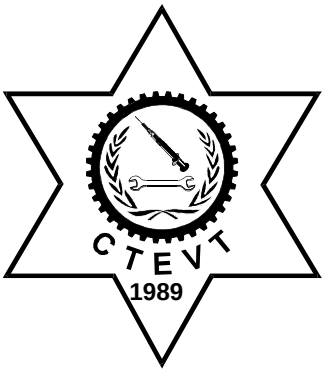
Curriculum
for
CERTIFICATE
in
General Medicine
(Second and Third years)



Council for Technical and Vocational Training
Curriculum Development Division
Sanothimi, Bhaktapur
Revised on December 2010
(Revision initiative taken by NHPC in collaboration with WHO)

First Year

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Third Year

A. First half of third year

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Course structure of Certificate in General Medicine

First year

S.No.	Subject	Mode		Weekly Hours	Distribution of Marks						Total Marks
					Theory			Practical			
		T	P		Internal	Final	Time (Hrs)	Internal	Final	Time (Hrs)	
1	English	3	-	3	20	80	3	-	-	-	100
2	Nepali	3	-	3	20	80	3	-	-	-	100
3	Social Studies	3	-	3	10	40	3	-	-	-	50
4	Anatomy & Physiology	3	2	5	16	64	3	8	12	3	100
5	Physics	3	1	4	16	64	3	8	12	3	100
6	Chemistry	3	2	5	16	64	3	8	12	3	100
7	Zoology	3	2	5	16	64	3	8	12	3	100
8	Botany	3	2	5	16	64	3	8	12	3	100
9	Mathematics, Statistics & Computer Application	3	2	5	16	64	3	8	12	3	100
	Total	27	10	38	146	584		48	72		850

Second Year: Hour Distribution

SN	Subject	Activity	Hours				Assessment Marks
			Hrs. Weekly	Theory Hrs./yrs	Practical Hrs./yrs	Total Hours Yearly	
1	**Medicine -I** (Clinical Method, communicable disease and system disease)	Theory and Practice	5	120	80	200	100 (20+40+40)
2	**Surgery-I** (General Surgery and orthopedics and Physiotherapy)	Theory and Practice	5	120	80	200	100 (60+30+10)
3	**Clinical Pathology** (Microbiology, Parasitology, Biochemistry, Hematology)	Theory and Practice	3	60	40	100	100 (25+25+25+25)
4	OB/GYN	Theory and Practice	4	80	80	160	100 (50+50)
5	Pharmacology and Pharmacy	Theory and Practice	3	90	30	120	100 (70+30)
6	Environmental Health	Theory and Practice	3	90	30	120	100
7	Health Education	Theory and Practice	3	70	30	100	100
8	**PHC/Family Health** (Nutritional, maternal child, family planning, population issues)	Theory and Practice	4	100	80	180	100 (25+25+25+25)
9	Epidemiology and Community diagnosis	Theory and Practice	3	60	30	90	100 (50+50)
10	Basic Medical Procedures/ First Aid	Theory and Practice	3	50	80	130	100 (60+40)
	Total		**36**	**840**	**560**	**1400**	**1000**

Third Year: Hour Distribution

SN	Subject	Activity	Hours				Assessment Marks	
			Hrs. Weekly	Theory Hrs./yrs	Practical Hrs./yrs	Total Hours Yearly	Internal	External
1	**Medicine -II** (Pediatrics including Neonatology, Psychiatry, Dermatology)	Theory and Practice	12.5/wk for 20 wks	120	130	250	100 (60+20 +20)	
2	**Surgery-II** (ENT, Dentistry, Ophthalmology)	Theory and Practice	12.5/wk for 20 wks	120	130	250	100 (30+30 +40)	
3	Health Management	Theory and Practice	7/wk for 20 wks	110	30	140	100	
4	Comprehensive Clinical Practice	Practice				750	150	150
	Emergency		15 days		8	120	40	
	Medicine		30 days		6	180	70	
	Surgery – ENT, Eye, General		30 days 2 days 3days		6	180	(10+15 +40)	
	Clinical Pathology (Laborato		10 days 15 days 15 days		6 6 6	12 18 60	10 5+10 15+15	
	Pharmacy, Pharmacology (Di				6	90	35	
	Obs/Gyane				6	90	35	
	Family Health (MCH,FP)							
	Basic Medical Procedures							
5	Comprehensive community field practice:	Practice						
	Community Health Diagnosis		5 days			6	30	
	a. Environmental Health		(10+10) days			6	120	
	b. Epidemiology and Communicable disease		5 days			6	30	
	c. Health Education		30days			6	180	
	d. PHC/ Health post attachment							
	Total		32-48	350	1442	1792	900	

Second Year: Marks Distribution

S.N.	Subjects	Distribution of Marks						Total marks
		Theory			Practical			
		Internal	Final	Total	Internal	Final	Total	
1.	**Medicine -I** (Clinical Method, communicable disease and system disease)	10	40	50	10	40	50	100
2.	**Surgery-I** (General Surgery and orthopedics and Physiotherapy)	10	40	50	10	40	50	100
3.	**Clinical Pathology**(Microbiology, Parasitology, Biochemistry, Hematology)	10	40	50	10	40	50	100
4.	OB/GYN	10	40	50	10	40	50	100
5.	Pharmacology and Pharmacy	10	40	50	10	40	50	100
6.	Environmental Health	10	40	50	10	40	50	100
7.	Health Education	10	40	50	10	40	50	100
8.	**PHC/Family Health** (Nutritional, maternal child, family planning, population issues)	10	40	50	10	40	50	100
9.	Epidemiology and Community diagnosis	10	40	50	10	40	50	100
10.	Basic Medical Procedures/ First Aid	10	40	50	10	40	50	100
	Total	**100**	**400**	**500**	**100**	**400**	**500**	**1000**

