

CURRICULUM

Technical School Leaving Certificate

Community Medicine Assistant

(18 months program)



Council for Technical Education and Vocational Training

Curriculum Development Division

Sanothimi, Bhaktapur

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Introduction:

Nepal Government, Ministry of Education implemented the letter grading system in SLC from 2072 B.S. The door of TSLC programme is open for those students who have appeared in SLC exam and achieved any GPA and any grade in each subject. Focusing on such students the curriculum of TSLC of 29 months and 15 months have been converted into 18 months to create uniformity among different TSLC programme.

This curriculum is designed to produce basic level human resources in the field of community health equipped with knowledge, skills and attitude necessary for this level of technicians so as to meet the demand of such technician in the country.

Title:

The title of the programme is **TSLC in Community Medicine Assistant**

Aim:

The aim of this program is to produce competent CMAs who provide preventive, promotive, curatives and rehabilitation services as well as primary health care services for individuals, family, groups, and communities through various level of health delivery system such as Sub Health Post, Health Post, Primary Health Care Centre and District Hospitals of Nepal.

Objectives

After the completion of this program, the graduates will be able to:

- Support in providing basic health care to the clients through medical procedure
- Plan and conduct different activities of health clinics.
- Identify the simple health disorders and their treatment.
- Identify basic health needs of the community people through community diagnosis on drinking water, nutrition, and environmental condition, MCH and take an appropriate action by approaching different multi-sectorial health.
- Identify the couples who need family planning services and counsel them for informed choice of family planning devices as their need.
- Visit the home for identifying the health need of individuals and family and take action appropriately.
- Provide health education to the individual, couples and community as required.
- Maintain reports and records of activities considering HMIS.
- Hold communication with the individual, family, and community in understandable way.

Program Description

The requirement of basic level health worker is still scarce in the country, especially in the grass root level of rural community. Training of this level of health worker, called Community Medicine Assistant (CMA) presently becomes the one of the major responsibilities of CTEVT.

Having with the feedbacks after the successful implementation of this curriculum, CTEVT Curriculum Development Division revised this curriculum in 2004 for the first time. However technology is changing frequently and new technology as well as diseases emerge in the health sector. Considering the above facts and feedbacks received from different training institutes and stakeholders, CTEVT/CDD organized workshops with subject experts of long experience in the field in different level and the curriculum now is in this shape at is

believed that this revised curriculum guide of CMA will correct all the observed shortcomings.

The graduates are chiefly employed by Ministry of Health and Population as AHW and other NGOs and INGOs for the development of community of Nepal placing emphasis on the preventive and primitive health, giving basic curative health care based on the principle of primary health care approach.

Hence this curriculum is designed to implement in the technical schools under the CTEVT to produce basic level health worker in the country. These basic level health workers called AHW would be the key persons to provide health in the peripheral level.

Course Duration

This course will be completed within 18 months/76weeks/2520 hours; including 12 weeks (480 hours) On the Job Training (OJT) with supervision. The 3 months (480 hours) OJT will be compulsory after completing the final exam.

Entry criteria:

Individuals with following criteria will be eligible for this program:

- SLC with any grade and any GPA (Since 2072 SLC).
- SLC appeared (Before 2072 SLC)
- Pass entrance examination administered by CTEVT

Group size:

The group size will be maximum 40 (forty) in a batch.

Medium of Instruction:

The medium of instruction will be in English and/or Nepali language.

Pattern of Attendance:

The students should have minimum 90% attendance in theory classes and practical/performance to be eligible for internal assessments and final examinations.

Instructors' Qualification:

- Instructors should have bachelor degree in public health or PCL in general medicine with minimum 5 years practical based experiences.
- The demonstrator should have PCL in general medicine with minimum 2 years practical based experiences.
- Good communicative/instructional skills

Teacher and Student Ratio:

- Overall at institutional level: 1:10
- Theory: 1:40
- Practical: 1:10
- Minimum 75% of the teachers must be fulltime

Instructional Media and Materials:

The following instructional media and materials are suggested for the effective instruction, demonstration and practical.

- Printed media materials (assignment sheets, handouts, information sheets, procedure sheets, performance check lists, textbooks, newspaper etc.).

- Non-projected media materials (display, models, photographs, flip chart, poster, writing board etc.).
- Projected media materials (multimedia/overhead transparencies, slides etc.).
- Audio-visual materials (films, videodiscs, videotapes etc.).
- Computer-based instructional materials (computer-based training, interactive video etc.)

Teaching Learning Methodologies:

The methods of teaching for this curricular program will be a combination of several approaches such as;

- Theory: lecture, discussion, assignment, group work, question-answer.
- Practical: demonstration, observation, simulation, role play, guided practice and self-practice.

Evaluation Details:

The ratio between the theory and practical tests will be as per the marks given in course structure. Ratio of internal and final evaluation is as follows:

S.N.	Particulars	Internal Assessment	Final Exam	Pass %
1.	Theory	50%	50%	40%
2.	Practical	50%	50%	60%

- There will be three internal assessments and one final examination in each subject. Moreover, the mode of assessment and examination includes both theory and practical or as per the nature of instruction as mentioned in the course structure.
- Every student must pass in each internal assessment to appear the final exam.
- Continuous evaluation of the students' performance is to be done by the related instructor/ trainer to ensure the proficiency over each competency under each area of a subject specified in the curriculum.
- The on-the-job training is evaluated in 300 full marks. The evaluation of the performance of the student is to be carried out by the three agencies; the concerned institute, OJT provider industry/organization and the CTEVT Office of the Controller of Examinations. The student has to score minimum 60% for successful completion of the OJT.

Grading System:

The grading system will be as follows:

<u>Grading</u>	<u>Overall marks</u>
Distinction	80% or above
First division	75% to below 80%
Second division	65% to below 75%
Third division	Pass aggregate to below 65%

Certificate Awarded:

The council for technical education and vocational training will award certificate in “**Technical School Leaving Certificate in Community Medical Assistant**” to those graduates who successfully complete the requirements as prescribed by the curriculum.

Job Opportunity:

The graduate will be eligible for the position equivalent to Non-gazetted 2nd class/level 4 (technical) as community medicine assistant or as prescribed by the Public Service Commission. The graduate is eligible for registration with the Nepal Health Professional Council in the grade as mentioned in the NHPC Act.

Allocation of Weeks and hours

S.N.	Particulars	Weeks	Hours
1.	Study Block	16	624
2.	Skill lab practice (Demonstration)	7	280
3.	General Hospital clinic practice	8	320
4.	Janaswasthya/MCH/FP/Nutrition	4	160
5.	Community Field Practice	4	176
6.	Health Laboratory	2	80
7.	Health Post Activities (PHC/HP/SHP)	8	320
	School Health Programme	2	80
8.	Vacation: (Dashain/Tihar, Winter and Summer)	10	
9.	Revision Class	1	
10.	Final examination	2	
	On the Job Training (OJT)	12	480
	Total Weeks:	76	2520

Suggested Master Plan

1	2	3	4	5	6	7	8	9	10
Study block								Dashain & Tihar	
11	12	13	14	15	16	17	18	19	20
Vacation		Skill Lab			MCH /FP/Nutrition clinic				Study Block
21	22	23	24	25	26	27	28	29	30
Study Block			Skill Lab			General Hospital Clinical Practice			
31	32	33	34	35	36	37	38	39	40
General Hospital Clinical Practice				Health Lab.		Vacation			
41	42	43	44	45	46	47	48	49	50
Study Block				Skill Lab	Community Field Practice				Health post Activity
51	52	1	2	3	4	5	6	7	8
Health post Activity							School Health program	Revision Class	
9	10	11	12						
Vacation		Final Exam							

Note: The individual technical schools can manage their vacation plan according to their climatic situation.

ON THE JOB TRAINING

1	2	3	4	5	6	7	8	9	10	11	12
PHC/Health Post/ General hospital											

Course Structure

S. N.	Course Title	Nature	Total Class/Yr		Full Marks	
			T	P	T	P
1	Anatomy & Physiology	T	85		50	
2	Community Health I:	T/P	100	252	50	150
	A. Health Education & Culture		58	160		
	B. Environmental Sanitation		42	92		
3	Epidemiology, Communicable Diseases and Basic Laboratory	T/P	90	215	50	150
4	Basic Medicine	T/P	78	164	50	100
5	Pharmacy & Pharmacology	T/P	70	142	50	100
6	Community Health II:	T/P	87	325	50	150
	1 Health Management		37	145		
	2 MCH/FP/Nutrition		50	180		
7	Basic Medical Procedure, Basic Surgery & First Aid	T/P	114	320	100	150
	Total		624	1416	400	800

Subject Title	Nature of instruction	Duration (Hrs)	Full marks
On the job training (OJT)	Practical	480	300

Note: The academic session consists of 51 weeks with 40 hours per week 2040 hours (51×40 = 2040 hrs) plus 12 weeks with 40 hours per week OJT total per session.

Anatomy & Physiology

Course Description:

This course will provide health workers with basic knowledge of the structure and function of the human body and changes that take place normal processes. The students care apply at the time of implementation of care of individual, family groups and communities to attain the optimal level of health.

Total Hours: 85

Full Marks: 50

S.N.	Task/Objectives	Contents	T
1	Define anatomical terminology	<ol style="list-style-type: none"> 1. Introduction of Anatomy & Physiology 2. Definition of anatomical terminologies: <ol style="list-style-type: none"> A. Anatomical position B. Middle line C. Other terms <ul style="list-style-type: none"> • Superior, Inferior • Anterior, Posterior • Superficial, Deep • External, Internal • Peripheral, Central, Lateral 	3
2	Define human cell, its structure, functions, types and cell division	Definition, structure, Function, types of cells, cell division <ul style="list-style-type: none"> • Tissues • Organization of the body • System • Cavity • Membrane 	9
3	Define digestive organs, functions, locations, structure and accessory digestive organs.	<ul style="list-style-type: none"> • Name of digestive organs • Region of abdomen (borders and located organs) Function and diagrams of: <ul style="list-style-type: none"> • Mouth/oral cavity • Tongue • Teeth • Pharynx • Esophagus • Stomach • Small intestine • Large intestine • Rectum • Anus Location, structure and function of accessory digestive organs <ul style="list-style-type: none"> • salivary glands • Liver and gall bladder 	10

		<ul style="list-style-type: none"> • Pancreas • Physiology of digestion 	
4	<p>Describe the structure & function of heart and blood vessels</p> <p>Describe the composition, function and blood circulation.</p>	<p><u>Cardiovascular System</u></p> <ol style="list-style-type: none"> 1. Heart: position, structure and function 2. blood vessels <ol style="list-style-type: none"> a. Arteries: structure functions and location of: <ul style="list-style-type: none"> • Aorta • Carotid artery • Sub clavian artery • Brachial artery • Radial artery • Ulnar artery • Femoral artery • Tibial artery b. Veins: structure, function and location of important veins: eg: superior venacava, inferior venecava, portal and pulmonary veins. c. Capillaries: structure and functions 3. Blood: <ul style="list-style-type: none"> • Introduction • Composition • Functions • Clotting mechanism • Blood grouping 4. Blood circulation: <ol style="list-style-type: none"> a. Systemic b. Pulmonary c. Portal d. Foetal 5. Cardiac cycle 6. Heart sound, heartbeat, pulse, blood pressure 	10
5	<p>Describe the organs, structure and function of respiratory system</p> <p>Explain the mechanism of respiration</p>	<ol style="list-style-type: none"> 1. Position structure and function of : <ul style="list-style-type: none"> • Nose and nasal cavity • Pharynx • Larynx • Trachea • Bronchi and alveoli • Lungs 2. Muscle of respiration 3. Type of respiration 4. Mechanism of respiration 5. Respiratory volumes 	8
6	Familiarize with muscular System	<ol style="list-style-type: none"> 1. Type of muscular tissues and its importance 2. List the different groups of muscles names and functions <p>Muscle of face and neck</p> 	5

		<p>Muscle of back Muscle of the abdominal wall Muscle of pelvic floor Muscle of respiration Skeletal muscle</p> <p>3. Clinically important muscles</p>	
7	Describe the composition, types, functions and classification of bone.	<p>Skeletal system <u>Bones</u> Definition, composition and function <u>Types of bone</u></p> <ol style="list-style-type: none"> 1. According to structure: Long bone, short bone, irregular flat and sesamoid bone 2. According to origin: cartilagenous, membranous, tendoneous 3. According to composition: compact, spongy <p>List the name and numbers of bones</p> <p><u>Axial skeleton</u></p> <p>a. Skull</p> <ol style="list-style-type: none"> 1. Cranium 2. Face 3. Sinuses 4. Fontanel of skull <p>b. Vertebral column</p> <ol style="list-style-type: none"> 1. Cervical 2. Thoracic 3. Lumbar 4. Sacral 5. Coceygeal <p><u>Function of vertebral column</u></p> <p>c. Thoracic cage</p> <ol style="list-style-type: none"> 1. Sternum 2. Ribs 3. Thoracic vertebrae <p><u>Appendicular skeleton</u></p> <ol style="list-style-type: none"> 1. Shoulder girdle and upper limb (clavicle, scapula, humerous, ulna and radial, carpel meta carpel, phalenges) 2. Pelvic girdle and lower limbs (femur, tibia, fibula, patella, tarsal metatarsal, phalenges) 3. Arches of foot 	10
8	Describe the structure, functions and positions of urinary organs	<p>Urinary System</p> <ol style="list-style-type: none"> 1. List and sketch the different parts of the urinary system 2. structure, function and position of ; <ul style="list-style-type: none"> - Kidney - Ureter - Bladder - Urethra 	5

