**Hrs. theory 42**
Objectives:	**Content:**
1 Yoga therapy for different disorders of different systems	1. Yoga therapy& use of asana, pranayama, mediation, mudra, bandha, kriyas & diet for different disorders of different systems (Integrative Approach) 2. Formulate an integrative Yoga therapy protocol for the following disorders ❖ ***Yoga therapy for:*** a Cardiovascular disorders • High blood pressure, • Arteriosclerosis 3. Musculoskeletal disorders a Cervical, Lumber pain & radiculopathy b Arthritis c Musculoskeletal pain 4. Nervous system disorders, Mental & Psychiatric disorders: a Insomnia b Depression c Headache & Migraine

	d Sleep disorders e Anxiety Disorders f Peripheral Neuropathy g Various Paralysis (Plegia& Paresis) h Addiction 5. Gastrointestinal disorders a Acid Peptic Diseases b Irritable Bowel Syndrome c Constipation d Hemorrhoids e Digestive Disorders 6. Respiratory disorders a Allergic Rhinitis b Sinusitis c COPD d Chronic Bronchitis e Asthma f Nasal polyps 7. Hormonal & Metabolic disorders, a Diabetes mellitus b Thyroid Disorders c Obesity 8. OBG disorders a Irregular menstruation b Dysmenorrhea c Amenorrhea d Leucorrhoea e Premenopausal-postmenopausal f Polycystic Ovarian disease
Evaluation methods: written exam, viva	**Teaching / Learning Activities / Resources:** Classroom instruction, teacher led discussion, textbook, hand-outs, charts
Unit 5: Meditation and its applications on psychosomatic disorders	**Hrs. theory 10**
Sub-unit 5.1: Meditation and its applications on psychosomatic disorders	**Hrs. theory 10**
Objectives:	**Content:**
1. Types of meditations *2.* Meditation and its applications on psychosomatic disorders	Introduction to Psychosomatic disorders And meditation 1. Types of Meditation a Active Meditations b Passive Meditations 2. Effects of Meditations 3. Meditation for Psychosomatic disorders

	4. Applications of different meditations for psychosomatic disorders
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 6: *Yogic* relaxation techniques	**Hrs. theory 12**
Sub-unit 6.1: *Yogic* relaxation techniques	**Hrs. theory 12**
Objectives:	**Content:**
1. Introduction to *Yogaic* relaxation techniques 2. Types of relaxation technique 3. Effects& use of relaxation techniques	1. Introduce, describe & demonstrate relaxation techniques 2. Types of relaxation techniques a QRT – Quick Relaxation Technique b IRT – Instant Relaxation Technique c DRT – Deep Relaxation Technique d Yoga Nindra 3. Effects & use of relaxation techniques
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 7: *Yoga* and Mental Health:	**Hrs. theory 14**
Sub-unit 7.1: *Yoga* and Mental Health:	**Hrs. theory 14**
Objectives:	**Content:**
1. Identify& describe correct Mental Health, Behavior & attitude 2. Identify & describe correct personality, types of personality 3. Describe Spiritual values, body & mind relationships 4. Describe stress 5. Describe Stress Management 6. Describe Meditations &Stress management workshops	1. Description of Mental Health. 2. Description & classification of the different of personalities 3. Identification & description of the correct personality, types of personality 4. Introduction &Description of Spiritual values, body & mind relationships, hormonal relationship of body and mind, self-content tranquilizing effect 5. Introduction &Description of stress 6. Life & Stress Management programs& workshops
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, demonstrations, Videos, Jeevan path workshop

Practical: Practical Total 80 hours

Unit 1: Yoga Practices	**Hrs. lab/practical: 30**
Sub-unit 1.1: Yoga Practices	**Hrs. lab/practical: 30**

Objective	Contents
Apply, practice, instruct& demonstrate 1 Kriyas 2 Asanas 3 Pranayamas 4 Mudra 5 Bandhas	Application, practice, instruction& demonstration of **1. Kriyas** a Jalaneti b Sutra neti c Vamanadhauti d Vasti e Nauli f Kapalbhati kriya g Trataka **2. Warm up Exercise** a Loosening exercises b Breathing exercises c Surya Namaskar **3. Asanas** a Standing • Sithil Tadasana a Tadasana b Triyak Tadasana c Vrikshasana d Dhurva asana e Ardha Kati Chakrasana f Kati Chakrasana g Trikonasana h Veerabhadrasana **. Sitting** i Sithildandasana j Dandasana k Padmasana l Vajrasana m Sasankasana n Mandukasana o Gomukhasana p Simhasana q Bakrasana r Ardha machendrasana s Baddhakonasana t Janu Sirsanana u Pachhimuttanasana v Ushtrasana **3. Prone** a Makarasana b Bhujangasana

	c Ardha Shalabhasana d Shalabhasana e Dhanurasana **4. Supine** a Pawanmuktasana b Naukasana c Matsyasana d Setubandhasana e Viparеetakarani f Sarvangasana g Halasana h Chakrasana i Uttanpadaasana j Shavasana **6. Pranayama** a Bhastrika b Surya Vedana c Ujjayi d Sheetkari e Sheetali f Chandra Vedana, g Bhramari h AnulomaViloma **8.Bandhas** a Jalandhar banda b Uddhayan banda c Mool banda **9.Mudras** a Gyan/Chin mudra b Dhyan mudra c Sanmukhi mudra d Sambhabhi mudra e Khechari mudra
Evaluation methods: performance observation in clinical setting	Teaching/Learning Activities/ Resources: Instruction, demonstration, Supervised clinical practice in related field.
Unit 2: Meditation	**Hrs. lab/practical: 8**
Sub-unit 2.1: Meditation	**Hrs. lab/practical: 8**
Objective	**Contents**
Demonstrate & instruct 1 Active Meditations 2 Inactive Meditation	1 Application, Counseling, instruction, practice & demonstration of 2 Active Meditations

	3 Passive Meditation
Evaluation methods: performance observation in clinical setting	Teaching/Learning Activities/ Resources: instruction, demonstration, supervised clinical practice in related field.
Unit 3: Yoga Therapy	**Hrs. lab/practical: 22**
Sub-unit 3.1: Yoga Therapy	**Hrs. lab/practical: 22**
Objectives:	**Content:**
Formulate & apply integrative Yoga practice for these disorders 1. Cardiovascular diseases 2. Mental & Psychiatric disorders 3. Musculoskeletal disorders 4. Nervous system disorders 1 Gastrointestinal disorders 2 Hormonal diseases 3 Respiratory diseases 4 Metabolic diseases 5 Ophthalmologic disorders 6 Pediatric disorders 7 ENT Disorders 8 OBG disorders	Demonstration & practice of Mixed Formulate & apply integrative Yoga practice for these disorders 1. Cardiovascular disorders a. High blood pressure 2. Musculoskeletal disorders a Cervical and Lumber pain b Radiculopathy c Arthritis d Musculoskeletal pain 3. Nervous system disorders, Mental & Psychiatric disorders: a Insomnia b Depression c Headache & Migraine d Sleep disorders e Anxiety Disorders f Peripheral Neuropathy g Various Paralysis (Plegia & Paresis) h Addiction 4. Gastrointestinal disorders a Acid Peptic Diseases b Irritable Bowel Syndrome c Constipation d Hemorrhoids e Digestive Disorders 5. Respiratory disorders a Allergic Rhinitis b Nasal polyps c Sinusitis d COPD e Chronic Bronchitis f Asthma 6. Hormonal & Metabolic disorders, a Diabetes mellitus b Thyroid Disorders