Third Year: Marks Distribution

S.N.	Subjects	Distribution of Marks						Total marks
		Theory			Practical			
		Internal	Final	Total	Internal	Final	Total	
1.	**Medicine -II** (Pediatrics including Neonatology, Psychiatry, Dermatology)	10	40	50	10	40	50	100
2.	**Surgery-II** (ENT, Dentistry, Ophthalmology)	10	40	50	10	40	50	100
3.	Health Management	10	40	50	10	40	50	100
					Internal supervision	**Intern exam**	**External Exam**	
4.	Comprehensive Clinical Practice				100	100	100	300
5.	Comprehensive community field practice:				100	100	100	300
	Total	**30**	**120**	**150**	**230**	**320**	**350**	**900**

The internal supervision marks for the 3rd year comprehensive practices will be calculated using the following formula:

Comprehensive Community Field Practices:

Evaluation by supervising faculty	50 marks
Evaluation by facility staff	20 marks
Community report grade	15 marks
Community presentation	15 marks
Total for internal supervision	**100 marks**

Comprehensive Clinical Practices:

Evaluation by supervising faculty	50 marks
Evaluation by facility staff	20 marks
Written case studies	30 marks
Total for internal supervision	**100 marks**

Certificate in General Medicine

Second Year

Theory:	**60%**
Practical:	**40%**
Theory Practical Ratio:	**3:2**
Total Working days:	**270**
Total working hours:	**8 hours per day (9 am to 5pm including 1 hour break)**
Total working hours per year:	**1890 hours**
No public and local holidays	
Only holidays:	**52 Saturdays, Dashain 3 days, Tihar 3 Days, Phagu Purnima 1 day, Teej (only female) 1 day, Total 60 days.**
Final Exam:	**35 days**

Course: Medicine I

Hours Theory: 120
Hours Practical: 80
Assessment Marks: 100

Course Description:

This course begins with an in-depth presentation on the diagnostic process applied to the history and physical examination of the patient, and includes assessments specific to each system. Medicine I presents a basic review of selected conditions and disorders from areas of internal medicine, including: haematological, cardiovascular, respiratory, gastrointestinal, endocrine, hepatic, nervous, and genitourinary systems. Additionally, communicable diseases common to Nepal are individually discussed. For each disease or condition this course examines etiologies, clinical features, differential diagnosis, management at the health post level, indications for referral, and preventive education.

Course Objectives:

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

1. Perform a thorough history and physical examination, and analyze and interpret the findings to make a rational provisional diagnosis.
2. Identify the etiologies, pathology and clinical features of common systemic disorders and communicable diseases.
3. Describe the management and counseling for common systemic disorders and communicable diseases.
4. Identify indications that a case requires referral to a higher level or specialty facility.
5. Identify and implement opportunities for health education, prevention measures, or rehabilitation.

Minimum Standards:

Students must achieve at a minimum of 40% accuracy in theory, 50% accuracy in Practical.

Recommended Texts:

1. Kafle, K. K., & Pinniger, R.G. Diagnostic and Treatment Manual for Primary Health Care in the District, distributed by Health Learning Materials Center, Tribhuvan University, Nepal.
2. Dhungel S., & Pathak, U., Textbook of Medicine. Educational Enterprises, Kathmandu. Current edition.
3. Dhungel S., & Pathak, U., Communicable Disease. Educational Enterprises, Kathmandu. Current edition.
4. Pathak, U., Differential Diagnosis. Educational Enterprises, Kathmandu. Current edition.
5. Dhungel S., & Pathak, U., Textbook of Medicine. Educational Enterprises, Kathmandu. Current edition.
6. Sayami, P., Medical Problems for Health Post Workers. HLMC Kathmandu.
7. Edwards, C.R.W. and Bouchier, I.A.D., Davidson's Principles and Practice of Medicine. Churchill Livingstone, London. Current edition.

Reference Texts:

1. L.M. Tierney, L.M. et al., Current Medical Diagnosis and Treatment**.** Appleton & Lange, Stamford, Conn. Current edition.