	Describe the mechanism and composition of urine.	3. Mechanism of urine formation 4. Composition of urine	
9	Describe the structure & functions of external and internal female reproductive organs.	<u>Female Reproductive System</u> Structure and function of Female reproductive organs 1. Review the pelvic cavity 2. Structure and function of external and internal female reproductive organs - Vulva - Vagina - Cervix - Uterus - Uterine tube - Ovaries 3. Accessory organ (Breast) 4. Menstrual cycle and mechanism of menstruation 5. Definition and changes during Menarchy, menopause, puberty	6
10	Describe the structure & functions of male reproductive organs.	<u>Male reproductive system</u> structure and function of male reproductive organs • Scrotum • Testes • Spermatic cord • Seminal vesicles • Prostate glands • Urethra • Penis	3
11	Describe and differentiate endocrine and exocrine gland Describe the structure and functions of endocrine system Explain the male and female hormone	<u>Endocrine System</u> 1. Define and differentiate Endocrine and exocrine glands Hormone and enzyme 2. List important exocrine and endocrine glands 3. Position, structure, function, hormones secreted and functions of hormones secreted by: Hypothalamus, pituitary, thyroid, para thyroid, suprarenal, ovary, testes, pancreas 4. Mammary gland (exocrine)	4
12	Describe the structure, functions and types of nervous system	<u>Nervous System</u> 1. Structure and function of different parts of brain • Cerebrum • Cerebellum • Medulla oblongata • Mid brain	5

		<ul style="list-style-type: none"> • Pons varolli • Spinal cord <p>2. Name and Function of</p> <ul style="list-style-type: none"> • Cranial nerves • Spinal nerves <p>3. Structure, functions and types of neurons</p> <p>4. Autonomic nervous system</p> <ul style="list-style-type: none"> • Sympathetic • Para sympathetic 	
13	Describe the structure and functions of special sense organs	<p><u>Special sense organs</u></p> <p>1. Introduction</p> <p>2. Tongue: structure and functions</p> <p>3. Nose: structure and function, air sinuses (frontal, maxillary)</p> <p>4. Ear: Structure and function of:</p> <ul style="list-style-type: none"> • External ear • Middle ear • Internal ear <p>5. Eyes: Structure and function</p> <p>6. Skin:</p> <ul style="list-style-type: none"> • Structure • Function • Special glands <ul style="list-style-type: none"> - Sweat gland - Sebaceous gland 	7
			85

Community Health I

Total Hours: Theory 100, Practical 252 Total Marks: Theory 50, Practical 150

A. Health Education & Culture

Course Description:-

One of the major functions of the graduates is to help to people change their behavior related to health in different settings such as; community, school and the clinics of health post, sub-health post and other health and medical care settings as well as identify positive/negative aspect of different culture relating health. In order to help change in these behaviors the graduates need to understand the concept of health education & communication, health culture and community diagnosis and develops skills of conducting activities related to their crucial fields. Therefore, the course on health education and culture has been included in the program. Upon the completion of this course the graduate will be able to communicate effectively with the people in the community and patient and visitor in the health care setting and plan and implement health education program in the basic health care delivery settings. Similarly student will be able to find out health problem in the community through field visit and conduct micro-health project through community survey under the supervision of the Instructor.

Total Hours: Theory 58

Practical 160

S. N.	Tasks/Objectives	Contents	T
1	Explain principles & purpose of health education	<p><u>Health Education</u></p> <ol style="list-style-type: none"> 1. Definition 2. Principles & purposes of health education. 3. Importance of health education. 	1
2	List the elements of health education	<p><u>Elements of H.E.</u></p> <ul style="list-style-type: none"> • Communication <ul style="list-style-type: none"> - Define elements • Perception <ul style="list-style-type: none"> - Define importance • Learning process <ul style="list-style-type: none"> - Define ways of learning factor's influencing learning • Leadership <ul style="list-style-type: none"> - Definition, types and role • Change process <ul style="list-style-type: none"> - Define ways of change, obstacle • People participation <ul style="list-style-type: none"> - Definition, importance, role of health education for people's participation. • Group dynamics: definition some propositions about groups. 	4
3	Explain method of health education Give health education through	<p><u>Method of H.E.</u></p> <p>Definition, advantages, disadvantages and uses of;</p> <ul style="list-style-type: none"> • Individual method: 	4

	individual small group & mass method.	<ul style="list-style-type: none"> - Counseling, interview • Small group methods: <ul style="list-style-type: none"> - Group discussion - Demonstration - Role playing/ drama - Mini-lecture - Brain storming - Field trip. - Problem solving. - Workshop - Seminar • Mass method: <ul style="list-style-type: none"> - lecture - Exhibition 	
4	Describe the advantages, disadvantages and uses of media (AVM) of health education.	<p><u>Media (AVM) of health education</u> (Definition, advantages, disadvantages and uses)</p> <ul style="list-style-type: none"> • Audio aids: Radio, cassette • Visual aids: <ul style="list-style-type: none"> - Poster - Pamphlet, flashcard, flipchart, flannel, board, (cut pieces), bulletin, board, film strip, film slide, overhead projector. • Audio-visual aids: <ul style="list-style-type: none"> - Film show, Television. 	2
5	Describe objectives, importance and components of health education program.	<p><u>Concept of planning for health education program</u> Definition Objective Importance Components (information collection):</p> <ul style="list-style-type: none"> • Identification of needs, deciding content, setting of specific objective, selection of the method of H.E., preparation of material, schedule of implementation, monitoring, evaluation of health education program 	4
6	Prepare model health education program on ORS, super flour, F.P., M.C.H., Immunization	<ol style="list-style-type: none"> 1. Introduction 2. Steps of health education program; content, objective, teaching materials, teaching method, resource person, target group, time evaluation. 	2
7	Familiarize with school Health Programme	<ul style="list-style-type: none"> • Introduction • Purpose of SHP • Importance of SHP • Areas of School Health Program, <ol style="list-style-type: none"> a. Health instruction 	4

		b. School health service c. Healthful school living d. School & community joint activities <ul style="list-style-type: none"> • Definition, ways of developing school & community relationship, school & community joint health activities 	
8	<ul style="list-style-type: none"> • Describe the importance and components of lesson plan. • Conduct health instruction classes in the school. 	Lesson plan <ul style="list-style-type: none"> - Definition, importance and components of lesson plan - Heading part - Body (main) part • Specific objective • Material • Activities <ul style="list-style-type: none"> - Ending part • Evaluation • Home work 	2
9	Identify health problems of the student	Physical examination and Nutritional status <ul style="list-style-type: none"> • Height, weight, hair, ear, eyes, teeth, skin, nail, vital sign, vision test, hearing test, 	2
10	Describe the elements, principle, importance, types, barriers, advantages and disadvantages of communication	Communication <ul style="list-style-type: none"> • Definition of communication. • Importance of communication • Elements of communication • Principle of communication • Types of communication • Barrier of communication • Advantage and disadvantage of various method of communication • Factor affecting communication • Communication planning process 	4
11	Describe the relationship of health and culture.	<u>Culture</u> <ul style="list-style-type: none"> • Definition • Relationship of health, behavior and culture • Identification of the major different ethnic group living in Nepal & their culture. 	2
12	Identify positive/negative aspect of different culture on health.	<ul style="list-style-type: none"> • Different cultural practices & its effects on health (personal hygiene; food selections, preparation & storage) • Traditional medical practices in 	2

		Nepal (Historical background) treatment without scientific method, dharmi jhakri traditional healer, priest lama, witches.	
13	Define cultural characteristic and its elements	<ol style="list-style-type: none"> 1. Cultural Characteristics 2. Elements of culture <ul style="list-style-type: none"> • Norms • Concepts • Superstition • Tradition • Customs • Religious practices • Social boundary 	1
14	<p>Familiarize with community Development</p> <p>Identify ways of viewing of community development.</p> <p>Describe the role of CMA for community development.</p>	<p><u>Community Development</u></p> <ol style="list-style-type: none"> 1. Concept of Community Development: <ul style="list-style-type: none"> • Definition, objective, Importance. 2. Ways of Viewing Community Development <ul style="list-style-type: none"> * Process * Method * Program * Movement 3. Role of C.M.A. for Community Development <ul style="list-style-type: none"> • As change agent • As motivator • As guider • As advisor • As Leader <ul style="list-style-type: none"> • As planner • As teacher 	2
15	Identify factors affecting community development.	<ul style="list-style-type: none"> • External agent • Multiple agent • Internal resource mobilization • Criteria for an adoption of the method according to need. 	1
16	Form an assisting committee.	<p><u>Form an assisting committee.</u></p> <ul style="list-style-type: none"> • Point to be consider to form an assisting committee. • Function of assisting committee. • Kinds of committee. 	1
17	Explain different community services	<p><u>Different community services</u></p> <ul style="list-style-type: none"> • Agriculture • Social • Education • Vocational • Co-operative 	1

		<ul style="list-style-type: none"> • Environmental Sanitation • Drinking water. • Inter-sectoral coordination. 	
18	Identify the local resources.	<u>Local resources</u> <ul style="list-style-type: none"> • Men • Money • Materials 	1
19	Explain components of local health development planning.	<u>Concept of local health development planning.</u> <ul style="list-style-type: none"> • Basic component of local health development planning. • Review of health need (observed, felt and real need) • Prioritization of health need. • Fixing goal /objectives of health program. • Assess resources which help health program. <ul style="list-style-type: none"> • Work plan formulation (Action plan) 	2
20	Implement the health program.	<u>Implementation of health program.</u> <ul style="list-style-type: none"> • Point to be considering to implement health program 	1
21	Describe the concept of monitoring, supervision & evaluation.	<u>Concept of monitoring, supervision & evaluation.</u> <ul style="list-style-type: none"> • Definition of monitoring, supervision and evaluation. • Differentiate between monitoring and supervision • Technique of evaluation (oral, observation, questionnaire) 	2
22	Define concepts of community & community diagnosis.	<u>Concepts of community & community diagnosis</u> <ul style="list-style-type: none"> • Definition of community. • Definition of community diagnosis. • Purposes. • Importance. 	2
23	Identify contents of community diagnosis.	<u>Components of community diagnosis</u> <ul style="list-style-type: none"> • Formal/informal leader & other helping hands. • Geographical status. • Educational status. • Demographic status. • Health status. • Social class & racial struggle in the community (political status) • Positive/negative aspects of different castes & their culture. • Lack & short coming circumstances in community • Community resources. 	2

24	Identify methods/tools of community diagnosis.	<u>Methods of Community Diagnosis</u> a. Rapid method (introduction). b. In-depth method (introduction). <u>Tools of Community Diagnosis</u> a. Define tools for rapid methods. I. RRA (Rapid Rural Appraisal) II. PRA (Participatory Rural Appraisal) includes focus group discussion	3
25	Prepare Instrument & pretest.	<ul style="list-style-type: none"> • Prepare question • Prepare interview schedule • Conduct pretest 	1
26	Explain the sample size and its methods	<u>Sample Size</u> Definition & introduction of; Census Sample Method of sampling <ul style="list-style-type: none"> • Random sampling • Purposive • Quota sample 	1
27	Describe the methods of processing information	<u>Data processing</u> <ul style="list-style-type: none"> • Data editing • Data coding • Classification and tabulation of data • Data Analysis and interpretation • Data presentation 	1
28	Write report & present	<u>A. Report writing</u> Structure of report (introduction, objective, analysis, suggestion, reference appendix). <u>B. Presentation in the</u> <ul style="list-style-type: none"> • Community • Institute 	1
29	Identify health need.	<u>Health need</u> <ul style="list-style-type: none"> • Felt health need • Observed health need • Real health need 	1
30	Explain the importance and process of micro health project	<u>Concept of micro health project.</u> <ul style="list-style-type: none"> • Introduction • Importance • Planning • Implementing • Evaluating • Reporting • Lessons learned. 	1
			58

Practical task

1. Identify the importance of Health Education in Health Protection and Promotion.
2. Identify & perform the different element of Health education.
3. Conduct Health Education program with different method.
4. Identify & use of different audio video media I Health Education.
5. Prepare & conduct Health Education program on ORS, Super flour, FP, MCH, Immunization Plan with necessary components for HE program.
6. Conduct School Health program.
7. Prepare & use of lesson plan in school Health program.
8. Perform simple physical examination for students in school.
9. Use & choose proper communication ways for Health Education.
10. Identify main ethnic group of Nepal, their culture and positive/negative aspect of different culture on health.
11. Identify cultural characteristic and its elements
12. Identify the factors that affect in community development.
13. Form an assisting committee.
14. Provide different community services
15. Identify local resources of the community
16. Implement different health programs
17. Monitor, supervise & Evaluate Health Development Program in the community
18. Identify contents of community diagnosis
19. Identify methods/tools of community diagnosis
20. Perform report writing & presentation
21. Identify health need of the community
22. Implement micro health project

B. Environmental Sanitation

COURSE DESCRIPTION:

This course will help the student to increase skill and knowledge needed to provide environmental sanitation services through community based programme and primary health care services during community field visit and home visit. In addition student will also develop skills to help people for better utilization of the locally available health facilities for the effective services.