	c Obesity 7. OBG disorders a Irregular menstruation b Dysmenorrhea c Amenorrhea d Leucorrhoea e Premenopausal f Postmenopausal, g Polycystic Ovarian disease
Evaluation methods: performance observation in clinical setting	Teaching/Learning Activities/ Resources: instruction, demonstration, supervised clinical practice in related field.
Unit 4: Relaxation Techniques	**Hrs. lab/practical: 10**
Sub-unit 4.1: Relaxation Techniques	**Hrs. lab/practical: 10**
Objectives:	**Content:**
Introduce, instruct, describe & demonstrate Relaxation techniques.	Application, Counseling, instruction, practice & demonstration of 1. IRT – Instant Relaxation Technique 2. QRT – Quick Relaxation Technique 3. DRT – Deep Relaxation Technique 4. Yoga Nindra
Evaluation methods: performance observation in clinical setting	Teaching/Learning Activities/ Resources: instruction, demonstration, supervised clinical practice in related field.
Unit 5: Meditations & Stress management	**Hrs. lab/practical: 10**
Sub-unit 5.1: Meditations & Stress management	**Hrs. lab/practical: 10**
Objectives:	**Content:**
Introduce, instruct, describe & demonstrate Meditations & Stress management techniques.	Application, Counseling, instruction, practice & demonstration of 1 Meditations & Stress management workshops. 2 Life & Stress Management programs & workshops
Evaluation methods: performance observation in clinical setting	Teaching/Learning Activities/ Resources: instruction, demonstration, supervised clinical practice in related field.

Physiotherapy and Sports Medicine

Hours Theory: 80
Hours Practical: 80

Course Description:

This course is designed to provide students in brief about the history, definitions, philosophy, knowledge, skillsand practicesof Physiotherapy, physical rehabilitation&Sports medicine. This course will help the students understand basic principles and effects various physiotherapy treatments & protocols, using various tools in diagnosing various diseases, selecting specific treatments & treating various diseases &disabilities.

Course Objective:

After completion of the course, students will be able to:

- Understand the principles and historical highlights of Physiotherapy&physical rehabilitation
- Explain the concepts and theories behind the mechanism in which Physiotherapy, exercise therapy& electrotherapy works
- Demonstrate basic understanding of procedures of different techniques, methods of Physiotherapy and related therapeutic modalities
- Describe basic and advanced tools used in Physiotherapy
- 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.
- Be aware of the contraindications and dangers of Physiotherapy, so as to avoid these in his/her professional practice;
- Diagnose common diseases and disorders using diagnostic techniques employed in Physiotherapy
- Demonstrate skill in physical examination, locating sports injuries on the human body;
- Perform therapeutic modalities, tests, care, home planto a patient
- Plan, implement and evaluate Physiotherapy sessions with expertise in his/her professional practice;
- Diagnose, evaluate, treat & refer the patients coming with different conditions & sports injuries
- Plan & teach the prevention & management of different disabilities & sports injuries
- Plan sports conditioning

Reference Texts:

- *The physiotherapist's pocketbook*
- *ACSM's Guidelines for exercise testing & prescription*
- *The sports medicine Bible*

- *Sports injury prevention & Rehabilitation*

Course: Physiotherapy and Sports Medicine	
Unit 1: Basics-Principles	**Hrs. theory: 10 Hrs. lab/practical: 10**
Sub-unit 1.1: Basics-Principles & Exercise therapy	**Hrs. theory: 10 Hrs. lab/practical: 10**
Objectives:	**Content:**
1. Define: field, history & general concepts of Physiotherapy& Exercises 2. Describe Principles, practice of Exercise therapy 3. Describe Muscle strength, weakness, strengthening & reeducation 4. Describe & demonstrate Joint movements & Relaxation 5. Describe & demonstrate Posture, co-ordination, co-ordination exercises 6. Describe & demonstrate Gait Analysis & training	1. Definitions, field, history & general concepts of Physiotherapy& Exercises 2. Principles, practice of Exercise therapy 3. Basic Physics in Exercise Therapy 4. Mechanics: Force, gravity, line of gravity, center of gravity in human body, base, equilibrium, axes and planes 5. Mechanical Principles: lever, order of lever, examples in human body, pendulum, spring 6. Introduction of exercise therapy 7. Starting positions: Fundamental starting positions, derived positions, muscle work for all the fundamental starting positions 8. Classification of movements in detail 9. Active movements 10. Passive movements 11. Muscle strength: 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 12. 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. 13. Relaxation: Techniques of relaxation, Principles of obtaining relaxation in various positions 14. Posture: types, factors responsible for good posture, factors for poor development of posture

	15. Coordination exercises: Definition of coordinated movements, in coordinated movements, Principles of coordinated movements, technique of coordination exercise 16. Gait: Analysis of normal gait with muscles work, various pathological gaits 17. Crutch gait: introduction, crutch measurement, various types of crutch gait 18. Neuromuscular facilitation techniques, functional reeducation
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 2: Electrotherapy	**Hrs. theory: 36 Hrs. lab/practical: 36**
Sub-unit 2: Electrotherapy	**Hrs. theory: 36 Hrs. lab/practical: 36**
Objectives:	**Content:**
1. Describe Fundamentals, Principles& useof electricity, electrical energy 2. Describe Fundamentals, Principles& use of magnetism 3. Describe Fundamentals, Principles & use of electrical currents& frequency 4. Preparation, caution & use of electrotherapy 5. Describe Electrotherapy modalities & their proper use	1. Electrical fundamentals a Physical principles b Structure and properties of matter c Molecular atom, proton, neutron, electron, ion etc. d Electrical energy e Nature of electricity current f Static electricity g Electric potentials generated by cell h Ohm‘s Law i Joule‘s Law 3. Nature and principles of production of muscles stimulating currents a Types of low frequency currents used for treatment b Therapeutic electric stimulation c Ionotophoresis d Phonophoresis **4.** Preparation, caution & use of electrotherapy a Preparation for electrotherapy b Preparation of apparatus c Patient treatment technique d Stimulating muscles of extremity, back and face through the motor points e Faradic and Galvanic currents f High frequency current treatments g Physics of high frequency currents

	h Principles i Biophysics of heat physiology and cold. j Production, physiological and therapeutic effects and uses. k Principles of radiation therapy l Physics of radiation therapy m Production, physiological and therapeutic effects, uses, techniques of treatment, dangers and precautions, indication &contraindications of: • EMS • Ultrasonic therapy • TENS • IFT • Wax therapy • Deep heat: Short Wave Diathermy, Microwave, • Superficial heating: Pack, compress, Moist heat • Traction • Recent developments& newer technologies n Physics of wax therapy o Physiological and therapeutic effects and uses p Setting up of apparatus, selection of dose & intensity, method, caution, and technique of application of all apparatus & modalitiestothe following conditions and to all parts of the body. q Respiratory diseases COPD, Chronic Bronchitis, Asthma r Digestive Disease (Prolapse of rectum) s Treatment of CNS diseases Trigeminal Neuralgia & Facial pain, Bells Palsy, CerebroVascular Accidents - Stroke, Peripheral Neuropathy, Motor Neuron Disease, GullianBarreSyndrome, Transverse Mylitis, Multiple Sclerosis, Paralysis, (Plegia& Paresis), Aphasia t Cardio Vascular system u Oedema v Locomotors system