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Course: Medicine I	Hrs. theory 120 Hrs. lab/practical 80
Unit: 1 Clinical Methods	Hrs. theory Hrs. lab/practical
Sub-unit: History taking & Physical Examination	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
(See BMP for basic history taking and physical examination) 1. Explain the importance of establishing trust with the patient/family by making introductions, showing respect, listening attentively, and remaining non-judgmental. 2. Explain the purpose of History taking and clinical examination. 3. Explain why it is essential to ask about and examine all systems of the patient, rather than only the system of "chief complaint." 4. Explain the process of data analysis and give examples. 5. Explain how to use a diagnostic decision diagram to develop a provisional diagnosis. 6. Explain the purpose of investigations in differentiating between possible diagnoses. 7. Discuss the meaning and implication of "false positive" and "false negative" findings. 8. Perform a minimum of 10 history taking and physical examinations with provisional diagnosis and case management details.	1. Principles and procedures for collecting and interpreting clinical data.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, practice in a simulated setting, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 2 Hematological & Cardiovascular Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Anaemia	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Define anaemia and tell the cardinal signs of anaemia. 2. Discuss the incidence of anaemia. 3. Discuss the causes, symptoms and clinical features of common forms of anaemia: iron deficiency anaemia. megaloblastic anaemia aplastic anaemia anaemia due to blood loss. haemolytic anaemia 4. Identify investigations for diagnosing anaemia. 5. Identify complications of anaemia. 6. Describe the management and prevention of common types of anaemia.	1. Incidence of anaemia in Nepal and the socio-cultural factors which contribute to anaemia in this county. 2. Classifications of aenemia. 3. Definition, types, courses clinical features, investigation, complications, management and prevention of different types of anaemia: Iron deficiency anaemia. Megaloblastic anaemia. Haemolytic anaemia. Anaemia due to blood loss. 4. Estimation of hemoglobin.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 2 Hematological & Cardiovascular Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Leukemia	Hrs. theory 1 Hrs. lab/practical 1
Objectives:	Content:
1 Define leukemia and tell the cardinal signs. 2 Discuss the incidence of leukemia. 3 Discuss the causes, symptoms and clinical features of leukemia. 4 Identify investigations for diagnosing leukemia. 5 Identify complications of leukemia. 6 Describe the management and prevention of common types of leukemia.	1. Incidence of leukemia in Nepal and the socio-cultural factors which contribute to leukemia in this county. 2. Definition, types, courses clinical features, investigation, complications, management and prevention of different types of leukemia: 3. Blood components.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 2 Hematological & Cardiovascular Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Haemostatic & atherosclerotic disorders	Hrs. theory 2 Hrs. lab/practical 1
Objectives:	Content:
1. Describe the incidence and pathology of common haemostatic disorders and atherosclerotic occlusive disorders. 2. Describe the clinical features and differential diagnosis of these, which can be done at the health post level. 3. Discuss the treatment and complications of haemostatic disorders and atherosclerotic occlusive disorders. 4. Identify indications for referral to a higher level facility.	1. Etiologies, incidence, complications, management, and referral of haemostatic disorders and atherosclerotic occlusive disorders.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 2 Hematological & Cardiovascular Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Cardiac disorders – angina, infarction, arrhythmia, valvular diseases	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Discuss the etiologies and incidence of each: a. angina b. myocardial infarction c. cardiac arrhythmia d. valvular disorders 2. Describe the pathology, cardinal signs and clinical features of each of the above. 3. Discuss differential diagnosis of these conditions, which can be done at the health post level. 4. Identify indications for immediate referral to a higher level facility. 5. Describe measures to stabilize a patient experiencing M.I. before transferal. 6. Describe the advice and management of these conditions when they are not life threatening.	1. Etiologies, diagnosis, management, referral, stabilization in cases of: a. angina b. myocardial infarction c. cardiac arrhythmia d. valvular disorders 2. Perform physical examination of the cardiovascular system.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 2 Hematological & Cardiovascular Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Cardiovascular disorders – Hypertension	Hrs. theory 2 Hrs. lab/practical 2
Objectives:	Content:
1. Define hypertension, tell the cardinal signs, and explain the different classifications. 2. Discuss the incidence of hypertension and complications of untreated hypertension. 3. Identify the aetiologies and clinical features of common forms of hypertension. 4. Identify investigations necessary for differential diagnosis. 5. Tell how to manage hypertensive emergencies. 6. Describe how to manage the uncomplicated case of hypertension. 7. Identify indications for referral to a higher level facility.	1. Definition, incidence, aetiologies, classifications, clinical features, investigations, complications, hypertensive emergency management, general management of hypertension and referral indications. 2. Measure the blood pressure in upper mid-arm and interpret the value. 3. Show X-ray chest-cardiomegaly.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 2 Hematological & Cardiovascular Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Cardiovascular disorders - Congestive cardiac failure	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the anatomy and physiology of the heart and related organs. 2. Describe the development and condition of congestive cardiac failure (CCF). 3. Identify the cardinal signs, aetiologies, clinical features and pathology of CCF. 4. Identify the investigations necessary for differential diagnosis. 5. Describe the complications of CCF. 6. Describe the management of simple cases of CCF. 7. Identify indications for prompt stabilization and referral to a higher level facility.	1. Anatomy and physiology of heart and related organs. 2. Definition, aetiology, pathology, clinical features, investigation, complication, differential diagnosis, and management of CCF. 3. Show the x-ray film of chest (Cardiomegaly).
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs.
Unit: 3 Respiratory Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Acute bronchitis	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Define bronchitis, tell the cardinal signs and discuss the incidence. 2. Identify aetiology, pathology and clinical features of acute bronchitis. 3. Identify investigations necessary for differential diagnosis. 4. Identify complications of acute bronchitis. 5. Explain how the incidence of chronic bronchitis can be reduced by preventive measures. 6. Describe the management of diagnosed cases of acute bronchitis and indications for referral to a higher level facility.	1. Definition, incidence, aetiology, pathology, clinical features, differential diagnosis, complication and management of acute bronchitis. 2. Investigations for acute bronchitis: Complete Blood Count TC DC Sputum for culture and sensitivity 3. Preventative measures: reduction of environmental air pollution good nutrition containment of respiratory mucus wastes (not