Total Hours: Theory 42,

Practical 92

S.N.	Tasks/objectives	Contents	T
1	Describe the types, importance and scope of environmental sanitation	Environment <ul style="list-style-type: none"> • Definition • Types <ul style="list-style-type: none"> - Physical - Biological - Social • Sanitation • Environmental Sanitation <ul style="list-style-type: none"> - Importance - Scope 	2
2	Describe the importance, requirement, uses and sources of water. Prevent water from pollution Describe the methods of water purification	Water <ul style="list-style-type: none"> • Definition • Importance • Requirement • Uses • Sources Water pollution <ul style="list-style-type: none"> • Definition • Sources • Prevention of water pollution Water borne diseases <ul style="list-style-type: none"> • Definition • Types • Prevention Household purification of water <ul style="list-style-type: none"> - Boiling - Chemical - Filtration Disinfections of well and well water	5
3	Explain the human excreta and its proper disposal/sanitation practices	Human Excreta <ol style="list-style-type: none"> 1. Introduction 2. Definition 3. Excreta disposal practice in Nepal <ul style="list-style-type: none"> - In rural area - In urban area 4. Social aspect of excreta disposal 5. Excreta disposal & health <ul style="list-style-type: none"> - Transmission of faecal borne 	5

		2. Type of ventilation - Natural - Artificial	
7	Describe food hygiene and its importance. Identify the ways of food contamination. Describe food fortification, additives and preservation. Identify the food borne disease	1. Introduction of food hygiene 2. Definition of food hygiene 3. Importance of food hygiene 4. Way of food contamination - environmental pollution - unhygienic practices - food adulteration 5. Sanitation of eating place 6. Introduction to - Food fortification - Food additives - Food preservation 7. Food borne disease - Food borne intoxication - Food borne infection	5
8	Describe milk hygiene, source of milk contamination, milk sanitation and milk borne disease.	Milk Hygiene 1. Definition 2. Source of milk contamination 3. Milk borne diseases 4. Milk sanitation 5. Pasteurization of milk - Method of pasteurization	1
9	Define meat hygiene, its causes and prevention and control	Meat Hygiene Introduction Causes of poor meat hygiene Related diseases Prevention and control measures Slaughter House	1
10	Identify the arthropods and rodent control measure	1. Introduction to louse arthropods - Mosquito - Flies - Flea - Mite - Rodent 2. Arthropod borne disease - Transmission of arthropod borne disease - Principle of arthropod control - Insecticides 3. Type of rodents - Domestic - Wild 4. Rodents and disease 5. Anti-rodents measure	3
11	Identify the concept of some environmental hazards	Definition and concept of 1. Ecological imbalance 2. Greenhouse effect 3. Ozone layer depletion 4. Radiological hazards	4

		<p>5. Occupational hazards</p> <ul style="list-style-type: none"> - Physical hazards - Chemical hazards - Biological hazards - Mechanical hazards - Psychological hazards <p>6. Occupational diseases</p> <p>Disease due to</p> <ul style="list-style-type: none"> i Physical agent ii Biological agent iii Chemical agent <p>7. Preventive Measures of occupational health hazards</p>	
12	Describe the sources, effects and prevention of noise pollution.	<p>Noise Pollution</p> <p>Definition</p> <p>Sources</p> <p>Effect on health</p> <p>Prevention and control measures</p>	1
13	Describe the sources, effects and prevention of air pollution.	<p>Air Pollution</p> <p>Definition</p> <p>Sources</p> <p>Prevention and control measures</p>	1
14	Manage bio-medical waste	<p>Bio-Medical waste</p> <ul style="list-style-type: none"> - Definition - Sources - Health hazards - Treatment & disposal technique 	2
			42

Practical task

1. Identify proper water purification methods.
2. Identify and manage excreta disposal.
3. Identify and manage solid waste management.
4. Identify and manage liquid waste management.
5. Identify housing condition.
6. Manage food hygiene.
7. Manage milk hygiene.
8. Control the ways of arthropods and rodent.
9. Identify environmental hazards and their management.
10. Perform personal hygiene.

Epidemiology, Communicable Diseases and Basic Laboratory

Total Hours: **Theory 90,** **Practical 215**
Full Marks: **Theory 50,** **Practical 150**

A. Epidemiology & Communicable Diseases

Course Description:

The purpose of this course is to make students able to know the basic concept of epidemiology & common communicable diseases prevalent in our country. This course also enables the student to explain the various epidemiological problems & tackle them & mainly prevent the communicable diseases in individual, family & community level.

Total Hours: Theory 45

Practical 135

S. N.	Tasks/Objectives	Contents	T
1	Define epidemiology, aims	<ul style="list-style-type: none"> • Introduction • Definition of epidemiology • Aims of epidemiology • Different between epidemiology and clinical medicine. 	2
2	Be familiar with various terminologies.	Definition of following terms <ul style="list-style-type: none"> ➤ infection ➤ infestation ➤ inflammation ➤ epidemic, endemic ➤ sporadic, pandemic ➤ zoonosis, incidence ➤ prevalence, fatality ➤ vector, carrier, exotic ➤ pollution, source ➤ reservoir, contamination ➤ surveillance, elimination, eradication ➤ infectious disease ➤ contagious disease ➤ communicable disease ➤ opportunistic infection ➤ Incubation period <ul style="list-style-type: none"> • period of communicability, iatrogenic infection, nosocomial infection 	2
3	Describe the components and importance of epidemiological triad	<ul style="list-style-type: none"> • Definition • Components (Agent, host & environmental factors) • Importance 	2
4	Identify the health indicators and their calculation	Introduction of health indicators Importance Define - rate, ratio and proportion Definition, Importance and calculation of: <ul style="list-style-type: none"> • Crude death rate (CDR) under 5 	7

		mortality rate (U5MR), Infant mortality rate (IMR) maternal mortality rate (MMR), neonatal mortality rate (NMR), crude birth rate (CBR), total fertility rate (TFR), gross fertility rate (GFR), growth rate (GR), prevalence and incidence rate.	
5	Describe the types and importance of population pyramid.	Population pyramid * Definition * Types * Importance	2
6	Explain the method of disease transmission.	* Dynamics of disease transmission * Source, reservoir o Human o Animal o Inanimate * Routes of disease transmission o Direct o Indirect * Susceptible host	2
7	Explain the method of prevention & control of communicable disease.	* Concept and objectives of prevention * Levels of prevention. * Primary * Secondary * Tertiary Concepts of control Control of communicable disease a. Control of reservoir b. Blocking the channel of disease transmission c. Protecting susceptible host.	2
8	Explain the Method of epidemiological investigation.	Epidemiological investigation. - Definition - Objective - steps/process	1
9	Identify the immunization schedule, classification and immunizing agents.	1. Immunity - Definition - Classification acquired and natural active and passive artificial and natural 2. Immunizing agents A. Vaccines ▪ Live ▪ Killed ▪ Toxoid ▪ Combined ▪ cellular fraction B. Immunoglobulins	5

	Perform immunization as per national immunization schedule.	<p>C. Antisera</p> <p>3. National Immunization schedule (vaccines BCG, DPT, Hepatitis B, Hib Measles, polio & T.T., JE, MMR)</p> <p>- Cold chain.</p>	
10	<p>Describe communicable and non-communicable diseases and differentiate them.</p> <p>Describe the causative agent, incubation period, mode of transmission, sign & symptoms, investigation and management of communicable diseases.</p>	<p>A. Introduction, meaning of communicable & non communicable disease.</p> <p>B. Causative agent, (predisposing factor) incubation period, mode of transmission, signs / symptoms, investigation, complications, prevention and management of following communicable diseases.</p> <p>1. Viral disease</p> <p>- Common cold, influenza (bird flue, swine flue), measles, poliomyelitis, chicken pox, mumps, AIDS, Hepatitis, Rabies, JE, yellow fever</p> <p>2. Bacterial diseases</p> <p>- Whooping cough, diphtheria, tetanus, TB (MDR, XDR), typhoid, cholera, food poisoning, diarrhea, dysentery (Amebic, Bacillary) Leprosy, syphilis, gonorrhea, ARI.</p> <p>3. Protozoal disease</p> <p>- Malaria, kala-azar, Dengue Fever.</p> <p>4. Parasitic disease</p> <p>- Worm infestation.</p> <p>Ascariasis, hook worm infestation, enterobiasis, trichuriasis, taeniasis & cisticercosis, filariasis.</p> <p>5. Others</p> <p>- Plague, Pediculosis, scabies, ring worm.</p>	20
			45

B. Basic Laboratory

Course Description:

This course will provide the students with knowledge & skills to identify the various Micro-organism present in human system, through the Microscopic examination, which helps to diagnose & treatment in health care setting.

Total Hours: Theory 45,

Practical 80

S. N	Tasks	Related technical Knowledge	T
1	Define lab, its importance and precaution.	Definition, importance, precaution to be taken in lab.	3
2	Define immunization and its classifications. List immunization against six killer diseases.	Define: Microbiology immune/immunity/ immunization Classification of immunity Antigen antibody reaction List immunization against six killer diseases (EPI)	4
3	Familiarize with microscope and handle properly.	<ul style="list-style-type: none"> • Name of different part of microscope • Types of microscope • Technique of handling microscope • Use of microscope & result reporting. • Advantage of microscope. 	4
4	Perform blood sample collection and blood count.	<ul style="list-style-type: none"> • Blood sample collection • Total count, Differential count and their relation to disease condition. 	3
5	Define microorganism, its classification and structure.	Classification (pathogenic + nonpathogenic) <ul style="list-style-type: none"> • Bacteria, virus, • Parasites, fungus. 2. Structure of microorganisms.	4
6	Define Parasites, its classification and structure.	Definition of parasite Classification Structure of parasite Ova, larva, cyst a protozoa is helminthes.	4
7	Take blood sample by pricking finger.	Finger pricking Definition process Indication Uses.	1
8	Identify the smear (thick & thin).	<ul style="list-style-type: none"> • Definition of thick/thin smear • Uses/advantages/condition for thick/thin smear 	2
9	Define sputum smear, AFB and AFB test. Collect sputum for AFB test.	<ul style="list-style-type: none"> • Meaning of smear • Meaning of AFB. • Meaning of AFB test • Collection of sputum • Meaning of ziehl Neelsen stain and uses. 	3
11	Identify the normal hemoglobin level.	<ul style="list-style-type: none"> • Normal hemoglobin label.(Male, Female) 	1
12	Collect urine sample and conduct pregnancy test.	<ul style="list-style-type: none"> • Urine sample collection • Routine test/ pregnancy test 	2
13	Collect urine for sugar and test.	<ul style="list-style-type: none"> • Importance of urine test for sugar. • Condition presenting sugar in urine. 	2

14	Identify the normal label of urine for albumin (protein).	<ul style="list-style-type: none"> • Normal albumin label in urine. • Normal protein label in urine. • Review the condition presenting albumin in the urine. 	2
15	Collect stool sample for test, conduct stool test and identify the ova, cysts, larva, parasite etc.	<p>Stool sample collection</p> <p>Geographical distribution of parasite & life cycle of:</p> <p>Protozoa, amoeba, giardia</p> <p>Helminthes</p> <ul style="list-style-type: none"> • Round worm • Hook worm • Pin worm • Tape worm • Thread worm • Malaria • Filaria • Kalazar <p>Morphology of ova cyst in different protozoa helminthes</p> <ul style="list-style-type: none"> • Round worm ovum • Hook worm ovum • Thread worm ovum • Whip worm ovum • Cyst of e, histolytic Cyst of C. coli • Cyst of giardia 	10
			45

Basic Medicine

Total Hour: **Theory 78** **Practical 164**
Total Marks: **Theory 50** **Practical 100**

Course Description:

This course will provide an opportunity for students to apply knowledge and skills during the care of an individual, family and community, and solving the problems related to different medical diseases in the care setting.

S. N.	Tasks/Objectives	Contents	T
1	Take general History of the patient	1. General history Taking 2. Introduction <ul style="list-style-type: none"> • Importance of history taking 3. Components of history taking <ul style="list-style-type: none"> • Personal identification • Chief complaint • History of present illness (CLOBWAD) • Medical and surgical history • Family history, family tree • Socio-cultural history • Economical history • Allergic, medicine history • Immunization history • Marital history/menstrual history • Obstetric history 	3
2	Perform general examination of the patient from head to toe	<u>Importance of physical exam</u> General examination a. General condition, height, weight b. Jaundice, anemia, lymph nodes cyanosis, clubbing edema, dehydration (mild, moderate, severe) <ul style="list-style-type: none"> • Definition • Types • Sites to be observed • Normal conditions 	3
3	Examine vital signs	<ul style="list-style-type: none"> • Definition of vital signs • Review of temperature, pulse, respiration, blood pressure and weight 	2
4	Identify the methods of inspection of each system of human body	<u>Systemic examination of system or the human body</u> a. Inspection b. Palpation c. Percussion d. Auscultation e. Normal findings & abnormal findings	2
5	Diagnose and manage anemia.	<u>Anemia: Definition</u> Cause, type, sign/symptom, prevention, treatment, complication, investigation, referral	2

6	Diagnose and manage Protein Energy Malnutrition (PEM)	<u>Protein energy malnutrition</u> <ul style="list-style-type: none"> • Definition, types, cause, symptoms/signs, prevention, treatment, complication, investigation • Review growth and development • Referral 	1
7	Diagnose and manage xerophthalmia	<u>Xerophthalmia</u> <ul style="list-style-type: none"> • Definition • Causes • Symptoms/signs • Treatment • Preventive measures • Complication • Referral 	1
8	Diagnose and manage beri-beri	<u>Beri-Beri</u> <ul style="list-style-type: none"> • Definition • Cause • Common symptoms/signs • Treatment • Preventive measures • Referral 	1
9	Diagnose and manage pellagra	<u>Pellagra</u> <ul style="list-style-type: none"> • Definition • Cause • Common symptoms/signs • Treatment • Preventive measures • Complication • Referral 	1
10	Diagnose and manage scurvy	<u>Scurvy</u> <ul style="list-style-type: none"> • Definition • Cause • Symptoms/signs • Treatment • Preventive measures • Complication • Referral 	1
11	Diagnose and manage rickets	<u>Rickets</u> <ul style="list-style-type: none"> • Definition • Cause • Common Symptoms/signs • Treatment • Preventive measures • Complication • Referral 	1
12	Diagnose and manage the problems of digestive system	<u>Common symptoms of disease of digestive system</u>	3

		<ul style="list-style-type: none"> • Definition, cause, diagnosis, management of: - Heart burn - Flatulence - Hematemesis - Nausea/vomiting - Constipation 	
13	Diagnose and manage gastritis	<u>Gastritis</u> <ul style="list-style-type: none"> • Definition • Cause • Common symptoms/signs <ul style="list-style-type: none"> - Investigation - Treatment - Prevention - Complication - Referral 	1
14	Diagnose and manage peptic ulcer	<u>Peptic ulcer</u> <ul style="list-style-type: none"> • Definition • Classification • Causes • Symptoms and signs • Investigation • Treatment • Prevention • Complication • Referral 	1
15	Diagnose and manage Viral hepatitis	<u>Viral hepatitis</u> <ul style="list-style-type: none"> • Definition • Etiology • Classification • Clinical features • Investigations • Treatment • Complications • Referral 	2
16	Diagnose and manage Amoebiasis and Amoebic liver abscess	<u>Amoebiasis and Amoebic Liver Abscess</u> <ul style="list-style-type: none"> • Definition • Etiology • Clinical features • Investigations • Treatment • Complications • Referral 	2
17	Diagnose and manage Ascites	<u>Ascites</u> <ul style="list-style-type: none"> • Definition • Aetiology • Symptoms/signs 	2