	w Torticollis, Frozen shoulder, Cervical, Lumber pain & radiculopathy, TMJ, Spinal Pain, Arthritis, Musculoskeletal pain x Gynecological Disease y Uterine Prolapse, Incontinence z Endocrine disease aa Obesity bb Urino genital system cc Edema, Incontinence, Nocturnal enuresis dd ENT Disease ee Vertigo, tinnitus, Optic atrophy, Ptosis
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 3: Practical Exercise Therapy	**Hrs. theory: 18 Hrs. lab/practical: 18**
Sub-unit 3.1: Practical Exercise Therapy	**Hrs. theory: 18 Hrs. lab/practical: 18**
Objectives:	**Content:**
1. Demonstrate and practice: active and passive movements 2. Demonstrate and practice: suspension therapy 3. Demonstrate and practice: strengthening, reeducation 4. Demonstrate and practice:Joint movement 5. Demonstrate and practice:free exercise 6. Demonstrate, describe:pathological gaits & perform gait training 7. Demonstrate and practice:Breathing exercises 8. Demonstrate and practice:Techniques of passive stretching	1. Demonstration and practice of active and passive movements 2. Demonstration and practice suspension to shoulder joint and elbow joint in upper limbs, hip and knee joints in lower limbs for all movements. Demonstration of total suspension. 3. Muscle strength: Demonstration and practice of strengthening, reeducation of weak/paralyzed muscles of both upper and lower extremity, individual group muscles, abdominal muscle exercises 4. Joint movement: Demonstration and practice of techniques to improve joint range of motion of all joints 5. Demonstration and practice of free exercise to improve joint range of motion of all joints. Demonstration and practice of all crawling exercises, faulty posture, correcting techniques. 6. Demonstration of various pathological gaits. 7. Measurement of crutches, walking aids, strengthening muscles, crutch balance, demonstration and practice of all crutch gaits. 8. Breathing exercises: Demonstration and practice of diaphragmatic breathing, localized expansion exercises.

	9. Passive stretching: Techniques of passive stretching
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos
Unit 4: Sports Medicine	**Hrs. theory: 16** **Hrs. lab/practical: 16**
Sub-unit 4: Sports Medicine	**Hrs. theory: 16** **Hrs. lab/practical: 16**
Objectives:	**Content:**
1: Introduce:Sports Medicine 2. Sports &Athletic performance training a. Explain & instruct: preparation window training b. Explain & instruct: competitivewindow training c. Explain & instruct: offseason window training 3. MedicalCare a) Explain & instruct: Sport injury prevention b) Explain: Planning and preparation c) Explain: General approach to unwell player 4. General practice of sport medicine Explain: Types of sport injuries, their prevention, care, first aid, management, treatments, rehabilitation&precautions	1: Introduction to Sports MedicineGeneral principles of sports medicine, First aid, introduction, principles, assessment&responsibilities in sports medicine 2. Sports, Athletic performance training &Fitness & Sports conditioning a. preparation window training b. competitive window training c. offseason window training d. Sports Massage 3. MedicalCare a) Sport injury prevention, b) Sports diet & nutrition c) Psychological Conditioning d) Planning and preparation e) General approach to unwell player f) Cardio Pulmonary Resuscitation (CPR) and Transport of Unconscious Patient, Splinting, Orthotics Strapping & Bracing,Bandages, dressing and slings, Work Physiology, Gym Training and Exercise Sessions g) Basic life support: Resuscitation techniques, mouth to mouth ventilation, artificial ventilation, Sylvester method, Unconsciousness and general principles of treatment, recovery position h) Transportation and handling of patient 4. General practice of sport medicine

	Types of sport injuries, their prevention, care, first aid, assessment, management, treatments, rehabilitation & precautions a. Sprain with ligament involvement b. Strain with tendon involvement c. Tendonitis d. Dislocation e. Bruises f. Laceration g. Concussions & head injuries h. Dehydration i. Spinal Injuries j. Drug & doping i. Collapse during play j. Hemorrhage and bleeding, k. Shock l. Wounds m. Fractures
Evaluation methods: written exam, spotting, viva, performance observation	**Teaching / Learning Activities / Resources:** classroom instruction, teacher led discussions, supervised practice, charts, handouts, demonstrations, Videos

Hydrotherapy and Spa Therapy

Hours Theory: 80
Hours Practical: 80

Course Description:

This course provides the comprehensive knowledge and skill of treating diseases and promotion of positivehealthusing Hydrotherapy and Spa therapy. The student also will have knowledge about the physiological andtherapeutic effects of various kinds of such applications and utilization of the same for therapeutic and relaxationpurpose. At the completion of training, the studentwill be able to integrate knowledge of hydrotherapy and SpaTherapy in variousdiseasesand healthy people and efficiently utilize the same for therapeutic and relaxation purpose.

Course Objectives:

After completion of this course the learner will be able to:

- Describe the properties of water used for therapeutic purposes and their physiological impact on different organ and systems.
- Explain action and reaction mechanisms and physiology, with their effects and uses
- Demonstrate the use of water in preservation, treatments and rehabilitation of the illnesses as well as promotion of the positive health.
- Show in-depth knowledge of general principles of hydrotherapy and therapeutic applications of water along with therapeutic actions, indications and contra-indications.
- Demonstrate techniques and procedures of various types of hydratic applications in hospital and Spa setting.
- Utilize knowledge of hydrotherapy in managing various diseases;
- Deliver hydrotherapy and Spa therapy treatments for various disease conditions in clinical as well as Spa settings.

Reference Books

- Joel, S. *Handbook of hydrotherapy*.
- Davis, B. C., & Harrison, R. A. *Hydrotherapy in practice*.
- Licht, S. (n.d.). *Medical hydrology*.

Course: Hydrotherapy and Spa Therapy	**Hrs. theory 80 Hrs. lab/practical: 80**
Unit 1: Introduction to Hydrotherapy, Properties Water	**Hrs. theory 3 Hrs. lab/practical: 4**
Objectives:	Content:
1. Define hydrotherapy and briefly highlight the history of hydrotherapy. 2. Explain Physical and chemical properties of water 3. Explain the importance to water for survival and health. 4. Explain Importance of water in prevention of disease and promotion of health. 5. Explain the use of water in acute diseases and list out the diseases that can be treated with water. 6. Explain the use of water in chronic diseases and list out the diseases that can be treated with water.	1. Definition and Historical highlights of Hydrotherapy 2. Physical and chemical properties of water 3. Importance of water to human body 4. Role of water in acute diseases 5. Role of water in chronic diseases
Evaluation methods: written and viva exams.	Teaching / Learning Activities/Resources: classroom instruction, Text book study
Unit 2: Physiological basis of Hydrotherapy	**Hrs. theory 10 Hrs. lab/practical: 8**
Sub-unit 2.1: Skin and Heat Regulation	**Hrs. theory 4 Hrs. lab/practical: 4**
Objectives:	Content:
1. Describe the structure and function of skin and its relation the heat regulation. 2. Explain the mechanism of heat production, regulation and factors that affect hit distribution in the body. 3. Explain the condition that increase and decrease heat production with example. 4. Locate the major reflex areas in the body and explain the results of application of hot and cold over reflex areas. 5. Define Actions and reaction, incomplete reaction in hydrotherapy and its application. 6. Explain about the conditions that encourage reaction, internal reaction, thermic reaction, modified thermic reaction.	1. The skin and its anatomical construction, functions of skin, temperature sense. 2. Production of heat and its distribution in the body. 3. Regulation of the body temperature, conditions that increase and decrease heat production in the body, 4. Reflex areas of the body, results of application of hot and cold over reflex areas 5. Definition and application actions and reaction, incomplete reaction, 6. Conditions that encourage reaction, internal reaction, thermic reaction, modified thermicreaction
Evaluation methods: written and viva exams.	Teaching / Learning Activities/Resources: classroom instruction and Text book study.
Unit 2: Physiological basis of Hydrotherapy	**Hrs. theory 10 Hrs. lab/practical: 8**
Sub-unit 2.2:Physiological effect of Heat on Different System	**Hrs. theory 3 Hrs. lab/practical: 2**