	spitting phlegm into the environment)
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 3 Respiratory Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Chronic Obstructive Pulmonary Disease (COPD)	Hrs. theory 2 Hrs. lab/practical 1
Objectives:	Content:
1. Define COPD and discuss the incidence of this condition in Nepal. 2. Identify the aetiology, pathology, cardinal signs and clinical features of COPD. 3. Identify the investigations necessary for differential diagnosis. 4. Describe how to manage a case of COPD with available resources. 5. Identify complications of COPD. 6. Identify indications for referral to a higher level facility. 7. List community actions or health education aimed at reducing the incidence of COPD.	1. Definition, aetiology, clinical features, differential diagnosis, investigations, management, complications and indications for referral of the case of COPD. 2. Component disorders: - chronic bronchitis - emphysema - asthma 3. Complications of COPD - cor pulmonale 4. Describe how to prevent COPD.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 3 Respiratory Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Pleural effusion	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Define pleural effusion and tell the cardinal signs. 2. State the aetiology, pathology and clinical features of pleural effusion. 3. Differentiate between exudates and transudate. 4. Identify the investigations necessary for differential diagnosis. 5. Identify complications of pleural effusion and the treatment for these. 6. Describe how to stabilize the patient and refer to higher level facility.	1. Definition, aetiology, pathology, clinical features, investigations, differential diagnosis, complications. 2. Management of pleural effusion, techniques of taping the chest. 3. Send the samples to appropriate places. 4. Show the X-ray film of chest to show pleural effusion.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 3 Respiratory Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Respiratory disorders – Pneumonia	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Define pneumonia and discuss the incidence. 2. Explain why pneumonia is a serious problem in Nepal, and identify the populations most at risk. 3. Identify the aetiologies, pathology, cardinal signs and clinical features of different types of pneumonia of pneumonia. 4. Identify complications of pneumonia. 5. List the investigations necessary for differential diagnosis of pneumonia. 6. Describe the management of simple cases of pneumonia. 7. Identify indications for referral to a higher level facility. 8. Describe how the incidence of pneumonia can be reduced.	1. Definition, aetiology, sign and symptoms, investigation, complications, management and epidemiology of pneumonia. 2. Types of pneumonia: - lobar - bronchial - aspiration - viral/bacterial 3. Prevention of pneumonia: - good nutrition for a healthy immune system - taking rest with minor respiratory infections - containment of respiratory mucus wastes (not spitting phlegm into the environment) 4. Show the x-ray of chest of pneumonia.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 3 Respiratory Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Asthma	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Define bronchial asthma and tell the cardinal signs. 2. Identify the aetiology, pathology and clinical features of bronchial asthma. 3. Discuss the relationship between extrinsic and intrinsic asthma. 4. Identify the investigations necessary for differential diagnosis. 5. List complications of asthma. 6. Describe how to manage simple bronchial asthma. 7. Identify indications for referral to a higher level facility. 8. Identify methods of symptom control.	1. Definition, aetiology, pathology, clinical features, differential diagnosis, complication, and investigation of bronchial asthma. 2. Symptom control: - reduce environmental irritants in the air - reduce personal stress - use inhalant medications appropriately 3. Show the X-ray of chest of bronical asthama. 4. Discuss how to prevent asthama.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 3 Respiratory Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Pulmonary tuberculosis	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Define pulmonary tuberculosis (PTB). 2. State the aetiology, pathology, cardinal signs and clinical features of PTB. 3. Identify the investigations necessary for differential diagnosis of PTB. 4. Describe complications of PTB. 1. Describe the procedures for managing smear positive cases according the DOTS concept with special reference to MDR and XDR. 5. . (SCC) 6. Summarize the teaching points for pulmonary positive cases. 7. Identify methods of prevention and control.	2. Definition, aetiology, pathology, clinical features, differential diagnosis, classification of Tuberculosis, investigation, complications, management and prevention of PTB. 3. DOTS therapy in PTB according to National Guidelines with special reference to MDR and XDR. 4. Prevention and control of PTB - reporting - patient/family education - vaccination - good nutrition for healthy immune system - containment of sputum (not spitting phlegm into the environment) 5. Show the sputum smear and X- ray chest of pulmonary tuberculosis.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice, field visit to DOTS clinic
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 4 Gastrointestinal Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Peptic Ulcer Diseases	Hrs. theory 1 Hrs. lab/practical
Objectives:	Content:
1. Define peptic ulcer (PUD) diseases and discuss the incidence. 2. Distinguish between gastritis, gastric ulcer, duodenal ulcer and esophageal ulcer. 3. Identify the aetiologies, pathology, cardinal signs and clinical features of PUD. 4. Explain the relationship of Helicobacter pylori to peptic ulcers. 5. Identify investigations necessary for differential diagnosis. 6. Describe integrated comprehensive treatment for PUD. 7. Identify complications of untreated PUD. 8. Identify indications for referral to a higher level facility.	1. Explain the anatomy and physiology of gastrointestinal system. 2. Describe physical examination of the gastrointestinal system. 3. Definition, component, aetiology, pathology, clinical features, differential diagnosis, complication and management. 4. Investigations for differential diagnosis: G.I. endoscopy, barium meal X-ray stomach, gastric acid estimation, stool for occult blood, USG abdomen. 5. Integrated comprehensive treatment of PUD: antacids gastric acid secretion inhibitors antibiotic therapy dietary modification alcohol/smoking cessation stress reduction
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Course: Medicine I	Hrs. theory		Hrs. lab/practical
Unit: 4 Gastrointestinal Disorders	Hrs. theory		Hrs. lab/practical
Sub-unit: Infectious disorders - Abdominal tuberculosis.	Hrs. theory	1	Hrs. lab/practical
Objectives:	Content:		
1. Describe the condition and cardinal signs of abdominal tuberculosis (T.B.) 2. Identify the aetiology and pathology and clinical features of abdominal T.B. 3. Identify investigations necessary for differential diagnosis. 4. Explain why referral may be necessary to confirm the provisional diagnosis. 5. Describe the complications of untreated abdominal T.B. 6. Describe how to manage diagnosed cases according to SCC, DOTS. 7. Describe the methods of prevention of abdominal T.B.	1. Definition, aetiology, pathology, clinical features, investigations, referral for differential diagnosis, complications, management and prevention of abdominal T.B.		
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice, observation of treatment at DOTS clinic		
Course: Medicine I	Hrs. theory		Hrs. lab/practical
Unit: 5 Endocrine System Disorders	Hrs. theory		Hrs. lab/practical
Sub-unit: Type 1 & 2 Diabetes Mellitus	Hrs. theory	2	Hrs. lab/practical
Objectives:	Content:		
1. Identify the cardinal signs for type 1 and type 2 diabetes mellitus. 2. Describe the patho-physiology of diabetes mellitus. 3. Differentiate between type 1 and type 2 diabetes. 4. Explain the production and action of insulin. 5. Identify the signs and symptoms of each type of diabetes mellitus. 6. Discuss the incidence and contributing factors for type 1 & 2 diabetes mellitus in Nepal. 7. Give the rationale for administering insulin versus oral hypoglycemic medications. 8. Describe the health consequences of chronic hyperglycemia. 9. Summarize the health teaching points for a diabetic patient. 10. Describe the signs and symptoms of ketoacidosis. 11. Relate the chief treatments for stabilizing a patient with ketoacidosis.	1. Normal anatomy & physiology of the pancreas 2. Patho- physiology of the different types of diabetes 3. Pharmacologic effects of insulin/oral hypoglycemic medicines 4. Methods for assessing hyperglycemia 5. Treatment for ketoacidosis and hypoglycemia 6. Preventive health care for diabetics 7. Demonstrate the blood glucose level of diabetic subjects.		
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice		

Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 5 Endocrine System Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Thyroid disorders	Hrs. theory 2 Hrs. lab/practical 2
Objectives:	Content:
1. Discuss the incidence and causes of hypo- and hyper-thyroidism in Nepal. 2. Identify the cardinal signs and clinical features of each of these disorders. 3. Describe the management and complications of hypo and hyper-thyroidism. 4. Identify health education programs for the prevention of thyroid disorder.	1. Incidence, etiologies, diagnosis, management and prevention of hypo- and hyper-thyroidism.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 6 Hepatic Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Cirrhosis of the liver	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the anatomy and physiology of the liver. 2. Describe the different types of cirrhosis of liver. 3. Discuss the incidence and aetiology of cirrhosis of the liver. 4. Describe the pathology cardinal signs and clinical features of different types of cirrhosis of the liver. 5. Identify investigations necessary for differential diagnosis. 6. Identify complications of cirrhosis of the liver. 7. Describe how to manage diagnosed cases or stabilize and refer provisionally diagnosed cases of cirrhosis of the liver. 8. Discuss methods of prevention of cirrhosis of the liver.	1. Anatomy and physiology of the liver 2. Definition, types, aetiology, pathology, clinical features, differential diagnosis, investigations, complications, management and prevention.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 6 Hepatic Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Ascites	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the condition of ascites and tell the cardinal signs. 2. Identify the aetiologies, pathology and clinical features of different types of ascites. 3. Identify investigations necessary for differential diagnosis. 4. Identify complications of ascites. 5. Describe how to manage the diagnosed case of ascites. 6. Identify indications for stabilization and referral to a higher level facility.	1. Definition, aetiology, pathology, clinical features, complications, investigations, differential diagnosis, management and referral of cases of ascites.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 6 Hepatic Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Amoebic liver abscess.	Hrs. theory 1 Hrs. lab/practical

	2
Objectives:	Content:
1. Define amoebic liver abscess and tell the cardinal signs. 2. Identify the aetiology, pathology and clinical features of liver abscess. 3. Identify the investigations necessary for differential diagnosis. 4. Identify complications of amoebic liver abscess. 5. Describe how to manage the diagnosed case of liver abscess. 6. Identify indications for referral to a higher level facility. 7. Discuss methods of prevention.	1. Definition, aetiology, pathology, clinical features, differential diagnosis, investigation, complication, management, referral and prevention.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 6 Hepatic Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Hepatitis	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Define hepatitis and discuss the incidence of each type of hepatitis. 2. Identify the aetiology, pathology, cardinal signs and clinical features of the different types of hepatitis. 3. Identify the investigations necessary for differential diagnosis. 4. Identify complications of hepatitis. 5. Describe how to manage the diagnosed case using local resources. 6. Identify indications for referral to a higher level facility. 7. Describe the modes of transmission of infectious hepatitis, the methods of prevention and control for each type.	1. Definition, incidence, aetiology, pathology, clinical features, differential diagnosis, investigation, complication, management and prevention of infectious and non-infectious hepatitis.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 7 Central Nervous System Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Tetanus	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Discuss the incidence of tetanus in Nepal. 2. Explain the cause, pathology, cardinal signs and clinical features of tetanus. 3. Describe the investigations and differential diagnosis of tetanus. 4. Describe the immediate management and referral procedure for cases of tetanus. 5. Discuss the socio-cultural factors which result in the high incidence of tetanus in Nepal. 6. Describe community education and prevention measures for tetanus.	1. Discuss physical examination of central nervous system. 2. Tetanus bacilli, pathology and clinical features of tetanus. 3. Investigations, differential diagnosis, management and referral of tetanus. 4. Incidence and causative factors, preventive measures, immunization schedules.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical

Unit: 7 Central Nervous System Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Poisoning	Hrs. theory 3 Hrs. lab/practical
	Content:
1. Identify commonly found poisons from chemical, plant, and snake sources. 2. Identify the effect of selected poisons locally and systemically. 3. Describe the appropriate treatments for commonly found poisons and snakebite. 4. Describe how to remove poisons by emesis and gastric lavage; tell exceptions for removal by emesis. 5. Describe symptomatic treatment of poisoning effects. 6. Identify indications for immediate referral to a higher level facility.	1. Accidental and intentional causes of poisoning 2. Common poison sources 3. Symptoms and signs of poisoning 4. Principles of management using health post resources
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 7 Central Nervous System Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Meningitis and encephalitis	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
a. Differentiate between the pathology, cardinal signs and clinical features of meningitis and encephalitis. b. Discuss the causes of meningitis and encephalitis. c. Describe the complications, health post management, and indications for immediate referral of meningitis and encephalitis. d. Discuss the management and follow up care for meningitis and encephalitis. e. Identify components of preventive education for early diagnosis and treatment of meningitis and encephalitis.	1. Etiology, diagnosis, treatment, complications, rehabilitation, and prevention of meningitis and encephalitis.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 7 Central Nervous System Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Cerebral vascular accident (CVA)	Hrs. theory 2 Hrs. lab/practical 2
	Content:
1. Identify the causes and incidence of cerebral vascular accidents. 2. Describe the classifications of CVA based on pathology. 3. Describe the cardinal signs and clinical features of mild, moderate and severe CVA. 4. Discuss the differential diagnosis of CVA. 5. Describe the treatment and expected outcomes for each type of CVA. 6. Discuss advice and counseling for the family of this patient, to promote rehabilitation. 7. State the risk behaviors for CVA which you would include in preventive education. 8. Identify indications for referral of a CVA patient for higher level or specialty care.	1. Etiology, classifications, diagnosis, treatment, prognosis, rehabilitation, counseling and prevention of cerebral vascular accidents.

Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 7 Central Nervous System Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Head Injury	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Identify the common causes for injury to the brain. 2. Describe the cardinal signs and clinical features of acute and residual brain injury. 3. Describe the process for stabilization of the patient with acute brain trauma, and measures to transport to a higher level facility. 4. Describe the advice and counseling for the family of a person with acute or chronic brain trauma. 5. Identify health education measures to reduce the incidence of brain trauma.	1. Causes, clinical features, pathology, management, prognosis, counseling, referral for acute or residual brain trauma. 2. Use of the Glasgow Coma scale. 3. Preventive education measures (motorcycle and bicycle helmets, safety harness for high altitude work, rafting helmets)
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 7 Central Nervous System Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Chronic disorders of CNS	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Identify chronic central nervous system disorders seen in Nepal, their etiologies and incidence. 2. Discuss the cardinal signs and clinical features of each. 3. Identify recommended treatment and prognosis for each. 4. Discuss family counseling for each diagnosis. 5. Describe strategies to prevent or give early treatment for these disorders.	1. Etiology, classifications, diagnosis, treatment, prognosis, rehabilitation, counseling and prevention of central nervous system disorders: a. multiple sclerosis b. cerebral palsy c. muscular dystrophy d. Mental Retardation
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 8 Musculoskeletal Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Arthritis	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Identify the incidence of osteoarthritis and rheumatoid arthritis. 2. Describe the cardinal signs, clinical features and pathology of each. 3. Explain the investigations for differential diagnosis. 4. Describe the advice and management for osteoarthritis and rheumatoid arthritis. 5. Identify indications for referral to a higher level facility. 6. Discuss contributing factors in the development of these types of arthritis. 7. Discuss the components of education programs to reduce the incidence of arthritis.	1. Incidence, pathology, diagnosis, management and prevention of osteoarthritis and rheumatoid arthritis.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 9 Urinary System Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Renal failure	Hrs. theory 2 Hrs. lab/practical
Objectives:	Content:
1. Describe the anatomy and physiology of the renal and urinary system in males and females. 2. Discuss physical examination of the abdomen. 3. Discuss the causes cardinal signs and clinical features of acute and chronic renal failure. 4. Identify indications for referral to a higher level facility. 5. Describe the management of chronic renal insufficiency at the health post level. 6. Identify important components of counseling for the patient with renal insufficiency.	1. Incidence, pathology, diagnosis, management and prevention of acute and chronic renal failure.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 10 Other Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Acute Rheumatic fever	Hrs. theory 2 Hrs. lab/practical
Objectives:	Content:
1. Discuss the incidence of Rheumatic fever and tell the cardinal signs. 2. Identify the aetiology, and pathology of Rheumatic fever. 3. Identify the clinical features and investigations for making a differential diagnosis. 4. List the complications of Rheumatic fever if early diagnosis and treatment are not given. 5. Describe how to manage the case after diagnosis. 6. State the methods of prevention of Rheumatic fever. 7. Identify indications that the patient should be referred to a higher level facility.	1. Definition, aetiology, pathology, clinical features, differential diagnosis investigations, early diagnosis and refer, prevention of complications, prevention of Rheumatic fever.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice

Course: Medicine I	Hrs. theory Hrs. lab/practical
Unit: 11 Infectious Disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Common communicable diseases	Hrs. theory 27 Hrs. lab/practical 6
Objectives:	Content:
1. Discuss the morbidity and mortality rates of commonly prevalent communicable diseases in Nepal. 2. State the general principles of communicable disease control. 3. Define selected terms relating to the study of communicable disease. 4. Identify the following for selected communicable diseases: - Modes of transmission - Incubation periods - Cardinal signs & Clinical features - Investigations - Differential diagnosis - Management - Complications - Prevention 5. Tell how to diagnose, treat and prevent commonly prevalent communicable diseases in Nepal.	1. Classify disease according to causative agents. 2. Diagnosis, management and prevention of common communicable diseases of Nepal: - Enteric fever - Malaria - Dysentery (Amoebic & Bacillary) - Kala-azar, - Giardiasis - Worm infestation • Hook worm • Round worm • Trichuris trichiura • Tape worm Tenia solium Tania saginata H. nana - Japanese Encephalitis - Filarial - Brucellosis - Influenza - Cholera - Rabies - Food poisoning - Introduction of Swine flue (H1N1), dengue fever and SARS.
Evaluation methods: written exam, viva, performance observation in clinical setting	Teaching / Learning Activities / Resources: classroom instruction, supervised clinical practice
Minimum standards: achieved at 40% accuracy (theory) and 60% accuracy (lab) by end of course.	