		<ul style="list-style-type: none"> • Investigations • Treatment • Referral 	
18	Identify, manage s/s of Respiratory system's problems	<u>Respiratory system</u> a. Common symptoms [Definition, common causes] <ul style="list-style-type: none"> • Cough • Dyspnoea • Haemoptysis • Chest pain • Cyanosis • Expectoration 	3
19	Diagnose and manage common cold	<u>Common cold</u> <ul style="list-style-type: none"> • Definition • Cause • Symptoms/signs • Prevention • Treatment (symptomatic) • Complications • Referral 	1
20	Diagnose and manage Tonsillitis	<u>Tonsillitis</u> <ul style="list-style-type: none"> • Definition • Cause • Symptoms/signs • Prevention • Treatment • Complications • Referral 	1
21	Diagnose and manage Rhinitis	<u>Rhinitis</u> <ul style="list-style-type: none"> • Definition • Cause • Symptoms/signs • Prevention • Treatment (symptomatic) • Referral 	1
22	Diagnose and manage Pharyngitis	<u>Pharyngitis</u> <ul style="list-style-type: none"> • Definition • Causes • Symptoms/signs • Prevention • Referral 	1
23	Diagnose and manage Sinusitis	<u>Sinusitis</u> <ul style="list-style-type: none"> • Definition • Types • Causes • Symptoms/signs • Investigation 	1

		<ul style="list-style-type: none"> • Prevention • Treatment • Complications • Referral 	
24	Diagnose and manage Bronchitis/Bronchiolitis	<u>Bronchitis/ Bronchiolitis</u> <ul style="list-style-type: none"> • Definition • Types • Aetiology • Symptoms/signs • Investigation • Prevention • Treatment • Complications • Referral 	2
25	Diagnose and manage Pneumonia/ARI (According to CBIMCI)	<u>Pneumonia/ARI</u> <ul style="list-style-type: none"> • Definition • Types • Aetiology • Symptoms/signs • Investigation • Prevention • Treatment • Complications • Referral 	4
26	Diagnose and manage bronchial Asthma	<u>Bronchial Asthma</u> <ul style="list-style-type: none"> • Definition • Types • Aetiology • Symptoms/signs • Investigation • Prevention • Treatment • Complications • Referral 	1
27	Diagnose and manage pulmonary & extra pulmonary Tuberculosis, MDR/XDR TB	<u>Pulmonary and extra pulmonary TB, MDR/XDR TB</u> <ul style="list-style-type: none"> • Definition • Aetiology • Symptoms/signs • Investigation • Prevention • Treatment • Complications • Referral 	4
28	Diagnose and manage pleural effusion	<u>Pleural Effusion</u> <ul style="list-style-type: none"> • Definition 	1

		<ul style="list-style-type: none"> • Aetiology • Symptoms/signs • Investigation • Prevention • Treatment • Complications • Referral 	
29	Diagnose and manage pneumothorax	<u>Pneumothorax</u> <ul style="list-style-type: none"> • Definition • causes • Symptoms/signs • Investigation • Prevention • Treatment • Complications • Referral 	2
30	Diagnose and manage Chronic Obstructive Pulmonary disease (C.O.P.D)	<u>Chronic obstructive pulmonary disease</u> <ul style="list-style-type: none"> • Definition • Aetiology • Symptoms/signs • Investigation • Prevention • Management • Referral 	1
31	Diagnose and manage problem of cardiovascular system	<u>Symptoms of cardiovascular systems</u> [Definition, causes, diagnosis, management of] <ul style="list-style-type: none"> • Fatigue • Palpitation • Edema • Cyanosis • Chest pain • Referral 	2
32	Diagnose and Manage Rheumatic Fever	<ul style="list-style-type: none"> • Definition • Aetiology • Symptoms/signs • Investigation • Prevention • Management • Referral 	1
33	Diagnose and Manage Hypertension	<ul style="list-style-type: none"> • Definition • Types • Aetiology • Symptoms/signs • Investigation • Prevention • Management • Referral 	1
34	Diagnose and Manage	<ul style="list-style-type: none"> • Definition 	1

	Congestive Cardiac Failure (CCF)	<ul style="list-style-type: none"> • Aetiology • Symptoms/signs • Investigation • Prevention • Management • Referral 	
35	Diagnose and Manage Myocardial Infarction (MI)	<ul style="list-style-type: none"> • Definition • Aetiology • Symptoms/signs • Investigation • Prevention • Management • Referral 	1
36	Diagnose and manage symptoms of Genito urinary system	<p>Definition, causes, diagnosis, and management of genito-urinary system's symptoms:</p> <ul style="list-style-type: none"> • Renal colic • O edema • Haematuria • Frequency and urgency of micturation 	2
37	Diagnose and manage symptoms or genito-urinary system's diseases	<p><u>Genito-urinary system</u></p> <ul style="list-style-type: none"> • Definition, Aetiology, Clinical, Features, Investigation, Treatment, Complication Referral of • UTI [cystitis, urethritis] • Nephrotic syndrome 	2
38	Diagnose and manage the problems of endocrine system	<p><u>Endocrine system</u></p> <p>Definition, introduction, causes of endocrine system's symptoms:</p> <ul style="list-style-type: none"> • Delayed growth • Excessive growth • Obesity • Polyuria, polydypsia <p>Definition, causes, clinical features, investigations, prevention and management, complications of endocrine system's diseases:</p> <ul style="list-style-type: none"> • Diabetes mellitus • Hyperthyroidism • Hypothyroidism • Non-toxic simple goiter 	4
39	Diagnose and manage nervous system's symptoms/sings	<p><u>Nervous system</u></p> <p>Definition , causes, Diagnosis, Management or Nervous system's symptoms:</p> <ul style="list-style-type: none"> • Headache 	2

		<ul style="list-style-type: none"> • Fainting attack (syncope) • Convulsion • Unconsciousness 	
40	Diagnose and manage the diseases of nervous system	<u>Nervous system</u> b. Definition, causes, types, investigation, prevention, treatment, complication of nervous system's diseases: <ul style="list-style-type: none"> • Cerebrovascular accidents (CVA) • Meningitis [Bacterial, viral, tubercular] • Encephalitis 	2
41	Diagnose and manage skin diseases	<u>Skin diseases:</u> Symptoms of skin diseases: <ul style="list-style-type: none"> • Itching • Pruritic • Skin eruptions [papules, pustules, vesicle, skin rash] Definition, causes, clinical features, investigation, diagnosis, prevention, treatment and complication of:- <ul style="list-style-type: none"> • Scabies • Ringworm • Impetigo • Eczema • Dermatitis • Acne • Psoriasis 	4
42	Diagnose and manage psychiatric problems	<u>Psychiatric problems:</u> Definition, types, causes, diagnosis, management of <ul style="list-style-type: none"> • Neurosis • Depression • Psychosis • Schizophrenia • Epilepsy • Mental retardation • Alcoholism and drug abuse • Psychosexual disorder • Conversion Disorder • Referral. 	4
			78

Practical

Take the history and vital signs properly
Perform clinical examination properly
Perform proper diagnosis
Perform proper management and referral
Provide proper advice to patients and guardian

Practical of this subject can be perform at clinical skill lab, SHP, HP, PHC, General hospital.

Pharmacy/Pharmacology

Total Hour: Theory 70 Practical 142
Total Marks: Theory 50 Practical 100

Description:

This course will provide students to change health related knowledge development attitude and practice of individual, family and community. Students will be able to support preventive/promotive community base health service in the community. During the course student will develop and maintain good rapid with community applying communication skills and conducting S.H.P. under the supervision of the Instructor.

Total Hour: Theory 70

Practical 142

S. N.	Tasks	Related technical Knowledge	T
1.	Explain the various terminology used in pharmacy and pharmacology	<p>Definition</p> <p>a. Pharmacy and Pharmacology - Types of pharmacy practice area, historical aspects</p> <p>b. Concept of pharmacology</p> <p>c. Function of clinical pharmacist</p> <p>d. Therapeutic drug monitoring</p> <p>e. <u>Pharmacological preparation</u>: Solution, Paste, Elixir, Mixture, Lotion, Liniment, Emulsion, Suspension, Syrup, Jelly, Tincture, Powder, Tablet and its type, Capsule and its type, Suppository Paste, Ointment, Cream, Paints, preservatives.</p> <p>f. <u>Pharmacological terminology</u>: Drugs, Medicine, Formula, Formulation, Manufacturing Date, Expire Date, Trade name, Generic name, preparation, dose, efficiency, batch (lot), convenience, bin-card, formulary, indication, contraindication, therapy, side effects , drug toxicity, toxic effects, bioavailability, precaution, chemotherapy, clinical pharmacology, clinical toxicology, pharmaceuticals, therapeutics, hypersensitivity, receptor, therapeutic index, therapeutic use, tocolytic agent, formulary, precaution, pharmacopoeia, sensitivity, allergic reaction, resistance, prophylactic, drug purity, meteria medica</p> <p>g. Differentiate between drugs and medicine</p>	2
2.	Write prescription	<p>Prescriptions:</p> <ul style="list-style-type: none"> • Definition, importance and parts of prescription • Key points to be considered by prescriber before prescribing. • Principle of appropriate prescribing. • Abbreviation used in prescription e.g. AC, PC, TDS, BID, PRN, SOS, HS, BD etc. 	2
3.	Dispense the drugs	<p>Dispensing</p> <ul style="list-style-type: none"> • Definition, Importance , Steps • Guidelines of appropriate dispensing 	1
4.	Counsel the patient	<p>Patient counseling</p> <ul style="list-style-type: none"> • Definition, Steps and sites, Technique • Reminding point for patient counselling 	1

5.	Perform the pharmacy practice	<ul style="list-style-type: none"> • Care of medicine and identification of damaged drugs • Quality control and quality assurance • Good manufacturing practice (why, essential needs) • Good pharmacy practice (GPP) (management of physical structure, management of drug, management of technical manpower) 	2
6.	Use drugs	<ul style="list-style-type: none"> • Rational use of drug (introduction, consideration, benefits, problems) • Irrational use of drug (introduction and examples) 	1
7.	Describe drug interactions	<ul style="list-style-type: none"> • Introduction, Types, predisposing factors of drug interaction, Examples 	1
8.	Define labeling, its types and importance	<ul style="list-style-type: none"> • Definition, types, important • Points to be mentioned in libeling 	1
10	Manage inventory.	<ul style="list-style-type: none"> • Definition, objective, Importance, Types, storage guidelines 	1
11	Identify the adverse drug reaction	<ul style="list-style-type: none"> • Definition • Types and classification of adverse drug reaction • Preventive measures of adverse drug reaction • Factor affecting adverse drug reaction 	1
12	Familiarize with the guidelines of prescribing drug	<ul style="list-style-type: none"> • Drug use in children • Drug use in elderly • Drug use in pregnancy and lactation 	1
13	Identify the different routes of drugs administration	<p><u>Routes:</u> Advantage and disadvantage, procedure and contraindication of :</p> <ul style="list-style-type: none"> • Oral: per oral, sublingual • Parenteral: IV, IM, SC, ID • Inhalation • Topical • Vaginal • Rectal: Suppository, Enema • Equipment, contraindication and procedures of above routes 	2
14	Manage the posology/ calculation of drug dose	<ul style="list-style-type: none"> • Calculation on the basis of age • Calculation on the basis of weight • Calculation based on body surface area 	1
15	Identify the lifesaving drugs	<ul style="list-style-type: none"> • Introduction, Classification 	1
16	Identify the bioavailability	<ul style="list-style-type: none"> • Introduction • Factors affecting in bioavailability 	1
17	Identify the pharmacokinetic	<p><u>Pharmacokinetic</u></p> <ul style="list-style-type: none"> • Definition • Steps:- Absorption, Distribution, Metabolism, Excretion • Factors affecting drug absorption, distribution and metabolism 	1
18	Identify the pharmaco dynamics	<p><u>Pharmacodynamics</u> Principle of drug action:-</p> <ul style="list-style-type: none"> • Stimulation • Depression 	3

		<ul style="list-style-type: none"> • Irritation • Cytotoxic effect • Replacement • Changing immune status • Anti-infective action • Physical/chemical property <p><u>Mechanism of drug action</u></p> <ul style="list-style-type: none"> • Physical action • Chemical action • Enzymatic action • The receptor theory <p>Factors modifying the effect of drug Effective concentration of drug and plasma half life</p>	
19	<p>Explain the mechanism of action, uses, dose, adverse effects and contraindication of each drugs</p> <p>Note: Anti tubercular drugs should be used according to the National Tuberculosis Control Program (NTP, Nepal)</p> <p>Anti leprotic drugs should be used according to WHO</p>	<p><u>Antibiotic, AMAs and chemotherapeutic agents</u></p> <ul style="list-style-type: none"> • Introduction, • Classification of antibiotics • Rules of using AMAs • Factors influencing AMAs therapy (Patient factor, organism factor, drug factor) • Risk of antimicrobial agents <p>a. According to action</p> <ul style="list-style-type: none"> - Bacteriostatic - Bactericidal <p>b. According to spectrum</p> <ul style="list-style-type: none"> - Broad spectrum - Narrow spectrum <p>Penicillin:</p> <ul style="list-style-type: none"> • Ampicilin, Amoxyciline, Cloxacillin, Flucloxacillin, Benzathine penicillin, Phenoxymethyl penicillin, Amoxycillin + Clavulanic acid, Ampicilin + sulbactam <p>Macrolides:</p> <ul style="list-style-type: none"> • Erythromycin, Azithromycin , Clarithromycin <p>Tetracyclines:</p> <ul style="list-style-type: none"> • Oxytetracycline, Doxycycline <p>Sulfadruugs:</p> <ul style="list-style-type: none"> • Cotrimoxazole <p>Fluroquinolones:</p> <ul style="list-style-type: none"> • Ciprofloxacin, Ofloxacin, Norfloxacin <p>Quinolones:</p> <ul style="list-style-type: none"> • Nalidixic acid, <p>Cephalosporins:</p> <ul style="list-style-type: none"> • Cefadroxil, Cefixim, Ceftriaxone, Cefotaxime, Cefpodoxime <p>Others:</p> <ul style="list-style-type: none"> • Chloramphenicol, clindamycin, Nitrofurantoin, vencomycin, meropenem <p>Aminoglycosides:</p>	9