Objectives:	Content:
1. Explain the Physiological effect of heat application on Skin, Respiration, Circulation, Nervous system, Digestive system, Heat and its production & dissipation, Tactile and temperature sense.	1.Physiological aspects of heat upon: Skin, Respiration, Circulation, Nervous system, Heat and its production & dissipation, Tactile and temperature sense
Evaluation methods: written and viva exams	Teaching / Learning Activities/Resources: classroom instruction.
Unit 2: Physiological basis of Hydrotherapy	**Hrs. theory 10 Hrs. lab/practical: 8**
Sub-unit 2.3: General and physiological effects of cold upon different system	**Hrs. theory 3 Hrs. lab/practical: 2**
Objectives:	Content:
1. Explain the physiological effects of cold application on Skin, Respiration, Circulation, Nervous system, Gastro Intestinal tract, body temperature and its maintenance, circulatory system.	1.Physiological effects of cold upon: Skin, Respiration, Circulation, Nervous system, Gastro Intestinal tract, body temperature and its maintenance, circulatory system
Evaluation methods: written and viva exams.	Teaching / Learning Activities/Resources: classroom instruction, Text book study.
Unit 3: General principles of Hydrotherapy	**Hrs. theory 12 Hrs. lab/practical: 8**
Sub-unit 3.1: General rules of hydrotherapy	**Hrs. theory 3 Hrs. lab/practical: 3**
Objectives:	Content:
1. Define therapeutic actions on application of Hot and cold and explain its use on Hydrotherapy 2. Define reaction effect on hot and cold application and explain it's important in hydrotherapy. 3. Explain each individual have different adaptation capacity and importance of individualized treatment protocol. 4. Explain the possibility of exaggeration of symptoms during treatment, the untoward effects and how to avoid or manage them. 5. Explain the general indications and contra-indications of hydrotherapy with reason and list out such conditions. 6. Explain the use and benefit of Magnesium Sulfate in hydrotherapy.	1. Therapeutic action - Definition and use of hot and cold application 2. Therapeutic reaction – definition and significance of reaction 3. General indications and contra-indications. 4. Use of Magnesium Sulphate in Hydrotherapy
Evaluation methods: written and viva exams.	Teaching / Learning Activities/Resources: Classroom instruction and textbook study.
Unit 3: General principles of Hydrotherapy	**Hrs. theory 12 Hrs. lab/practical: 8**
Sub-unit 3.2: Classification of Hydriatic effects	**Hrs. theory 9 Hrs. lab/practical: 5**
Objectives:	Content:

1. Define all term of Primary excitant effects and explain their benefit, indications, contra indications and method of application. 2. Define all term of Secondary excitant effects and explain their benefit, indications, contra indications and method of application. 3. Define all term of Resolvant effects and explain their benefit, indications, contra indications and method of application.	Definition, method of application, indication , contraindication and benefit of : 1.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 2.Secondary excitant effects a Restorative effects b Tonic effects of cold water, physiological effects of cold water, cold water vs. medical tonics c Calorific effects d Diaphoretic effects e Expectorant effects f Diuretic effects g Revulsive and derivative effects 3.Resolvent effects a Sedative effects – general sedatives localsedatives: b Nerve sedatives, hypnotic, calmative, and c analgesic, anesthetic, antispasmodic d Antithermic and antipyretic effects e Secretory and sedative effects
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and Text book study.
Unit 4: Techniques of Hydrotherapy	**Hrs. theory 25 Hrs. lab/practical: 24**
Sub-unit 4.1: Water Baths	**Hrs. theory 9 Hrs. lab/practical: 9**
Objectives:	Content:
1. Define each of the technique of water baths. 2. Explain pre-operative, operative and post-operative procedure step by step. 3. Explain general benefits, therapeutic indication and contra-indication of each technique. 4. List out the precautions and possible complications of each technique. 5. Demonstrate these procedures according to the guidelines.	Definition, procedure, physiological effect, general benefits, therapeutic indication , contra indication, precaution, possible complication of: 1 Plain water bath 2 Hip bath 3 Kellogg‘s and Kuhne‘ssitz bath 4 Arm and foot bath 5 Immersion bath 6 Whirlpool bath 7 River bathing 8 Sea bathing 9 Hot spring Bath

Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, Observation.
Unit 4: Techniques of Hydrotherapy	**Hrs. theory 25 Hrs. lab/practical: 24**
Sub-unit 4.2: Vapor baths and air baths	**Hrs. theory 8 Hrs. lab/practical: 6**
Objectives:	Content:
1. Define each of the technique of water baths. 2. Explain pre-operative, operative and post-operative procedure step by step. 3. Explain general benefits, therapeutic indication and contra-indication of each technique. 4. List out the precautions and possible complications of each technique. 5. Demonstrate these procedures according to the guidelines.	Definition, operative procedure, physiological effect, general benefits, therapeutic indication , contra indication, precaution, possible complication of: 1. Russian bath 2. Turkish bath 3. Steam bath 4. Local steam bath 5. Steam inhalation 6. Hot air bath 7. Local hot air bath 9. Cold air bath 10. Indoor and outdoor bath
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, observation.
Unit 4:Techniques of Hydrotherapy	**Hrs. theory 25 Hrs. lab/practical: 24**
Sub-unit 4.3: Douches	**Hrs. theory 2 Hrs. lab/practical: 3**
Objectives:	Content:
1. Define each of the technique of water baths. 2. Explain pre-operative, operative and post-operative procedure step by step. 3. Explain general benefits, therapeutic indication and contra-indication of each techniques. 4. List out the precautions and possible complications of each techniques. 5. Demonstrate these procedures according to the guidelines.	Definition, procedure,physiological effect, general benefits, therapeutic indication , contra indication, precaution, possible complication of: 1.Cold Douche 2.Hot Douche 3.Neutral Douche 4.Alternative Douche
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, observation.
Unit 4: Techniques of Hydrotherapy	**Hrs. theory 25 Hrs. lab/practical: 24**
Sub-unit 4.4: Pool therapy	**Hrs. theory 3 Hrs. lab/practical: 3**
Objectives:	Content:
1. Define each of the technique of water baths. 2. Explain pre-operative, operative and post-operative procedure step by step. 3. Explain general benefits, therapeutic indication and contra-indication of each technique.	1. Definition, operative procedure, physiological effect, general benefits, therapeutic indication, contra indication, precaution, possible complication of pool therapy.

4. List out the precautions and possible complications of each technique. 5. Demonstrate these procedures according to the guidelines.	2. Aquatic fitness, aquatic rehab, aquatic Yoga.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration.
Unit 4 :**Techniques of Hydrotherapy**	**Hrs. theory 25 Hrs. lab/practical: 24**
Sub-unit 4.5:**Packs , compresses and Cryo Therapy**	**Hrs. theory 3 Hrs. lab/practical: 3**
Objectives:	Content:
1. Define each of the technique of water baths. 2. Explain pre-operative, operative and post-operative procedure step by step. 3. Explain general benefits, therapeutic indication and contra-indication of each techniques. 4. List out the precautions and possible complications of each techniques. 5. Demonstrate these procedures according to the guidelines.	Definition, types, procedure,physiological effect, general benefits, therapeutic indication , contra indication, precaution, possible complication of: 1. Packs – throat, abdomen, Chest, Pelvic, Gastro-hepatic, knee, ankle, and Full body. 2. Compresses 3. Cryo Therapy
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration.
Unit 5: Mud Therapy	**Hrs. theory 5 Hrs. lab/practical: 6**
Sub-unit 5.1: Introduction, preparation, application and uses	**Hrs. theory 5 Hrs. lab/practical: 6**
Objectives:	Content:
1. Define each of the technique of water baths. 2. Explain pre-operative, operative and post-operative procedure step by step. 3. Explain general benefits, therapeutic indication and contra-indication of each techniques. 4. List out the precautions and possible complications of each techniques. 5. Demonstrate these procedures according to the guidelines. 6. Explain the cosmetic uses of mud and compare with chemical cosmetics.	1. Introduction, Definition of Mud therapy 2. Classification of Mud for therapeutic use 3. Precautions for storing mud 4. Physiological effect of mud on different systems of body 5. Definition, operative procedure,physiological effect, general benefits, therapeutic indication , contra indication, precaution, possible complication of: Mud Pack Hot poultices Natural mud bath Full and partial mud packs Cosmetic uses of mud
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration.