Course: Surgery I (General Surgery, Orthopediatics and Physiotherapy)

Hours Theory: 120
Hours Practical: 80
Assessment Marks: 100

Course Description:

This course introduces the student to basic knowledge and skills necessary to identify and manage simple surgical conditions at the Health Post level. The content includes wound care, and abdominal, respiratory, genitourinary, skeletal and malignant conditions. The student will learn to recognize conditions that require surgical interventions at a higher level facility, to stabilize such cases, and manage the referral.

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

1. Identify and use common surgical instruments.
2. Perform simple suturing for skin approximation.
3. Perform simple incision and drain of a superficial abscess.
4. Identify and manage the different kinds of shock.
5. Identify and manage cysts, fistulas, sinus cavities.
6. Evaluate and manage poor wound healing, gangrene and necrosis.
7. Identify, manage, and make referrals as necessary for abdominal disorders.
8. Identify, manage, and make referrals as necessary for potentially malignant conditions
9. Identify, manage, and make referrals as necessary for ano-rectal conditions.
10. Identify, manage, and make referrals as necessary genitourinary conditions.
11. Identify, manage, and make referrals as necessary brain or spinal cord injury.
12. Identify, manage, and make referrals as necessary chest injuries.
13. Identify, manage, and make referrals as necessary for orthopedic patients eg. fractures and osteomylitis.
14. Identify common types of anaesthesia, the precautions for each, methods of administration, and prjinciples for selection of suitable anesthesia.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended Texts:

1. Sharma, A.K., Principles of Surgery at the District Hospital. WHO, current edition.

2. Kafle, K.K. & Pinniger, R.G., Diagnostic and Treatment Manual for Primary Health Care in the District. Health Learning Materials Center, Tribhuvan University, Nepal.

3. Tierney et al., Current Medical Diagnosis and Treatment**.** Appleton & Lange, Stamford, Conn. Current edition.

Reference Texts:

1. Edwards, C.R.W. and Bouchier, I.A.D., Davidson's Principles and Practice of Medicine. Churchill Livingstone, London. Current edition.

2. Kings, M., et al., Primary Surgery, Vol. I. Oxford Medical Publications, Oxford. Current edition.

Course: Surgery I	Hrs. theory 120 Hrs. lab/practical 80
Unit: 1 Emergency Treatment	Hrs. theory Hrs. lab/practical
Subunit: Trauma, evaluation & treatment	Hrs. theory 6 Hrs. lab/practical 4
Objectives:	Content:
1. Describe the steps for evaluating the patient's condition in emergency situations. 2. Describe how to conduct primary emergency care to stabilize the patient. 3. Describe indications for immediate transfer of patient to higher level facility. 4. Describe measures to use to maintain the life of the patient during transport.	1. Define trauma and types of injury. 2. Methods of controlling external hemorrhage. 3. First aid and emergency treatment. 4. Principles of patient transfer. 5. Management principles of chest trauma. 6. Management principles of fractures. 7. Management of head and spinal cord injuries. 8. Management principles of urinary tract injuries. 9. Management principles of abdominal trauma.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 1 Emergency Treatment	Hrs. theory Hrs. lab/practical
Sub-unit: Shock & management of shock	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Define shock. 2. Differentiate the various kinds of shock. 3. Describe how to conduct the appropriate treatments for shock, in order to stabilize the person. 4. Demonstrate recording of fluid intake and output. 5. Describe indications for immediate transfer of the patient to a higher level facility.	1. The definition of shock. 2. Types and causes of shock: anaphylactic shock, septic shock, cardiogenic shock, diabetic shock, hypovolemic shock, neurogenic shock. 3. Signs and symptoms of shock. 4. Management of shock.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 1 Emergency Treatments	Hrs. theory Hrs. lab/practical
Sub-unit: Fluid and electrolyte	Hrs. theory 3 Hrs. lab/practical 3
Objectives:	Content:
1. Describe the ways the body maintains fluid and electrolyte balance. 2. Demonstrate the methods for assessing hydration. 3. State the principles which guide the in deciding which parenteral fluid to administer, by what route, and at what rate.	1. Normal distribution and composition of body fluid. 2. Maintaining acid-base balance. 3. Management of mild moderate and severe dehydration. 4. Selecting appropriate injection fluid and their routes of adminstration. 5. Principles of parenteral fluid replacement therapy.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.

Course: Surgery I	Hrs. theory	Hrs. lab/practical
Unit: 2 Invasive Procedures	Hrs. theory	Hrs. lab/practical
Sub-unit: Minor surgical procedures	Hrs. theory 6	Hrs. lab/practical 4
Objectives:	Content:	
1. Identify the name and function of selected surgical instruments. 2. Demonstrate cleaning and sterilization of surgical instruments in various methods, according to guidelines. 3. Describe preoperative site preparation. 4. Demonstrate local anesthesia techniques. 5. Perform selected simple surgical procedures such as incision and drain for abscess, boil, carbuncle, benign simple skin tumor excision, correction for ingrowing toe nail, according to guidelines.	1. Concepts of medical and surgical asepsis. 2. Simple surgical instrument terminology. 3. Sterilization methods and antiseptics. 4. Techniques for identifying presence of an abscess, boils and carbuncle and achieving incision & drain. 5. Techniques for identifying a benign skin tumor and their management. 6. Nail and nailbed anatomy; indications for removal of ingrown toe nail. 7. Local anesthetics and techniques for administration.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.	

Course: Surgery I	Hrs. theory	Hrs. lab/practical
Unit: 2 Invasive Procedures	Hrs. theory	Hrs. lab/practical
Sub-unit: Injury care and wound approximation	Hrs. theory 3	Hrs. lab/practical 2
Objectives:	Content:	
1. Differentiate between simple or compound wounds, and between clean or dirty (necrotic) wounds. 2. Demonstrate ways to approximate the edges of a small, clean wound by taping with “butterfly” plasters. 3. Describe ways to clean a dirty wound or debride a necrotic wound. 4. Demonstrate how to put on sterile gloves without contaminating them. 5. Demonstrate ways to achieve approximation of a wound using various methods of suturing.	1. Principles of wound healing. 2. Classification of wounds. 3. Hand washing and scrub technique. 4. Procedure for putting on sterile gloves. 5. Techniques of simple suturing. 6. Techniques of debridement.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.	