		<ul style="list-style-type: none"> • gentamycin, Amikacin, Kanamycin <p><u>Antiprotozoal:</u></p> <ul style="list-style-type: none"> • Metronidazole, Tinidazole, Diloxanide Furoate <p><u>Antimalarial:</u></p> <ul style="list-style-type: none"> • Quinine, Chloroquine, primaquine, Artemether with lumefantrine, halofantrine, Chemoprophylaxis and Chemotherapy <p><u>Anthelminths:</u></p> <ul style="list-style-type: none"> • Albendazole, Mebendazole, Prziquantel, Niclosamide <p><u>Antifilarial drug</u></p> <ul style="list-style-type: none"> • Diethylcarbamazine <p><u>Antileishminiasis:</u></p> <ul style="list-style-type: none"> • Sodium stibogluconate, Pentamidine <p><u>Antifungal</u></p> <ul style="list-style-type: none"> • Fluconazole, Ketoconazole, Griseofulvin, Nistatin <p><u>Antitubercular:</u></p> <ul style="list-style-type: none"> • INH, Rifampicin, pyrizinamide, Streptomycin, Ethambutol (combined therapy), Ethonamide, Thiacetazone, cyclooserin <p><u>Antileprotic:</u></p> <ul style="list-style-type: none"> • Dapsone, clofazimine, Rifampicine (Combined therapy) 	
20	Explain the mechanism of action, uses, dose, side effects and contraindication of each drugs used in digestive disorders	<p><u>Antacids :</u></p> <ul style="list-style-type: none"> • Aluminium Hydroxide, magnesium trisilicate, milk of magnesia , sodium bicarbonate <p><u>Drugs used in peptic ulcer:</u></p> <ul style="list-style-type: none"> • Ranitidine, Famotidine, Omeprazole, pantoprazole, rabeprazole, sucralfate, bismuth chelate <p><u>Laxative/purgative:</u></p> <ul style="list-style-type: none"> • Bulk laxative: eg Isabgol • Irritant laxative: eg Bisacodyl tab and suppository • lubricant laxative: eg liquid paraffin • Osmotic laxative: eg Magnesium sulphate, Milk of magnesia ,lactulose <p><u>Drug that affecting intestinal motility</u> Intestinal motility: control and site of drug action</p> <p><u>Antispasmodic:</u></p> <ul style="list-style-type: none"> • Hyoscine, Dicyclomine, mebeverine, Alvirine <p><u>Antidiarrhoeal (nonspecific diarrhea):</u></p> <ul style="list-style-type: none"> • Loperamide, Codine, Diphenoxylate • Maintenance of fluid and electrolyte balance <p><u>Antiemetic:</u></p> <ul style="list-style-type: none"> • Promethazine, ondansetron, Metoclorpramide, Domperidone, granisetron 	4
21	Explain the mechanism of action, uses, dose, adverse drug effects and contraindication of each drugs	<p><u>Bronchodilators</u></p> <ul style="list-style-type: none"> • Aminophylline, Salbutamol (all dosage form), Theophylline + Etophyllin (Deriphylline), Terbutalin, Theophylline, Ephedrine • Drugs used in anaphylactic shock Adrenaline/Epinephrine <p><u>Drugs used in cough:</u></p>	3

		<ul style="list-style-type: none"> Productive cough (Cough expectorant): e.g. Ammonium chloride, Sodium/potassium citrate Unproductive cough (Antitussive: e.g Codeine (for adult), Dextromethorphan (for child) 	
22	Explain the mechanism of action, uses, dose, adverse effects, contraindication and precaution of each drugs	<p><u>Diuretic</u></p> <ul style="list-style-type: none"> What is electrolytes Functions of electrolytes in our body Source of electrolytes Classification of diuretic drugs <p>Frusemide, Hydrochlorthiazide, mannitol, sprionolacetone</p> <p><u>Antihypertensive</u></p> <ul style="list-style-type: none"> Factors involve in control of blood pressure Classification and precaution of antihypertensive drug Choice of initial and subsequent drugs Principle of treatment Ascertain of HTN Goal of therapy <p>Amlodipine, Enalapril, Methyldopa, Nifedepine, Atenolol, Prazosin, Losartan</p>	4
23	Explain the mechanism of action, uses, dose, adverse effects and contraindication of each drugs	<p><u>NSAIDs</u></p> <ul style="list-style-type: none"> Major clinical actions of NSAIDs Clinical effects of NSAIDs Classes of NSAIDs and comparision of their main action <p>Paracetamol, Ibuprofen, Diclofenac, Indomethacin, Naproxin, Aceclofenac, Mefenamic acid, Nimesulide, Ketorolac, piroxicam, Aspirin</p> <p><u>Opid Analgesic</u></p> <ul style="list-style-type: none"> Introduction and classification Clinical notes <p>Morphine, Codeine, Pethidine, Tramadol, Fentanlyl, Pentazocine</p> <ul style="list-style-type: none"> Addiction, habituation Cause of opioid poisoning Signs and symptoms of opioid poisoning or overdose Treatment of opioid poisoning Narcotic management, Objectives of narcotic management, Prevention of addiction or habituation of narcotic drugs, 	3
29	Explain the mechanism of action, uses, dose, adverse drug reactions/ side effects, precautions and contraindication of each drugs	<p><u>Psychopharmacology</u></p> <p>There are various neurotransmitters</p> <ul style="list-style-type: none"> Central neurotransmitters (GABA, Dopamine, etc.) Neurhumoral transmission in CNS Function of brain Treatment modalities in psychiatry Paramedic patient relationship (Therapeutic relationship, therapeutic communication techniques, counselling) <p><u>Anxiolytic drugs</u></p> <ul style="list-style-type: none"> Busiprone, Hydroxyzine, Chlordiazepoxide, Diazepam, 	7

		<p>lorazepam, midazolam, alprazolam,</p> <p><u>Antiepileptic drug</u></p> <ul style="list-style-type: none"> • Phencytoin, phenobarbitone, carbamazepine, gabapentin, lamotrigine, valporic acid <p><u>Anti-depressants drugs</u></p> <ul style="list-style-type: none"> • Amitryptiline, imipramine, fluoxetine, Sertraline, Trazodone, Isocarboxadiz <p><u>Antipsychotic drugs</u></p> <ul style="list-style-type: none"> • Chloropromazine, haloperidol, clozapine, Triflurpromazine, Risperidone • Substance use disorder (drug dependence, classification of commonly abused drugs, complications of drug dependence) • Concept of drug misuse (drug misuse, drug dependence, drug tolerance, withdrawal, inhalants or volatile solvents) • Legal aspects of drug misuse • Narcotic drug act of Nepal • National rules of narcotic management 	
24	Define the mechanism of action, uses, dose, adverse drug reactions/ side effects and contraindication and precaution of each drugs	<p><u>Hormonal drugs</u></p> <p>Introduction of hormones and hormonal drug -Different between hormones and neurotransmitters</p> <p><u>Antidiabetic drugs</u></p> <p>Effects of insulin in fuel homeostasis</p> <ul style="list-style-type: none"> • Type I diabetic (e.g. Insulin) • Type II diabetics (hypoglycaemic drugs) <p><u>Drug used in uterus</u></p> <ul style="list-style-type: none"> • Ergometrine Oxytocin, Methyle ergometrine <p><u>Drug used in thyroid</u></p> <ul style="list-style-type: none"> • Drugs used in hypo-Thyroidism (e.g Thyroxine) and hyper thyroidism (e.g Carbimazole) <p><u>Corticosteroids:</u></p> <ul style="list-style-type: none"> • major effects of corticosteroids, corticosteroids used therapeutically, conditons in which corticosteroids are used for anti-inflammatory and immunosuptessive effects, effect of prolonge corticosteroid use: e.g Betamethasone, Dexamethasone, Prednisolone, Hydrocortisone <p><u>Family planning:</u></p> <p>oral contraceptive pill, norplant, Depomedroxy progestrone acetate, emergency contraceptives</p>	4
25	Identify vaccine and sera, define terms and indication, dose , side effect and contrindication	<p><u>Vaccine:</u></p> <ul style="list-style-type: none"> • Definition • Immunity & its type • Immunization • Immunoglobulins & its types • Antisera • Different between vaccine and sera <p>BCG, DPT(Diphtheria, pertussis, Tetanus, Hepatitis B and Haemophilus influenza type b) Tetanus toxoid, Measles and Rubella, Polio, Hepatitis B vaccine , Hib vaccine , Chicken pox, pneumonia, Typhoid, Japanese encephalitis, MMR</p>	2

		<p>Sera Anti Rabies Vaccine, Anti Snake venom</p> <p>Cold chain</p> <p>Immunoglobulin:</p> <ul style="list-style-type: none"> • Tetanus immunoglobulin, Rabis immunoglobulin, Hepatitis-B immunoglobulin 	
26	Define the mechanism of action, use, dose and adverse effect	<p>Antidotes:</p> <ul style="list-style-type: none"> • Activated charcoal • Atropine 	1
27	Identify drugs for electrolyte imbalance	<p>IV fluids and their electrolytes content Fluid and electrolyte balance Correction of fluid balance Body fluid compartments</p> <ul style="list-style-type: none"> • Oral rehydration salt (ORS) • Normal saline • Dextrose 5%, 10%, 25%, 50% • Ringer lactate, • Dextrose normal saline (DNS) • Infusion rate 	1
28	Define the mechanism of action, uses, dose, adverse effects, precaution and contraindication and precaution of each drugs	<ul style="list-style-type: none"> • Pharmacological effects of histamine • Mechanism of action • Highly sedative: Promethazine • Moderately sedative: Pheniramine • Mild sedative: Chlor-pheniramine, cyproheptadine • Newer: Cetirizine, Fexophenadine 	1
29	Identify the locally used chemicals Actions Use Dose Preparation Side effects Contraindications	<p>Some general used drugs: eye/ear/throat/nose/skin:</p> <ul style="list-style-type: none"> • Povidone Iodine, Gention violet, potassium permanganate, savlon aquous, Methylated spirit, Benzyl Benzoate, Gamma Benzene Hexa-chloride, Whit filed's ointment, Vaseline, glycerine, zinc oxide, Calamine, lignocaine jelly, diclofenac gel, gentamycin, tetracycline, chloramphenicol, ciprofloxacin, soframycin, acyclovir, dexamethasone, hydrocortisone, miconazole, ketoconazole, oxymethazoline, xylomethazoline, silver sulphadiazine 	2
30	Identify vitamins and minerals Sources Indications Side effects Dose Daily requirement Contraindications	<p>Vitamins:</p> <ul style="list-style-type: none"> • Water soluble: Vit.B1, Vit.B2, Vit.B3, Vit.B6, Vit.B12, Ascorbic acid • Fat soluble: Vitamin A, Vitamin D, Vitamin K, Vitamin E <p>Minerals</p> <ul style="list-style-type: none"> • Iron, calcium, ferrous sulfate, iodine, folic acid, 	2
31	Identify the anesthetic drugs; use, dose, side-effects, contraindication	<ul style="list-style-type: none"> • General anesthetic introduction and example only • Local anesthetic: ligcocane, ligcocane + adrenaline 	1

	and precaution		
32	Identify, classification and adverse effects of drugs	<ul style="list-style-type: none"> • Anticancer drugs • Antigout drugs • Lipid lowering drugs • Anti-arrhythmic drugs • Anti-anginal drug • Cardiac-glycosides • Anti-viral • Anti platelet • Anti-coagulant and antagonist 	1
33	Identify concept of essential drugs	<p><u>Essential Drugs</u></p> <ul style="list-style-type: none"> • Concept of essential drug • Benefits of essential drugs • List of essential drugs for national, district, PHC, health post and sub health post. • Treatment Concept of standard treatment guidelines/ protocols (STGs) 	1
34	Identify patient compliance	<ul style="list-style-type: none"> • Introduction • Types of compliance and noncompliance • Factors affecting compliance and noncompliance • Consequences of noncompliance 	1
			70

Practical

Recognize the different medicine

Calculate the dose of drugs

Apply the topical medicine

Community Health II

Total Hours: **Theory 87** **Practical 325**
Full Marks: **Theory 50** **Practical 150**

A. Health Management

Course Description:

This course will provide knowledge and skill in health management field which can be applied to manage Health Post/sub health post/primary health care center and community. During training period student will have opportunities of observation visit to observe existing health management system as well as activities in real situation of HP/SHP/PHC and DHO.