Unit 6: Spa Therapy	**Hrs. theory 25 Hrs. lab/practical: 30**
Sub-unit 6.1: Introduction , History and modern trends in Spa	**Hrs. theory 5 Hrs. lab/practical: 5**
Objectives:	Content:
1. Define spa and explain how it has developed in ancient time. 2. Explain the global trends in spa and scope of spa in Nepal. 3. Explain the difference between naturopathy hospital and spa. 4. Describe the role of spa therapy in preventive and promotive health.	1.Definition of Spa 2.Historical highlights 3. Modern trend in spa therapy and scope. 5.Role of spa therapy in prevention of disease and promotion of positive health 6. Essential features of a spa 7. Essential Qualities of spa Therapist.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration.
Unit 6: Spa Therapy	**Hrs. theory 25 Hrs. lab/practical: 30**
Sub-unit 6.2:Treatment Modalities In spas	**Hrs. theory 20 Hrs. lab/practical: 25**
Objectives:	Content:
1. Define each technique of spa therapies. 2. Explain pre-operative, operative and post-operative procedure each techniques step by step. 3. Explain the role of spa therapy in prevention of disease and promotion of positive health. 4. List out the precautions of each technique. 5. Demonstrate these procedures according to the guidelines.	Definition, procedure, general benefits,physiological effect, therapeutic indication , contra indication, precaution, possible complication 1. Hydrotherapy – Jacuzzi, Steam Bath, Sauna Bath, 2. Mud therapy – Cosmetic Use (Bath and Packs) 3. Massage therapy – Ayurvedic massage, Swedish massage, Thai massage, Shiatsu massage, Hot stone massage, Nepali traditional massage, Trekker's massage 4. Exercise and fitness 5. Aroma therapy 6. Mineral Baths 7. Music therapy 8. Color therapy 9. Pool therapy 10. Scrub and wraps 11. Pedicure and manicure 12. Yoga-Asana, Pranayams, meditation, Relaxation techniques. 13. Diet and Life style counselling
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, observation.

Nutrition, Dietetics & Fasting Therapy

Hours Theory: 60
Hours Practical: 20

Course Description:

This course is designed to provide students the comprehensive knowledge and skills about Nutrition, Dietetics & Fasting Therapy. It deals with basic principles and concepts of Diet (Aahaara), Nutrition (Poshana) and Fasting therapy (Upabaasa) as well as the role of them in human. The goal is to enable them to analyze nutritional profiles of their patients and prescribe diets to them based on nutritional requirements as well as utilization of therapies for therapeutic purpose.

Course Objectives:

After studying this subject, the student will be able to:

1. Apply nutritional knowledge to analyze personal dietary intakes, to plan nutritious meals using nationally established criteria to meet recommended goals and to evaluate food labels and the validity of nutritional claims.
2. Trace the pathways and processes that occur in the body to handle nutrients and alcohol through consumption, digestion, absorption, transport, metabolism, storage and waste excretion.
3. Discuss functions, sources, deficiencies and toxicities of macro- and micronutrients, including carbohydrates, lipids, proteins, water, vitamins and minerals.
4. Apply the concept of energy balance and its influences at the physical, emotional, societal, and cellular level to evaluate advantages and disadvantages of various methods used to correct energy imbalances.
5. Utilize concepts of aerobic and anaerobic energy systems, and knowledge about macronutrients, vitamins, minerals, ergogenic, and supplements and relate them to fitness and health.
6. Describe health and disease issues related to nutrition throughout the life cycle, including food safety, corrective dietary modifications, and the influence of specific nutrients on diseases.

Students in all sections of this course will learn the following content:

1. Identify nutrients and the role they contribute to the overall health of an individual.
2. Identify different tools used to assess and evaluate the dietary intake of nutrients.
3. Discuss the role of the various body systems as they contribute to nutrient digestion, absorption, transport and regulation and the removal of wastes from the body.
4. Discuss the structure, dietary sources, biological functions, digestion and absorption of carbohydrates, lipids and proteins.
5. Discuss the sources, functions, potentials for deficiencies or toxicities and recommended intakes for each vitamin and mineral.
6. Identify the importance of energy balance in the maintenance of a healthy body weight.
7. Identify the advantages of a healthy active lifestyle and discuss the utilization of glucose during times of physical exertion.
8. Identify the causes, physical effects, and treatment options for various eating disorders.
9. Identify the role of proper nutrition in assessing growth and development through various stages of life.
10. Discuss food safety as related to foodborne illness, environmental contamination, public health and food preservation.

1 es of 10 with records. 15 hrs

Reference Books

- Begum, M. R. (2005). *Textbook of foods, nutrition and dietetics* (2nd rev. ed.). Sterling Publishers Private Ltd.
- Bamji, M. S., Rao, N. P., & Reddy, V. (1999). *Textbook of human nutrition*. Oxford and IBH Publishing Co. Pvt. Ltd.
- Robinson, C. H., Chenoweth, W. L., & Garwick, A. E. (1986). *Normal and therapeutic nutrition* (17th ed.). MacMillan Publishing Co.
- Joshi, S. A. (2004). *Nutrition and dietetics*. Tata McGraw Hill Publications.
- Begum, M. R. (1989). *A textbook of foods, nutrition and dietetics*. Sterling Publishers.
- Paul, S. (2005). *Textbook of bio-nutrition: Curing diseases through diet* (1st ed.). CBS Publications.
- Antia, F. P. (2001). *Clinical dietetics and nutrition*. Oxford University Press.
- Williams, S. R. (2000). *Nutrition and diet therapy* (7th ed.). Times Mirror/Mosby College Publishing.
- Williams, M. H. (2005). *Nutrition for health, fitness, and sports* (7th ed.). McGraw-Hill International Edition.
- Mudambi, S. R., & Rajagopal, M. V. (2001). *Fundamentals of foods and nutrition* (4th ed.). New Age International (P) Limited, Publishers.
- Gibney, M. J., Vorster, H. H., & Kok, F. J. (2003). *Introduction to human nutrition*. Blackwell Publishing.
- Manay, N. S., & Shadaksharaswamy, M. (2005). *Foods: Facts and principles* (2nd ed.). New Age International (P) Ltd.
- Mahan, L. K., & Arlin, M. T. (1992). *Krause's food, nutrition and diet therapy* (8th ed.). W. B. Saunders Company.
- Adhikari, R. (2075 B.S.). *Khane kasari piune kasari*. Fine Print

Course: Nutrition, Dietetics & Fasting Therapy **(Aahara Vijnaana)**	**Hrs. theory 40 Hrs. lab/practical 40**
Unit 1: Food Science	**Hrs. theory 10 Hrs. lab/practical**
Objectives:	Contents:
1 Define food, nutrition, nutrient and diet 2 Define Dietetic principles in naturopathy 3 Dietetic principles in *Ayurveda* 4 Concept of modern nutrition 5 Explain the medical values and functions of food. 6 Explain the types of diet, and the role of dietician in managing the diet plan.	1 Definition of food, nutrition, nutrient and diet. 2 Dietetic principles in naturopathy 3 Dietetic principles in Ayurveda, Concept of modern nutrition 4 Classification of diet (Naturopathy, Yoga, aurveda) 5 Medical values of food, 6 Functions of food; food guide based on basic five food groups **Cereals-** Composition and nutritive value of rice and wheat. Best method of cooking. **Pulses** - Composition, nutritive value, best method of cooking, germination and its advantages. **Vegetables –** Classification, nutritive value & Best method of cooking. **Fruits** - Classification, nutritive value and changes during ripening **Fleshy foods-** Meat, fish, egg and milk: Nutritive value. 7 Concept of wholesome diet 8 Value of a therapeutic diet, 9 Principles and types of hospital diet

	10 clear fluid, full fluid, soft, light, bland and regular diet. 11 Types, qualities, qualification and role of dietitian in managing hospital dietary.
Evaluation methods: written exam, viva, performance observation in clinical setting	**Teaching / Learning Activities / Resources:** classroom instruction, supervised clinical practice
Unit 2: Human Nutrition	**Hrs. theory: 10 Hrs.**
Objectives:	**Contents:**
1 Define and explain Nutrition, its role for health. 2 Define Nutrient and Recommended Dietary Allowance (RDA) for different age groups.	1 Orientation to human nutrition, an integrated approach, a conventional framework for the study of nutrition 2 Relationship between nutrition and health Malnutrition 3 RDA- meaning, RDA of nutrients for different age groups
Evaluation methods: written exam, viva, performance observation in field trip	**Teaching / Learning Activities / Resources:** classroom instruction, supervised clinical practice
Unit 3: Adequate and balanced Diet:	**Hrs. theory: 5 Hrs.**
Objectives:	Contents:
1 Define and explain adequate diet, and guideline for selection of food. 2 Must have knowledge about Fortification, enrichments, functional foods, phytochemicals.	**Food guidelines for selecting an adequate diet**: Introduction, development of a food guidelines 1 Food exchange lists, use of the food guide in meal planning and evaluation. 2 Fortification, enrichments, functional foods, phytochemicals.
Evaluation methods: written exam, viva, performance observation in field trip	**Teaching / Learning Activities / Resources:** classroom instruction, question-answer session during class room activities, supervised clinical practice
Unit 4: Nutritional care:	**Hrs. theory: 20 Hrs.**
Objectives:	Content:

1 Define nutritional care and explain the **role of Nutrition in health promotion and disease treatment.** 2 Must be able to manage various pathological condition through nutritional care. 3 Define Food Allergy, Diagnosis and treatment. 4 Must perform nutritional care and management during Surgery, trauma and burns 5 To counsel and educate the patient about diet and nutrituion.	1 Nutritional care : Introduction, role of Nutrition in health promotion and disease management. 2 Nutritional care for weight management- Obesit, overweight and underweight : Identification, dietary management and behavioral modifications. 3 Nutritional care for febrile condition – Acute, chronic and recurrent: Malaria, Typhoid and TB 4 Nutritional care for diseases of the Gastro Intestinal tract- Gastric and duodenal ulcer, diarrhoea, constipation, malabsorption syndrome, hemorrhoids, ulcerative colitis, flatulence and steatorrhea. 5 Nutritional care for diseases of liver and biliary system- Viral hepatitis, cirrhosis of liver, cholelithiasis and cholecystitis: Etiology, symptoms and dietary management. 6 Nutritional care for deficiency disorders- 7 Gout, hypo and hyper thyroidism-Causes, symptoms and dietary management. 8 Nutritional care for diseases of Cardiovascular systems. 9 Nutritional care for diseases of Kidney and urinary tract- Nephritis, nephrotic syndrome, nephrolithiasis, renal failure: Etiology, symptoms, dietary management and renal dialysis. 10 Nutritional care for Cancer and AIDS. 11 Food Allergy – Introduction, Diagnosis and treatment, 12 Surgery, trauma and burns- Physiological changes, nutritional care and management 13 Patient education and counseling- Assessment of patient needs, establishing rapport, counseling relationship, resources and aids to counseling
Evaluation methods: written exam, viva, performance observation in field trip, clinical posting.	**Teaching / Learning Activities / Resources:** classroom instruction, question-answer session during class room activities, supervised clinical practice.
Unit 6: Fasting:	**Hrs. theory: 10 Hrs.**

Objectives:	Content:
1 Define fasting and its types. Must have detail knowledge about therapeutic fasting and its role on health and prevention of disease. Must know about its indication, contraindication, crisis and its management	1 General classification of Fasting (Religious, Political and Therapeutics), Methods and types of therapeutic fasting (Dry, Water, Juice, Saline, Monodiet (Kalpa), Fruit, Intermittent, Preventive, Weekly etc,) 2 Science and Fasting: a Theory of fasting in animals . b Scientific basis and research update of fasting a) Fasting for preservation of health and prevention of diseases. b) Rules and regulations for selection of patient for fasting, Do‘s and don‘ts of fasting c) Metabolism of fasting - Preparation of individuals for fasting - Psychological effects and barriers for fasting - Crises during fasting therapy and its management - Significance of enema during fasting and its physiology - Significance of fasting in fever - Fasting for preservation of health - Contraindications and limitations of fasting d) Crises during fasting and their management. e) of Fasting: Fasting in acute diseases, Fasting in chronic diseases, Role of fasting in various diseases, Obesity and fasting, Definition and assessment of obesity & Types, -Treatment.
Evaluation methods: written exam, viva, clinical posting.	**Teaching / Learning Activities / Resources:** classroom instruction, practice in a simulated setting, question-answer session during class room activities, supervised clinical practice.
Unit 7: Food Status and Safety regulation in Nepal:	**Hrs. theory: 5 Hrs.**
Objectives:	Content:
1 Detail knowledge about regulation of food, institutional infrastructure and international status of Nepal.	1 Legislations to regulate food safety 2 Major Food Saftey Act of Nepal 3 Govt Institutional infrastructure to regulate food safety 4 International membership of Nepal -

Evaluation methods: written exam, viva.	**Teaching / Learning Activities / Resources:** classroom instruction, question-answer session during class room activities

Lab/ Practical (20 Hrs):

2 Visit to different diet departments of naturopathy and modern medicine hospitals. 5 hrs
3 Survey nutritional status of at least 2 sites. 3 hrs
4 Plan menu plan using natural foods and raw diet in general. 2 hrs
5 Demonstrate o different sprouts. 3 hrs
6 Prepare low cost balanced diet for different population groups using natural foods. 2 hrs
7 Prepare canteen duties at different Naturopathy hospital, Ayurveda Hospital. 5 hrs

Comprehensive Clinical Practicum

(10 Weeks)

Full Marks: Practical 300

COURSE DESCRIPTION

Comprehensive Clinical Practicum is a 2 months (10 weeks/ 60 working days) program that aims to provide students an opportunity for meaningful career related experiences by working fulltime in real organizational settings where they can practice and expand upon their classroom based knowledge and skills before graduating. It will also help students gain a clearer sense of what they still need to learn and provides an opportunity to build professional networks.In this program the students will be placed in the job market under the supervision of supervisors in Naturopathic hospitals, Ayurvedic hospitals and Allopathic hospitals. The nature of work is practical and the duration will be of three **10 weeks (at least 60 working days).** The student will be eligible for Comprehensive Clinical Practicum only after the completion of all classes of the subjects included in the curriculum. Comprehensive Clinical Practicum should be completed at least 2 weeks before the start of 3rd year final examination of CTEVT. The institute will make arrangement for Comprehensive Clinical Practicum. The institute will inform the CTEVT at least one month prior to the Comprehensive Clinical Practicum placement date along with plan, schedule, the name of the students and their corresponding Comprehensive Clinical Practicum site.