Total Hours: Theory 37

Practical 145

S. N.	Tasks/Objectives	Contents	T
1.	Identify the management in health organization	Management: <ul style="list-style-type: none"> • Definition • Principle • Function <u>(PODSCRBE)</u> P-Planning O-Organizing D-Directing S-Supervising C-Controlling/monitoring R-Record keeping B-Budgeting E-Evaluating or <u>POLE</u> P-Planning O-Organizing L-Leading E-Evaluation	3
2.	Identify the PHC situation in Nepal	<u>P.H.C.</u> Definition Elements Principle Primary health care system in Nepal Current programme in Nepal(Goal)	2
3.	Identify health care system in Nepal	<u>Health care system</u> Introduction, Concept Health care system: <ul style="list-style-type: none"> • Ayurvedic • Homeopathic • Allopathic Level of health care: <ul style="list-style-type: none"> • Primary • Secondary • Tertiary Functions of different health care settings	3

4.	Identify health organization in Nepal	1. Definition <ul style="list-style-type: none"> • Organization • organogram 2. Introduction, function & structure of Health organization in Nepal: MOHP, DOHS, Central, Regional, Zonal, DHO, DPHO, PHC. , HP, SHP 3. Professional Councils <ul style="list-style-type: none"> • Definition • Types • Importance 	3
5.	Familiarize with staffing pattern	Staffing: <ul style="list-style-type: none"> • Definition • Importance • Pattern <ul style="list-style-type: none"> ➤ PHC ➤ HP ➤ SHP Recruitment <ul style="list-style-type: none"> • Introduction • Types <ul style="list-style-type: none"> ➤ Internal ➤ External 	2
6.	Familiarize with the job description of health worker	Job description <ul style="list-style-type: none"> • Introduction • Types • Importance • function Job description of health worker <ul style="list-style-type: none"> • Doctor • HA • Nurse • AHW/SAHW • ANM • Other health workers 	4
7.	Identify the system of recording/reporting	Record <ul style="list-style-type: none"> • Definition • Importance • Deferent type of record forms used in health post • Type of record <ul style="list-style-type: none"> - Clinical - Administrative • Analysis of the records • Utilization of the records Report & Reporting <ul style="list-style-type: none"> • Definition • Importance • Types <ul style="list-style-type: none"> - oral - written 	3

		<ul style="list-style-type: none"> • Reporting time schedule 	
8.	Identify health information system (HIS)	HMIS, HuRDISH, LMIS, FMIS <ul style="list-style-type: none"> • Introduction Importance and process of HMIS	2
9.	Perform administrative work	Administrative work <ul style="list-style-type: none"> • Introduction • Importance • Types • Function <ul style="list-style-type: none"> - Registration - Dispatch - Filing 	1
10.	Define planning, steps and importance of health planning in Nepal.	<u>PLANNING</u> <ul style="list-style-type: none"> • Definition • Steps of planning • Importance of planning • Health planning in Nepal 	1
11.	Identify/conduct training. Select participants for training	TRAINING <ul style="list-style-type: none"> • Meaning • Importance • Types <ul style="list-style-type: none"> - Pre service - In-service - Short term - Long term - Refresher Meaning of training need Criteria for trainees selection Criteria for need identification <ul style="list-style-type: none"> • Data collection <ul style="list-style-type: none"> * Interview * Questionnaire * Observation • Data analysis • Problem identification • Need prioritization • Need selection 	3
12.	Conduct meeting	Meeting <ul style="list-style-type: none"> • Definition • Importance • Agenda • Step of meeting Minute <ul style="list-style-type: none"> • Definition • Importance 	1
13.	Develop leadership	Leadership <ul style="list-style-type: none"> • Definition • Types • Qualities 	1
14.	Define supervision and prepare supervision plan	1. Definition 2. Importance	1

		<p>3. Tools</p> <ul style="list-style-type: none"> • Manual • Personal file • Checklist <ul style="list-style-type: none"> - Definition - Type - Preparation <p>4. Prepare supervision plan</p>	
15.	Define coordination	<p>Coordination</p> <ul style="list-style-type: none"> • Definition • Types • Importance 	1
16.	Solve the problems	<p>PROBLEMS SOLVING</p> <ul style="list-style-type: none"> • Definition of problems • Identification of problem • Step of problems solving – Rechar’s Method 	1
17.	Write official letters and communicate	<ul style="list-style-type: none"> • Type of letter <ul style="list-style-type: none"> - official - personal • Format of official letter <ul style="list-style-type: none"> - Heading - Greeting - Body of the letter - Closing - Salutation • Characteristic of good letter <ul style="list-style-type: none"> - respectful - concise - clarity - simplicity • Communication process 	1
18.	Prepare different type of statistical charts	<p>Definition and types of:</p> <ul style="list-style-type: none"> • Tabulation • Bar Diagram • Pie Chart 	1
19.	Identify different type of leave	<p>Definition of leave</p> <p>Type of leave</p> <ul style="list-style-type: none"> • Casual leave • Festival leave • Sick leave • Annual leave • Maternity leave • Education leave • Special leave • Others..... 	1
20.	Manage Inventory	<p>Inventory</p> <ul style="list-style-type: none"> • Definition • standard and quality • Replacement • Management • Type of goods 	2

		- Consumable - non-consumable	
			37

Practical Task

1. Visit and monitor Health sector if the organization is managed or not.
2. Develop work plan
3. Draw and recognize the organogram of Nepals health sector.
4. Recognize the staffing pattern and their job description in PHC, HP & SHP.
5. Write leave letters.
6. Identify training need & select health worker for training.
7. Write letters with proper format.
8. Conduct meeting and write minutiing.
9. Fill the different HMIS form using in health sectors.
10. Develop chart.
11. Prepare Budget in Health sector.
12. Solve problems in Richard's method.
13. Perform administrative work.
14. Select proper recording technique and reporting.
15. Manage inventory in well manner.

B. Maternal Child Health (MCH)/Nutrition/Family Planning

Course Description:

This course will provide the students basic concept and the skill needed to provide preventive, primitive as well as curative service to the mother & child to ensure optimal health through the various activities in the MCH clinic.

Total hours: Theory 50 hrs

Practical 180 hrs

S.N.	Tasks/Objectives	contents	T
1	Define MCH/ANC	Introduction- <ul style="list-style-type: none"> ▪ Definition ▪ Objectives ▪ Importance ▪ Function ▪ Need of MCH service in the community 	1
2	Define pregnancy Perform pregnancy test	Introduction- <ul style="list-style-type: none"> ▪ Definition of pregnancy ▪ Physical change according to systems ▪ Signs & symptoms of pregnancy ▪ History taking (personal, past-present and gyne/obst.) ▪ Physical examination (Head to toe) ▪ Calculate the LMP EDD & weeks of gestation 	3
3	Identify minor disorders of pregnancy Provide health education for pregnant women	Introduction- Definition, causes and management of the minor disorders; <ul style="list-style-type: none"> ▪ Morning sickness ▪ nausea /vomiting ▪ backache ▪ Heart burn ▪ muscles cramps Health education on; <ul style="list-style-type: none"> ▪ Personal hygiene ▪ Nutrition (Diet) ▪ Rest & Exercise ▪ Use of medicine ▪ Family planning 	3
4	Identify complication of pregnancy and its management	Introduction- Abortion, ectopic pregnancy, toxemia, mal presentation APH, Placenta Previa; <ul style="list-style-type: none"> ▪ Definition ▪ Causes ▪ S/S ▪ Diagnosis ▪ Treatment ▪ Management ▪ Health education 	3
5	Define delivery/labour	Introduction- <ul style="list-style-type: none"> ▪ Definition of normal labour 	3

		<ul style="list-style-type: none"> ▪ Stages of labour (1st, 2nd, 3rd and 4th) ▪ Sign/symptoms and management of labour (1st, 2nd, 3rd & 4th) ▪ Different between true and false labour ▪ APGAR scoring 	
6	Perform abnormal delivery	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Definition ▪ Types ▪ Diagnosis ▪ Management and referral 	2
7	Manage complication of delivery	<p>Introduction-</p> <ul style="list-style-type: none"> • List the complication such as PPH (primary/secondary), retained placenta, retention of urine, puerperal sepsis; ▪ Definition ▪ Etiology ▪ S/S ▪ Diagnosis ▪ Treatment & management ▪ Referral 	2
8	Provide postnatal care to mother	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Definition terms (Normal lochia, involution of uterus) ▪ Definition of postnatal care ▪ Purpose ▪ Care of postnatal of mother ▪ Health education on <ul style="list-style-type: none"> ➤ Postnatal exercise ➤ care of new born (cord care, eye care, skin care,) ➤ Nutrition ➤ Breast feeding ➤ immunization 	2
9	Provide care of new born baby	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Definition ▪ Purpose of new born baby care ▪ Immediate care of new born (skin care, eye care, cord care) ▪ Follow up new born care (3 days, 7 days, 28 days) ▪ Successful breast feeding ▪ Expressing breast feeding ▪ New born problem/danger sign <ul style="list-style-type: none"> ○ Hypothermia ○ Asphyxia ○ Low birth weight <p>K M C</p> <ul style="list-style-type: none"> ▪ Minor disorder of new born and management <ul style="list-style-type: none"> ○ Sore buttock ○ Skin rashes ○ Physiological jaundice ○ Oral thrust ○ Gynaecomastia 	3

		<ul style="list-style-type: none"> ○ Vomiting <p>New born resuscitation in home or health center.</p>	
10	Identify the postnatal disorders	<p>Postnatal disorders such as; after pain, constipation, crack nipple, engorged breast;</p> <ul style="list-style-type: none"> ▪ Definition ▪ Etiology ▪ S/S ▪ Diagnosis ▪ Management 	2
11	Manage common gynecological problem	<p>Introduction-</p> <ul style="list-style-type: none"> - List the common gynecological problem such as; PID, uterus prolapsed, leucorrhea, Candidiasis and UTI; ▪ Definition ▪ Etiology ▪ Sign & symptoms ▪ Diagnosis ▪ Management ▪ Referral 	2
12	Identify the normal growth development under 5 years child	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Definition ▪ Determinant of growth and development ▪ Growth and development of children according to age <ul style="list-style-type: none"> ➤ weight ➤ height ➤ head & chest circumference ➤ MUAC ▪ Development of milestone ▪ Importance of road to health chart ▪ Use of growth chart 	2
13	Identify common disease in childhood and manage such disease	<p>Introduction</p> <ul style="list-style-type: none"> - The common disease such as; ARI, Diarrhea, meningitis, six killer diseases (TB, Tetanus, Polio, Pertusis, Diphtheria, Measles); ▪ Definition ▪ Etiology ▪ Sign & symptoms ▪ Diagnosis ▪ Management ▪ prevention of six killer disease (immunization) ▪ Immunization schedule 	3
14	Describe the handicap children	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Definition of handicap ▪ Types ▪ Causes ▪ Prevention ▪ Rehabilitation 	1

15	Describe feeding & extra supplementary food	<p>Introduction -</p> <ul style="list-style-type: none"> ▪ Definition <ul style="list-style-type: none"> ➤ breast feeding ➤ weaning ➤ Supplementary food ▪ Importance of breast feeding ▪ Disadvantage of bottle feeding ▪ Importance of weaning ▪ locally available weaning food <ul style="list-style-type: none"> ➤ Method of preparation of sarbottom pitho ▪ Method of preparation of jeevan jal 	2
16	Describe nutrition and health	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Definition ▪ Importance of nutrition ▪ Types of nutrient and their sources <ul style="list-style-type: none"> ➤ Protein ➤ Fat ➤ Carbohydrate ➤ Mineral ➤ Vitamins ▪ Main function of nutrients ▪ Nutrient sources of locally available food 	2
17	Explain about nutritional requirement	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Recommended daily intake for energy <ul style="list-style-type: none"> ➤ Infancy ➤ Children ➤ Adult male ➤ Adult female ➤ Pregnancy mother ➤ Lactation mother ▪ Importance of balance diet 	2
18	Provide nutritional education	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Importance ▪ Precipitating factors of under nutrition in community <ul style="list-style-type: none"> ➤ Food taboos belief & practice 	1
19	Familiarize with agriculture, specially kitchen garden.	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Kitchen garden <ul style="list-style-type: none"> ➤ Definition ➤ Purpose ➤ Advantage 	1
20	Perform counseling	<p>Introduction -</p> <ul style="list-style-type: none"> ▪ Definition ▪ Importance ▪ Process of counseling (ask, tell, help, explain, write, follow up) 	1
21	Define family planning, its types and importance	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Definition ▪ Purpose/importance 	6

		<ul style="list-style-type: none"> ▪ Types ▪ Temporary method of FP (Definition, purpose, indication , side effect, contraindication, advantage, disadvantage and health education); <ul style="list-style-type: none"> ➤ Condom ➤ Oral Pills ➤ Foam tab ➤ Spermicidal ➤ IUD ➤ Norplant ➤ Depo-Provera ➤ Calendar method ➤ Natural method (Lactation Amenorrhea, Safe period method, Withdrawal method, Basal body method, temperature method and Cervical mucosa method) ▪ Permanent methods of FP (Definition, purpose, indication, side effect, contraindication, advantage and disadvantage and health education/follow up visit); <ul style="list-style-type: none"> ➤ Male sterilization (Vasectomy) ➤ Female sterilization (Laparoscopy & Minilap) 	
22	Manage emergency contraceptive	<p>Introduction-</p> <ul style="list-style-type: none"> • Types • Dose and timing • Effectiveness, precaution • Client information • Management of complications 	1
23	Manage PAC/CAC	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Define ▪ Indication ▪ Management ▪ Complication 	1
24	Sub-fertility	<p>Introduction-</p> <ul style="list-style-type: none"> ▪ Definition ▪ Causes ▪ Prevention ▪ Counseling ▪ Management (male and female) 	1
			50

Basic Medical Procedure, Basic Surgery and First Aid

Total Hours: **Theory 114** **Practical 318**
Total Marks: **Theory 100** **Practical 150**

A. Basic Medical Procedure

Course Description:

This course will expose the student to provide the basic medical care for individual and family in the health posts/community and in the hospital settings.