S. N.	Subject	Duration days
1. Naturopathic hospitals	• Decision making in naturopathy • Manipulative therapies • Yoga • Hydrotherapy and mud therapy • Physical medicine and rehabilitation • Dietetics, Nutrition and Fasting therapies • Naturopathic management of various systemic illnesses • Naturopathic management of various disorders • Clinical skill practice of first aid and emergency medicine • Emergency situations related to different body systems	30 days
2. Ayurvedic hospitals	General Ayurveda	20 days
3. Allopathic hospitals	General modern medicine, first aid and emergency medicine	10 days

In this unit students will learn to integrate all the theoretical and practical knowledge gained throughout the course. It provides basic clinical skills for students' future clinical practice.

Naturopathic Hospitals: 24 days

- For each case, students are required to take a detailed history, conduct relevant assessment, critically analyse the data collected, compose a Naturopathic understanding, construct therapeutic treatment aims, define mechanisms of action of selected modalities, conceive a therapeutic prescription and apply it in the clients as a middle level naturopathic practitioner.
- Students do all these strictly under the supervision of an experienced clinical supervisor
- Students have to act professionally and assure patients safety at all times.
- One of the most fundamental principles during the clinical practicum of students is 'do no harms'

A. Decision making in naturopathy: 2 days

1. Operations of the clinic
2. Case taking, screening, basic patient assessment and analysis skills.
3. Natural and naturopathic healing , concept of disease, pathogenesis and preventive approaches naturopathy
4. General management of patients
5. Learn basic counselling
6. Record Keeping
7. Handling naturopathic equipments and other common instruments
8. Good dispensing practice
9. Ethical issues- understanding limitations of treatments and being able to consider alternatives and promptly refer needy cases to the right place and person. Practicing ethically and within the legal boundaries.

Note: Minimum two cases and maintain records

B. Manipulative therapies: 3 days

1. Apply different types of massages in various organ system, joints and whole body.
2. Learn practical skills for paediatric massage, geriatric massage, massage for antenatal care and other systemic applications.
3. Use learned practical skills about aromatherapy and using different types of oils for therapeutic purpose.
4. Develop confidence in working with other manipulative therapies such as Ayurvedic massage, Swedish massage, reflexology, shiatsu, osteopathy, chiropractic and zone therapy

5. Develop and apply therapeutic manipulative formulations for preventive promotive, rehabilitative and curative purposes in various systemic medical issues.

Note: Minimum two cases and maintain records

C. Yoga: 3 days

1. Apply therapeutic Yogaic techniques in preventive, promotive, curative and rehabilitative measures for various clinical conditions
2. Apply Yogaic techniques in management of various systemic problems such as musculoskeletal, nervous, cardiovascular, metabolic, respiratory, hormonal, psychiatric and other disorders.
3. Use of relaxation and meditative techniques.
4. Advanced Yogaic techniques such as Cyclic meditation, Deep relaxation techniques, Instant relaxation techniques, Mastering the emotions techniques, Mind imagery techniques, Mind sound resonance techniques, Quick relaxation techniques, SKY, SMET, VISAK, ANAMS,LSP, PET

Note: Minimum two cases and maintain records

D. Hydrotherapy and mud therapy: 2 days

1. Application of various therapeutic procedures and treatment approaches in hydrotherapy and mud therapy including detailed case documentations.
2. Practical application of excitant effects and resolvent effects.
3. Techniques and practical applications of different types of water baths, air baths, pool therapies, douches, packs and compressions.
4. Various therapeutic and cosmetic applications of mud such as baths, packs and plasters

Note: Minimum two cases and maintain records

E. Physical Medicine and rehabilitation: 2 days

1. Apply learned skills of exercise therapy, heat treatments, cryotherapy, electrotherapy and other electrotherapeutic models for preventive, promotive, rehabilitative and curative measures to manage various systemic problems.

Note: Minimum one cases in each sub-topics and maintain records

F. Dietetics, Nutrition and Fasting therapies: 2 days

1. Nutritional assessment
2. Therapeutic dietary and nutritional interventions in various clinical conditions.
3. Comprehensive nutritional therapeutic strategies with an emphasis on complex health conditions.
4. Administration of different kinds of fasting therapy based on various components of diets such as calorie restrictions, metabolism, dietary fibre, vitamins, minerals and other nutrients.
5. Use various fasting therapies and dietetics in management of various problems and preventive, promotive and rehabilitative therapies.

6. Menu planning for various health issues using knowledge gained about fasting therapy and dietetics.

Note: Minimum two cases and maintain records

G. Naturopathic management of following systemic illnesses: 3 days

1. Musculoskeletal system
2. Nervous system
3. Cardiovascular system
4. Respiratory system
5. Endocrine system
6. Gastrointestinal system
7. Reproductive system
8. Excretory system
9. Otorhinolaryngeal system

Note: Minimum one cases in each sub-topics and maintain records

H. Naturopathic management of various disorders : 3 days

1. Sleep disorders
2. Syncope, faintness, vertigo, dizziness
3. Fever and hyperthermia
4. Hypothermia and frostbite
5. Generalized weakness and other types of weakness.
6. Metabolic disorders including weight loss and weight gain
7. Different types of pain
8. Immune disorders
9. Allergic disorders
10. Various cancers
11. Skin disorders

Note: Minimum two cases and maintain records

I. Clinical skill practice of first aid and emergency medicine: 2 days

1. Cardio-pulmonary resuscitation (CPR)
2. Handling of patient, transportation of patient, recovery position
3. Haemorrhage, shock, wound, injuries and road accidents
4. Poisoning
5. Asphyxia, suffocation, drowning and aspiration.
6. Effects of extreme temperatures: burns, frostbites and heatstrokes.
7. Various bites (snake, dog, scorpion)

8. Syncope and convulsion
9. Bandages, dressing and slings
10. Fractures, sprains and strains
Note: Minimum five cases and maintain records

J. Emergency situations related to different body systems: 2 days

1. Cardiovascular system: arrhythmias, cardiac arrest, acute myocardial infarction, pulmonary embolism, hypertensive emergencies
2. Respiratory System: acute laryngeal obstruction, pneumonia, acute respiratory failure, hemoptysis
3. Gastrointestinal System: severe dehydration, intestinal obstruction, acute pancreatitis, perforation of ulcer, GI bleeding,
4. Nervous System: unconsciousness, head injuries, cerebro-vascular accidents, spinal cord injuries
5. Endocrine system: Diabetic ketoacidosis, hypoglycaemia, tetany
6. Renal system: hematuria, renal colic, acute renal failure, acute retention of urine

Note: Minimum two cases and maintain records

Ayurvedic Hospitals: 24 days

Objectives

- Develop familiarity with the health service delivery system of Ayurveda
- Develop capacity to integrate compatible approaches of Ayurveda in Naturopathic practices
- Broaden the horizon of holistic approaches to health.
- Be able to make and receive appropriate referrals from Ayurveda system of medicine

Activities

- Learn General methods of patient examinations from Ayurvedic approach including *prakriti and bikriti* examination *(parixan)*
- Learn method of systemic examination from Ayurvedic approach
- Learn ayurvedic diagnosis of common problems and Ayurvedic approach to their treatment

Jwor	Raktapitta	Gulma	Prameha kustha	Rajayaxma
Unmada	Apasmara	Sotha	Udar rog	Grahani pandu
Swas kaas	Hikka	Atisara	Chhardi	
Visarpa	Trishna	Bisha	Madatyaa	Bran
Trimarmiya	Vatabyadhi	Vatarakta	Yonibyapat	Arsa and Bhagandar

- Learn about suitable lifestyle, *dincharya*, *ritucharya* and other ayurvedic regimen suitable to particular prkriti.
- Learn about various treatment methods of Ayurveda
- Learn about different aspects of uses of various ayurvedic herbs and ayurvedic preparations, *anupan, sahapan* and the like**.**
- Observe and record diagnostic approach and management of any 5 cases of the common diseases