Total Hours: Theory 24

S. N.	Tasks/Objectives	Contents	T
1	Define Basic Medical Procedure	<ul style="list-style-type: none"> • Introduction • Importance 	1
2	Perform infection prevention	<ul style="list-style-type: none"> • Definition • Precaution • Importance • Techniques 	1
3	Sterilize the equipment	<ul style="list-style-type: none"> • Definition • Importance • Types • Methods of sterilization • Indications 	2
4	Take Temperature	<ul style="list-style-type: none"> • Definition of temperature and thermometer • Normal body temperature • Types of temperature • Required materials • Procedures of taking temperature • Convert centigrade to fahrenheit. • Factors affecting for temperature. • Possible result of excessive temperature • Recording reading in decimals. • Condition for taking oral, axillary, groin and rectal temperature. 	3
5	Take pulse rate	Pulse <ul style="list-style-type: none"> • Definition • Method of taking pulse • Sites to take pulse • Normal pulse rate according to age. • Relation of pulse to temperature/respiration. • Condition causing variation 	2
6	Take Respiration	<ul style="list-style-type: none"> • Definition • Method of counting respiration • Normal respiration rate 	2

		<ul style="list-style-type: none"> • Types of respiration • Relation of respiration to pulse & temperature • Condition causing variation. 	
7	Take blood pressure	<ul style="list-style-type: none"> • Introduction • Definition • Required materials • Method of taking B.P. • Normal blood pressure in different age group • Condition causing variation. 	2
8	Perform Nebulization	<ul style="list-style-type: none"> • Introduction • Indication • Required materials • Procedures 	1
9	Perform the dressing in sterilized technique	<ul style="list-style-type: none"> • Definition • Dressing • Importance • Principles • Types • Indication • Required materials • Procedure 	1
10	Carry out bandage	<ul style="list-style-type: none"> • Definition of bandage • Types of bandage • Required materials • Importance of bandage • Indication of bandage • Procedures 	1
11	Carry out Splint	<ul style="list-style-type: none"> • Definition of splint • Types of splint • Required materials • Importance of splint • Indication of splint • Procedure 	1
12	Dispose dirty dressing bandage & Splint.	<ul style="list-style-type: none"> • Process of removing. • Methods of disposing. 	1
13	Perform injection	<ul style="list-style-type: none"> • Definition of injection • Methods of giving injection • Route of injection • Importance of injection. • Sites of giving injection • Possible complication of injection 	1
14	Perform IV cannulation	<ul style="list-style-type: none"> • Required materials • Methods of giving IV cannulation • Sites of giving IV cannulation • Precaution 	1
15	Perform Suturing	<ul style="list-style-type: none"> • Definition of suturing • Indication 	1

		<ul style="list-style-type: none"> • Importance • Types of suturing • Process of suturing • Removal of suturing 	
16	Perform Catheterization	<ul style="list-style-type: none"> • Definition • Type • Indication • Contraindication • Material of catheterization • Procedure • Care of catheter • Complication • Referring case 	1
17	Perform NG (Ryles) tube insertion	<ul style="list-style-type: none"> • Introduction • Indication • Materials requirement • Procedure • Referring condition 	1
18	Perform Enema	<ul style="list-style-type: none"> • Introduction • Objective • Indication • Types • Materials requirement • Procedure • Referring condition 	1
			24

B. Basic Surgery & First Aid

Course Description:

This course will provide students about basic knowledge of first aid and be able to solve any emergency problems by using their knowledge and practice. So an additional course of basic surgery, appropriate care to individual, families and communities to improve the optimum level of health will be provided.

Basic Surgery

Total Hours: Theory 62

S.N.	Contents	Related Technical Knowledge	T
1	Define basic surgery	<ul style="list-style-type: none"> • Definition • Importance 	1
2	Define terminologies used in surgery	Definition of:- <ul style="list-style-type: none"> • Infection • Sepsis • Asepsis • Antiseptic • Aseptic Technique • Disinfections • Disinfectant 	1
3	Diagnosis and manage inflammation	Inflammation <ul style="list-style-type: none"> • Definition • Cause • Sign/Symptoms • Treatment • Complication 	2
4	Perform diagnosis and management of wound	Wound <ul style="list-style-type: none"> • Definition • Cause • Types • Sign & symptoms • Management • Complication 	3
5	Perform diagnosis and management of Boil/Abscess/ Carbuncle/ Cellulites/Gangrene.	Definition, Cause, Clinical feature and management of <ul style="list-style-type: none"> • Boil/ Abscess/ Carbuncle/ Cellulites • Gangrene/Peripheral Vascular Disease (PVD) Methods of incision and drainage	3
6	Perform treatment and management of otitis media	Otitis media <ul style="list-style-type: none"> • Definition • Cause • Sign/Symptoms • Treatment • Complication • Prevention 	1
7	Perform treatment and manage otitis externa	Otitis externa <ul style="list-style-type: none"> • Definition • Sign/Symptoms • Treatment 	1

8	Identify and manage gum bleeding	Gum Bleeding <ul style="list-style-type: none"> • Definition • Cause • Clinical Feature • Treatment 	1
9	Diagnose and manage gingivitis	Gingivitis <ul style="list-style-type: none"> • Definition • Cause • Sign/Symptoms • Management 	1
10	Perform treatment and management of toothache	Toothache <ul style="list-style-type: none"> • Definition • Cause • Clinical features • Management 	1
11	Perform diagnosis and management of dental carries	Dental Carries <ul style="list-style-type: none"> • Definition or introduction • Cause • Sign/Symptoms • Treatment • Prevention • Complication 	1
12	Identify and manage dental calculus	Dental Calculus <ul style="list-style-type: none"> • Definition • Cause • Sign/Symptoms • Prevention • Management • Complication 	1
13	Identify and manage dental plaque	Dental Plaque <ul style="list-style-type: none"> • Definition • Sign/Symptoms • Prevention • Management 	1
14	Perform treatment and management of stye	Stye <ul style="list-style-type: none"> • Definition • Cause • Sign/Symptoms • Treatment • Complication 	1
15	Perform treatment and management of conjunctivitis	Conjunctivitis <ul style="list-style-type: none"> • Definition • Cause • Sign/Symptoms • Diagnosis • Treatment • Complications • Prevention 	2
16	Perform diagnosis and management of cataract	Cataract <ul style="list-style-type: none"> • Cause 	1

		<ul style="list-style-type: none"> • Sign/Symptoms • Diagnosis • Treatment • Complications • Referral 	
17	Perform diagnosis and management of iritis	Iritis <ul style="list-style-type: none"> • Definition • Cause • Sign/Symptoms • Diagnosis • Treatment • Prevention • Complications • Referral 	1
18	Perform diagnosis and management of trachoma	Trachoma <ul style="list-style-type: none"> • Definition • Cause • Sign/Symptoms • Diagnosis • Treatment • Prevention • Complication 	1
19	Perform diagnosis and management of Glaucoma	Glaucoma <ul style="list-style-type: none"> • Cause, Sign/Symptom, • Diagnosis • Treatment • Complication • Referral 	1
20	Perform diagnosis and management of hemorrhoids	Hemorrhoids <ul style="list-style-type: none"> • Definition • Cause • Clinical feature • Treatment • Complications • Referral 	1
21	Perform diagnosis and management of Cyst	Cyst <ul style="list-style-type: none"> • Definition • Classification • Cause • Clinical feature • Treatment • Complications • Referral 	2
22	Perform diagnosis and management of Anal Fistula	Anal Fistula/Fissure <ul style="list-style-type: none"> • Definition • Cause • Clinical feature • Treatment • Complications • Referral 	1
23	Perform diagnosis and	Mastitis	1

	management of Mastitis	<ul style="list-style-type: none"> • Definition • Cause • Clinical feature • Treatment • Complications • Referral 	
24	Perform diagnosis and management of Hernia	Hernia <ul style="list-style-type: none"> • Definition • Cause • Clinical feature • Management • Complications 	1
25	Perform diagnosis and management of Acute abdomen (acute appendicitis, intestinal obstruction, cholecystitis/cholilithiasis)	Acute abdomen <ul style="list-style-type: none"> • Definition • Cause • Clinical feature • Investigation • Differential diagnosis • Management • Complication 	10
26	Perform diagnosis and management of hydrocele	Hydrocele <ul style="list-style-type: none"> • Definition • Cause • Clinical feature • Management • Complication 	1
27	Perform diagnosis and management of retention of urine	Retention of urine <ul style="list-style-type: none"> • Definition • Cause • Clinical feature • Investigation • Treatment • Management • Complication 	2
28	Perform diagnosis and management of haematuria	Hematuria <ul style="list-style-type: none"> • Definition • Cause • Clinical feature • Investigation • Management • Complication 	1
29	Perform diagnosis and management of head injury	Head injury <ul style="list-style-type: none"> • Definition • Causes • Clinical features • Investigation • Management • Complication 	2
30	Identify Glas gows coma scale	<ul style="list-style-type: none"> • Definition 	2

		<ul style="list-style-type: none"> • Importance 	
31	Perform diagnosis and management of spinal cord injury	Spinal Cord Injury <ul style="list-style-type: none"> • Introduction • Clinical features • Investigation • Management • Complication 	1
32	Perform diagnosis and management of tumor	Tumor <ul style="list-style-type: none"> • Definition • Types • Difference between Malignant and benign tumor • Sign and symptoms of malignant and benign tumor • Diagnosis and Referral 	3
33	Perform diagnosis and management of epistaxis	Epistaxis <ul style="list-style-type: none"> • Definition • Cause • Signs / Symptoms • Management 	1
34	Perform diagnosis and management of burn & scalds	Burn <ul style="list-style-type: none"> • Definition • Types • Calculation of Burn • Signs / Symptoms • Management • Complication 	4
35	Identify and Management of Shock	<ul style="list-style-type: none"> • Definition • Types • Cause • Signs/Symptoms • Management • Complication 	4
			62

First Aid

Total Hours: Theory 28

S. N.	Tasks/Contents	Related technical Knowledge	T
1	Define of First Aid	<ul style="list-style-type: none"> • Definition of first aid and emergency care • Duties and responsibilities of first aider • Triage • Importance of first aid management. 	1
2	Define basic life support Perform mouth to mouth respiration	<ul style="list-style-type: none"> • ABC management • CPR Perform mouth to mouth respiration <ul style="list-style-type: none"> • Definition • Importance to give mouth to mouth respiration 	2

	Perform Cardiac massage	<ul style="list-style-type: none"> • Method or process to give mouth to mouth respiration Perform Cardiac massage <ul style="list-style-type: none"> • Introduction • Need for cardiac massage • Technique 	
3	Perform first aid management of choking	Chocking <ul style="list-style-type: none"> • Definition, • Causes • Signs and symptoms • Management • complication 	1
4	Perform first aid management of high altitude sickness	High altitude sickness <ul style="list-style-type: none"> • Introduction • Signs/Symptoms • Prevention • First Aid Management 	1
5	Perform first aid management on sun burn	Sun burn <ul style="list-style-type: none"> • Definition • Signs/Symptoms • Prevention • First Aid management 	1
6	Perform first aid management of high fever	High fever <ul style="list-style-type: none"> • Definition of fever • Types of fever • Causes of fever • Danger of high fever • Sign/Symptom • First aid management 	1
7	Perform first aid Management of Drowning	Drowning <ul style="list-style-type: none"> • Definition • Prevention from drowning • Sign and symptoms of drowning • First Aid management 	1
8	Manage shock	<ul style="list-style-type: none"> • Definition of shock • Causes • Types • Sign/symptom • First aid management • Complication 	4
9	Perform first aid management on frost bite	frost bite <ul style="list-style-type: none"> • Definition • Sign and symptom • Prevention • First Aid management 	1
10	Perform first aid management of snake bite	<ul style="list-style-type: none"> • Types of snake • Signs and symptoms of poisonous and 	1

		<ul style="list-style-type: none"> nonpoisonous snake bite Common poisonous snake in Nepal Prevention First aid management Complication 	
11	Perform first aid management of dog bite	<ul style="list-style-type: none"> Identification Prevention S/S of mad dog and bitten victims First Aid management Danger 	1
12	Perform first aid management of animal and insect bite	<ul style="list-style-type: none"> Identification Signs/symptoms Complication First aid management. 	1
13	Perform first aid management of electrical injury	<ul style="list-style-type: none"> Identification Prevention First Aid management Complication. 	1
14	Manage hemorrhage	<ul style="list-style-type: none"> Definition types pressure point management rehydration Complication 	1
15	Perform first aid management of fracture/dislocation/ sprain	<ul style="list-style-type: none"> Definition of fracture, dislocation and sprain Types First Aid Treatment Complication 	3
16	Perform first aid management of fit and convulsion	<ul style="list-style-type: none"> Definition Causes Sign and symptom First Aid Treatment Dangers 	1
17	Perform first aid management of poisoning	<ul style="list-style-type: none"> Definition Types of poison (organophosphorus, kerosene, mushroom, food poisoning) Sign and symptom Prevention First aid treatment 	2
18	Remove the foreign body from the throat	<ul style="list-style-type: none"> Introduction Ways of foreign body introduced Diagnosis of foreign body Process of removing foreign body Complication 	1

19	Remove the foreign body from the nose	<ul style="list-style-type: none"> • introduction • ways of foreign body introduced • Diagnosis of foreign body • process of removing foreign body • Complication 	1
20	Remove foreign bodies from the eye	<ul style="list-style-type: none"> • Definition of foreign body • Types of foreign body • Ways of foreign body introduced • Diagnosis of F.B. • Process of removing F.B. • Complications 	1
21	Remove the foreign body from ear	<p><u>Introduction</u></p> <ul style="list-style-type: none"> • Ways of foreign body introduced • Diagnosis of foreign body • Process of removing foreign body • Complication 	1
			28

Guidelines for Practical

A. Health post (PHC/HP/SHP):

Practical Areas: OPD, Mobile Clinic, MCH Clinic/Nutrition, Dispensary

Practical Task:

- Identify the PHC/HP/SHP staffing pattern, their job description in PHC, HP & SHP.
- Develop work plan.
- Perform administrative work.
- Develop different chart for statistical data of HP.
- Identify the minimum 10-15 basic medical problem, provide the treatment and if not manage to refer proper channel.
- Provide health education on any one health problem (make a lesson plan).
- Manage inventory in well manner
- Conduct meeting with health post staffs on any one change process (any one real need of the HP for the management point of view and write minute.
- Fill the different HMIS form using in health sectors.
- Select proper recording technique and reporting
- Maintain daily diary (individual student).
- Prepare and present the report about the health post activity and challenges/issue in PHC/HP/Institute.

B. General hospital (H):

Practical Areas:

- Different ward-Emergency unit, surgical ward, Medical ward, Child ward, Gynae/Obst. Ward.
- OPD- ENT, Eye, Dental, Psychiatric and MCH /Family Planning clinic.

Practical Task:

- Perform general physical examination/history taking 5-10 cases and identify the needy problem and manage (In Emergency unit).
- Perform suturing /dressing minimum 5 cases (In surgical ward).
- Perform catheterization/enema and N/G tube insertion procedure minimum 5/5 case in different ward.
- Perform general physical examination/history taking and calculate the LMP /EDD 5-10 Antenatal mothers (In Gynae/obst.ward).
- Identify the growth and development of less than 5 years child (In MCH clinic).
- Identify and manage solid waste/ liquid waste management.
- Perform personal hygiene.

C. Community field

Practical Task:

- Conduct community survey (Fill up family folder 2-5 home individual student)
- Identify and manage excreta disposal
- Identify environmental hazards and their management
- Conduct health teaching and health action selected one home (individual student).
- Maintain diary book (individual student).
- Prepare and present report about the community diagnosis in community field/Institute.

D. School Health Programme

Practical Task:

- Assess the school health environmental sanitation.
- Perform the simple physical examination eg. Height, weight, hair, ear (hearing test) ,eye (vision test), teeth, skin, nail, vital signs and nutritional status.
- Conduct health instruction classes in school (individual student conduct one class with lesson plan).
- Prepare and present the report about the school health programme in school /institute.

E. Laboratory (H.L.)-In hospital

Duration: 2 weeks

- Examine the urine /stool at least 5-10 cases
- Examine the blood for hemoglobin at least 5-10 cases.
- Prepare the blood smear for malaria if available.
- Perform Blood grouping at least 5-10 cases.
- Take blood sample at least 5-10 cases.

On the Job Training (OJT)

Full Marks: 300

Practical: 12 weeks/480 Hrs

Description:

On the Job Training (OJT) is a 3 months (12 weeks/72 working days) program that aims to provide trainees an opportunity for meaningful career related experiences by working fulltime in real organizational settings where they can practice and expand their classroom based knowledge and skills before graduating. It will also help trainees gain a clearer sense of what they still need to learn and provides an opportunity to build professional networks. The trainee will be eligible for OJT only after attending the final exam. The institute will make arrangement for OJT. The institute will inform the CTEVT at least one month prior to the OJT placement date along with plan, schedule, the name of the students and their corresponding OJT site.

Objectives:

The overall objective of the On the Job Training (OJT) is to make trainees familiar with firsthand experience of the real work of world as well as to provide them an opportunity to enhance skills. The specific objectives of On the Job Training (OJT) are to;

- apply knowledge and skills learnt in the classroom to actual work settings or conditions and develop practical experience before graduation
- familiarize with working environment in which the work is done
- work effectively with professional colleagues and share experiences of their activities and functions
- strengthen portfolio or resume with practical experience and projects
- develop professional/work culture
- broaden professional contacts and network
- develop entrepreneurship skills on related occupation

Activity:

In this program the trainees will be placed in the real work of world under the direct supervision of related organization's supervisors. The trainees will perform occupation related daily routine work as per the rules and regulations of the organization as follows;

- Identify the basic medical problem, provide the treatment and if not manage to refer proper channel.
- Provide health education on health problem
- Fill the different HMIS form using in health sectors.
- Perform general physical examination/history taking and identify the needy problem and manage (In Emergency unit).
- Perform suturing /dressing minimum (In surgical ward).
- Perform catheterization/enema and N/G tube insertion procedure in different ward.
- Perform general physical examination/history taking and calculate the LMP /EDD of antenatal mothers (In Gynae/obst. ward).
- Identify the growth and development of less than 5 years child (In MCH clinic).
- Identify and manage solid waste/ liquid waste management.
- Maintain personal hygiene.
- Maintain daily diary (individual student).
- Prepare and present the report about the activity and challenges/issue in PHC/HP/Institute.

Potential OJT Placement site:

Different wards/units of Regional Hospital, Zonal Hospital, District Hospital, Primary Health Care Center and Health Post as follows;

- Emergency unit (3 weeks)
- Child ward/ under 5 year clinic (3 weeks)
- Gyne/obstetric ward/ANC (3 weeks)
- Surgical OPD (minor OT/Dressing) (1 week)
- ENT/EYE OPD (1 week)
- Dispensing/Pharmacy (1 week)

Requirements for Successful Completion of On the Job Training:

For the successful completion of the OJT, the trainees should;

- maintain log book of every practical area (TSLC) distributed by Nepal health Professional Council and submit
- submit daily attendance record approved by the concerned supervisor and minimum 72 working days attendance is required
- maintain daily diary with detail activities performed in OJT and submit it with supervisor's signature
- prepare and submit comprehensive final OJT completion report with attendance record and diary
- secured minimum 60% marks in each evaluation

Complete OJT Plan:

SN	Activities	Duration	Remarks
1	Orientation	2 days	Before OJT placement
2	Communicate to the OJT site	1 day	Before OJT placement
3	Actual work at the OJT site	12 weeks/72 days	During OJT period
4	First-term evaluation	one week (for all sites)	After 3 to 4 weeks of OJT start date
5	Mid-term evaluation	one week (for all sites)	After 8 to 9 weeks of OJT start date
6	Report to the parental organization	1 day	After OJT placement
7	Final report preparation	2 days	After OJT completion

- First and mid-term evaluation should be conducted by the institute.
- After completion of 3 months OJT period, trainees will be provided with 3 days period to review all the works and prepare a comprehensive final report.
- Evaluation will be made according to the marks at the following evaluation scheme but first and mid-term evaluation record will also be considered.

Evaluation Scheme:

Evaluation and marks distribution are as follows:

S.N	Activities	Who/Responsibility	Marks
1	OJT Evaluation (should be three evaluation in 3 months –one evaluation in every one months)	Supervisor of OJT provider	200
2	First and mid- term evaluation	The Training Institute	100
	Total		300

Note:

- Trainees must secure 60 percent marks in each evaluation to pass the course.
- If OJT placement is done in more than one institution, separate evaluation is required from all institutions.

OJT Evaluation Criteria and Marks Distribution:

- OJT implementation guideline will be prepared by the CTEVT. The detail OJT evaluation criteria and marks distribution will be incorporated in the guidelines.
- Representative of CTEVT, Regional offices and CTEVT constituted technical schools will conduct the monitoring & evaluation of OJT at any time during the OJT period.

सन्दर्भ सामग्री (Reference Books)

१. समुदाय विकासमा स्वास्थ्य पक्ष: डा. यगेन्द्र प्रधानाङ्ग
स्वास्थ्य विकास समाज, २०५३
२. पाठशाला स्वास्थ्य र स्वास्थ्य कार्यकर्ताहरू: डा. यगेन्द्र प्रधानाङ्ग
स्वास्थ्य विकास समाज, २०५४
३. संक्रमणमा प्रयोग हुने औषधीहरू: डा. नवीन श्रेष्ठ
स्वास्थ्य विकास समाज, २०५३
४. वेसिक प्रिन्सिपल अफ सर्जरी : निरन्जन आचार्य
एजुकेशनल एण्ड कम्युनिटी हेल्थ अर्गनाइजेशन,
२०५४
५. आधारभूत शरिर रचना तथा क्रिया विज्ञान : एजुकेशनल एण्ड कम्युनिटी हेल्थ अर्गनाइजेशन,
२०५४
६. वातावरणीय स्वास्थ्य: शत्रुधन ओझा
जनशक्ति विकास तथा अनुसन्धान संस्थान,
२०५४
७. समुदाय स्वास्थ्य शिक्षाको रूप रेखा: डा. यगेन्द्र प्रधानाङ्ग/डा देवी बहादुर श्रेष्ठ
एजुकेशनल इन्टरप्राइजेज, २०५३
८. सरुवा रोग: डा. संजीव ढुंगेल/डा उग्रनारायण पाठक
एजुकेशनल इन्टरप्राइजेज, २०५१
९. टेक्स्ट बुक अफ मेडिसिन : डा. संजीव ढुंगेल/ डा उग्रनारायण पाठक
एजुकेशनल इन्टरप्राइजेज, २०५१
१०. क्लिनिकल मेडिसिन डा. संजीव ढुंगेल/डा उग्रनारायण पाठक
एजुकेशनल इन्टरप्राइजेज, २०५१
११. Community Diagnosis Dr. Cinthia B. Hole and other
Health Learning Material Centre
१२. Medical Problems for Health post worker: Dr. Harding
Health Learning Material Centre
१३. HMIS Training Manual: NHTC
१४. LMIS Training Manual: NHTC
१५. A companion pocket book of pharmacy and Pharmacology (Author: Raj Kumar Thapa)
१६. Pharmacy and Pharmacology: Raj kumar Thapa and Surya Narayan Gainju
१७. Basic medicine + pharmacy and pharmacology (Dr. prakash subedi & Hari sharan Thapa)

Basic Requirement for CMA Course

Office Equipment:

There should be well-arranged equipment for training and office management.

- a. Computer
- b. Photo Copy Machine
- c. Printer
- d. Projector
- e. Fax
- f. Telephone
- g. multimedia

Hostel Management:

- a. Essential furniture
- b. Well managed bathroom, urinal.
- c. Well managed kitchen
- d. Warden room
- e. Visiting room
- f. Dining room
- g. Electricity
- h. Security
- i. Television
- j. Telephone

Required tools and materials

Clinical (Basic Medical Procedure):

- Thermometer (alcohol)
 - a. Rectal: 1
 - b. Oral : 10
 - c. Digital : 10
- B.P set (Sphygmomanometer) : 10
- Stethoscope: 10
- Examine table: 1
- Tongue depressor: 10
- Diagnosis set: 2
- Examination bed: 1
- Torchlight: 2
- Weighing machine Adult: 1
- Weighing machine baby: 1
- Measuring tape: 5
- Hand washing materials (per demo room)
- First aid box: 5

Dressing

- Dressing table (Bed) - 1
- Dressing set - 5
- I & D set - 5
- Autoclave - 1
- Gloves (Different Sizes): 10 pairs
- Dressing trolley - 1
- Gauze, Cotton, Bandage sufficient
- Foreign body removal set - 2

- Suture set - 5
- Kidney tray: 5
- Local anesthesia
- Artery forceps: 10
- Dissecting forceps: 10
- Apron: 5
- Perennial towel (As per requirement)
- Antiseptics (Phenol, Lysol, Savlon)
- Sanitary pad
- Surgical blade as per need
- Scissors: 5
- Dental removal set: 2
- Sponge holding forceps: 5
- Chattel forceps: 5
- Foetuscope-5

Medical Procedure:

- Hot and cold application set: 1 Each
- Enema set - 1
- Catheterization set - 1
- Sponge bath set - 1
- Urine test set (Set tube, reagent, Spirit lamp etc.) - 4
- HB set
- I.V injection set – 1
- IM injection set: 1
- I.V stand - 1
- Delivery set - 1
- Speculum (Different types) – 2
- Perennial care set - 2
- Baby bath set – 2
- Vaccines / Cold chain box - 1
- KMC Materials- 1 set
- Resection set 1(C P R)
- Family planning devices 2set
- Utensil / Materials for preparing superfluous - 1
- Utensils / Materials for preparing jeevan jal - 1

Health Education, Sanitation and Community:

- Models of different types of latrine - 1 set
- Relevant poster, Pamphlets, flash cards - 1 set each relevant subject
- Screen - 1
- Water test set (O.T test) - 1
- Transparencies - as per requirement
- Model of insects 1set
- Model of garbage pits.
- Overhead projector - 1
- Overhead projector, Transparency set paper pens, slide, slide projector. Film projector visual aids, (Chart model, Poster etc.) Tape recorder
- T.V, VCR cassettes player according to subject
- Well setting community housing
- Poor setting community housing

Laboratory:

- Chemical balance
- Trays 5
- Hypodermic needles and syringes
- Health post drug list and sample of drugs.
- Spirit
- Kerosene stove / heater 1
- Health Lab Unit:
- Microscope 3
- Sufficient test tube 10
- Spirit lamp 5
- Slides 20
- Hard glass tube (Sufficient) 5
- Other necessary equipment

Anatomy Demonstration Room

- Anatomy model 1 set
- Eye model 1 set
- Ear model 1 set
- Skeletal model (Bone) 1 set
- Full dummy for BMP 1 set
- Anne baby for BMP 1 set
- Skin model chart 1 set
- Muscular system chart 1 set
- Endocrine system chart 1 set
- Fetus for step by step 1 set
- Zoe model 1 set

Miscellaneous

- Syringe (2”+5”+10”+20”+50”)
- Needles (18, 20, 22, 24, 25)
- Urinal
- I.V cannula (different size) 1 set
- I.V solution
- Oxygen cylinder 1 set
- Ambu bag baby and adult 1-1
- Medicine tray
- Emergency drug
- Refrigerator 1
- Bedpan 2
- Sputum cup 2
- Rubber catheter (Different Size and type)
- Screen 2
- Ryles tube 5
- Materials for bedding 1 set
- hand washing per demo room

These above materials must be arranged for conducting practical class effectively.

- a. Management of place for field practice and instructor
For practical training the institute should select appropriate site health post, health center. The institute should inform to CTEVT before sending the students to these places. The students should be sending together with subject related teacher.
- b. Class Room

There will be 40 students per classroom in theory class. Chairs should be arranged one square meter per student. Demonstration room, Workshop room and laboratory should be arranged for practice.

Furniture for Library

- Open Rack, table, and enough chairs

Instructor Staff/Management- Quality of the training must be maintained by appointing permanent qualified and skill teacher in their respected subjects. For clinical practice, the numbers of teaching staff should be determined on the basis of 1:4 students per teacher/part time teacher or instructor should be counted.

Minimum criteria of instructor is -

- a. Bachelor in nursing and equivalent (B.N)
- b. Bachelor in public health (B.P.H)
- c. Certificate level in nursing (C.L.N)
- d. Health assistant (H.A)

*** Trainers training required for all instructors**

Administrative Staffs

Account section / Assistant administration Typist, Librarian and room must be maintained.

Furniture Management

There must be sufficient chair, bench, and desks according to student ratio. There must be good arranged for clinical practice e.g. Table, Chair, Rack and Water etc. These must be necessary Table, Chair, Rack for instructor and staffs.