  Note: Minimum five cases and maintain records

Allopathic Hospitals: 12 days

Objectives

- Develop familiarity with the mainstream health service delivery system (allopath) including diagnostic tools

- Develop clinical competence in providing First Aid and basic emergency services
- Will be able to integrate compatible approaches and clinical methods of modern medicine (allopath) in Naturopathic practices
- Broaden the horizon of holistic approaches to health.
- Be able to make and receive appropriate referrals from mainstream system of medicine

Activities

- Learn to take detail history of the patient.
- Learn to perform general physical examinations
- Learnt to perform various systemic examinations
- Learn to perform mental state examination and cognitive functioning.
- Learn to provide first aid and basic emergency services such as care of shock, wound, injury, bites, poisoning, hemorrhage, asphyxia, hyperthermia and hypothermia.
- Learn to imply aseptic techniques in basic surgical procedures.
- Learn common surgical procedures
- Observe and record diagnostic approach and management of the common diseases involving different bodily systems including obstetrics.
- Learn basic skills of antenatal check-up and delivery (child birth)

Note: Minimum ten cases and maintain records

Evaluation/Assessment of comprehensive clinical Practicum

Attendance and quality of participation	25%
Case reports (numbers and qualities)	30%
Clinical live skill demonstration: In any 3 given areas	45%
Total:	**100%**

Comprehensive community field Practicum

(5 Weeks)

Full Marks: Practical 150

Comprehensive Community Field Practicum is a 1 months (5 weeks/ 30 working days) program where the student performs self-study/problem base learning on case studies, recording and reporting like activities focused on non communicable diseases. The student will be eligible for Comprehensive Community Field Practicum only after the completion of all classes of the subjects included in the curriculum. Comprehensive Community Field Practicum should be completed at least 2 weeks before the start of 3rd year final examination of CTEVT. The nature of work is practical and the duration will be of three 5 weeks (at least 300 hours). The institute will make arrangement for Comprehensive Community Field Practicum. The institute will inform the CTEVT at least one month prior to the Comprehensive Community Field Practicum placement date along with plan, schedule, the name of the students and their corresponding field site.

Serial No	Subject	Duration
1.	Community mini health project	5 days
2.	Community research project	5 days
3.	Exposure to primary health care services	4 days
4.	Family health and welfare	4 days
5.	Health education	4 days
6.	Working with school aged children	2 days
7.	Environmental health and sustainability in community health related activities	2 days
8.	Health service delivery system	4 days

A. Community Mini Health Project : 5 days

- Identify a situation or issue in a community that need to be addressed and can be improved from a community intervention.
- Assess different dimensions of the situations from the multiple perspectives using as many tools as possible
- Explore possible interventions to address the issue
- Choose one suitable interventions among those option implementing the standard decision making process. (you should have important reasons behind choosing that particular option among many others)
- Find supporting evidence to justify proposed interventions. Consult with relevant personnels and experts if needed.
- Make detail plan with clear steps and time frame to implement the intervention.
- Implement the plan in the community with the guidance of supervisors.

- Evaluate the interventions objectively with the help of data. Collect relevant data, organize, analyze, interpret, and reach to a conclusion about the effectiveness of the intervention.
- All these processes should be presented to supervisors and other concerned authorities.
- Answer questions of supervisors, colleagues and other concerned academic authorities. Defense own point of view and position

B. Community Research project: 5 days

1. Design a mini research project. Write a mini research proposal for that. Present it to the supervisor
2. Review some relevant literature on the topic.
3. Make data collection tools: questionnaires or interview(semi-structured) schedule
4. Establish good rapport with the community members of the target population and collect the data using representative sample
5. Process and analyze the data Write the report
6. Present the findings

C. Exposure to Primary Health Care Services: 4 days

1. Development and implement community outreach services.
2. Make home visits to fully assess the health care needs of the family situation.
3. Work with different groups of populations: Different castes, ethnicity, gender, religion.
4. Work with vulnerable populations such as children, pregnant, lactating mothers, the poor persons without family, mentally disturbed, retarded, homeless, aged people and people having various disabilities.
5. Intervene the abuse of vulnerable persons and its consequences.
6. Identify the constraints, limitations and potentials of the health post situation when giving primary health care.
7. Identify indications for referral to a higher level health care facility.

Note: Attend minimum 5 cases maintain appropriate records according to heading.

D. Family Health and welfare:4 days

1. Implement motivational strategies for selection of suitable family planning methods by individuals and couples.
2. Provide family planning materials, education and follow-up care.
3. Implement national guidelines for the care of mothers and children.
4. Provide antenatal, perinatal, postnatal care to mothers and infants.
5. Promote and provide the recommended immunizations for children and mothers.
6. Execute and manage EPI and PHC outreach clinics.
7. Promote healthy nutrition among all family members.
8. Identify treat and resolve the problem of childhood malnutrition among community children.
9. Identify treat and prevent the common diseases of young children.
10. Maintain records of family planning methods, ANC and relevant forms
11. Demonstrate Balanced and mixed diet
12. Demonstrate preparation of jeevan jal and weaning foods

Note: Attend minimum 5 cases maintain appropriate records according to heading.

E. Health Education: 4 days

1. Identify and prioritize community health needs based on data collection.
2. Plan and implement health education programs for preventive, promotive, curative, and rehabilitative purposes for various health related issues
3. Use health education methods and media appropriately, creatively and effectively.
4. Monitor the implementation of health education programs.
5. Evaluate the effectiveness of health education programs and modify them as needed.

F. Working with School age children: 2 days

1. Identify and analyze the occurrence of health problems among school age children.
2. Identify and analyze environmental health problems of the schools.
3. Present a data based needs analysis of school health problems to school authorities.
4. Implement solutions to school health problems.
5. Provide health instruction to students including nutrition, sex education and prevention of communicable disease.
6. Provide counselling services to school age children
7. Provide regular health checkups to school children.

Note: Attend minimum 5 cases maintain appropriate records according to heading.

G. Environmental Health and sustainability in Community health related activities: 2 days

1. Apply sustainability principles in all health related activities.
2. Promote public awareness and responsibility for environmental sanitation through health education.
3. Identify and resolve contamination of drinking water within the community.
4. Manage health service waste products properly
5. Promote the construction of latrines.
6. Counsel individuals and community to promote personal hygiene habits.
7. Identify and advise individuals and community about hygienic methods for handling domestic animals.
8. Identify occurrences of threats to the eco-system of the community and promote public support for sound environmental management.
9. Apply environmental sanitation principles in controlling communicable disease.

H. Health service delivery system: 4 days

1. Understand the different levels and types of health institutions and their functioning
2. Describe organogram of Ministry of Healt, Government of Nepal
3. Describe the functions of the national public health care agencies, public health NGO's, INGO's, various private heath institutions and tell where your possible working place fits and coordinate with each.
4. Analyze and describe community dynamics as they relate to community health.
5. Promote community partnership in health service delivery
6. Take appropriate measures to prevent/control communicable disease.
7. Maintain accurate records of the activities of your health centre.
8. Prepare monthly reports accurately and promptly and maintain records.
9. Supervise, direct and coordinate with other staffs.
10. Maintain communications with all coordinating agencies
11. Maintain record of supplies, inventories and logistics according to LMIS.
12. Promote quality assurance principles in health centre activities.
13. Maintain a safe, pleasant and sustainable working environment.

Evaluation/Assessment of Community Field Practicum

Attendance:	15%
Participation in group activities among health professionals (Coordination, communication, management and leadership skills):	30%

Participation in community activities:	30%
Report preparation and presentation (Individual efforts including detail orientation and organizing):	25%
Total:	**100%**