Course: Surgery I	Hrs. theory	Hrs. lab/practical
Unit: 2 Invasive Procedures	Hrs. theory	Hrs. lab/practical
Sub-unit: Surgical conditions in children	Hrs. theory 3	Hrs. lab/practical 2
Objectives:	Content:	
1. Describe how to detect common congenital anomalies. 2. Discus the importance of reassuring and counseling the parents to get the appropriate treatments in a timely manner. 3. Identify indications of the emergency surgical case requiring referral to higher medical facilities after stabilization. 4. Demonstrate the technique for manual and surgical procedure for uncomplicated cases of phimosis and paraphimosis. 5. Identify clinical features which indicate the need to refer for cancer specialty evaluation.	1. Identification of congenital anomalies. 2. Identification of intussuception, intestinal obstruction. 3. Assessment of undescended testis, hydrocele, hernia. 4. Assessment of phimosis, paraphimosis. 5. Signs and symptoms of childhood cancer.	

Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 3 Dermatological Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Skin inflamnatory disorder, skin ulcer, pressure sore	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the etiologies and clinical features of common skin inflammation disorders. 2. Identify appropriate treatments for common skin inflammation disorders and dispense medications according to guidelines. 3. Differentiate common skin ulcers and identify the appropriate treatment for each (wound dressing, minor stamp skin graft). 4. Identify indications for referral to specialty facilities in cases suspicious of malignant skin ulcer. 5. Differentiate between gas gangrene and dry gangrene. 6. Explain why the patient with gangrene and gas gangrene requires referral to a higher level facility. 7. describe how to counsel the family about appropriate management to prevent or treat pressure sores.	1. Common skin diseases. 2. Etiology, clinical features and their management. 3. Gangrenous conditions, their etiology, clinical features, pressure soures and their management. 4. Pressure sore and their management.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 4 Heart and Lung	Hrs. theory Hrs. lab/practical
Sub-unit: Cardiopulmonary anatomy and physiology	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the cardiopulmonary anatomy and function. 2. Describe the vascular anatomy and function. 3. Explain the process of ventilation and oxygenation of blood. 4. Describe the action of the heart in pulmonary circulation. 5. Describe normal breathing sounds and heart sounds. 6. Differentiate abnormal and normal breathing sounds and heart sounds. 7. Describe cardiopulmonary signs and symptoms which indicate that referral to a higher level facility is required.	1. Anatomy of the lung, heart, chest cage and vascular system. 2. Correlative physiology of the heart and lungs. 3. Techniques for assessing heart and lung sounds. 4. Common normal and abnormal heart sounds: sinus rhythm, gallup rhythm, murmur. 5. Common normal and abnormal lung sounds: vesicular sounds, bronchial sounds, crepitations, wheezing, rhonchi. 6. Clinical features of lung abscess and empyema. 7. Clinical features which require prompt or expert treatment.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised practicum observation.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 4 Heart and Lung	Hrs. theory Hrs. lab/practical

Sub-unit: Chest injuries	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Classify chest injuries and describe the pathophysiological dynamics of each type. 2. Explain how to manage simple rib fracture. 3. Describe how to detect pneumothorax and hemothorax by diagnostic assessment (percussion, auscultation). 4. Identify indications for immediate referral to a higher level facility.	1. Techniques for chest assessment. 2. Classification of the chest injury, and derived conditions. 3. Clinical features of rib fracture and treatment. 4. Clinical features of pneumothorax and use of underseal water drainage in the hospital setting. 5. Clinical features of hemothorax and health post level treatment. 6. Clinical features of flail chest and health post level treatment.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 4 Heart and Injury	Hrs. theory Hrs. lab/practical
Sub-unit: Pneumothorax	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Define pneumothorax and tell the cardinal signs. 2. Identify the aetiologies, pathology, and clinical features of each type of pneumothorax. 3. Identify the investigations necessary for differential diagnosis. 4. Identify complications of pneumothorax. 5. Describe the management of diagnosed pneumothorax. 6. Identify indications for prompt referral to a higher level facility.	1. Definition, aetiologies, types, clinical features, pathology, differential diagnosis, investigations, complications and management of pneumothorax.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 4 Heart and Lung	Hrs. theory Hrs. lab/practical
Sub-unit: Lung abscess and empyema	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Identify the early and late signs, symptoms and clinical courses of lung abscess and empyema. 2. Describe the primary care treatment for lung abscess and empyema. 3. Identify indications for referral to a higher level facility.	1. Definitions and causes of lung abscess. and empyema thoracis. 2. Etiology, pathophysiology, clinical features, and treatments for lung abscess and empyema.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 4 Heart and Lung	Hrs. theory Hrs. lab/practical
Sub-unit: Lung Cancer	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Identify the clinical features of lung cancer. 2. Tell how to encourage the person to follow up promptly with referral to a specialty hospital. 3. Describe ways to educate individuals and communities about causes and prevention, and early detection of lung cancer.	3. Etiology, classifications, and clinical manifestations of lung cancer. 4. Appropriate referral system.

Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 5 Abdominal Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Anatomy and physiology of the abdomen	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the anatomical characteristics of the gastro-intestinal system (GIT): tongue, esophagus, stomach, small & large intestines, colon, rectum. 2. Describe the anatomy of the abdominal wall and different quadrants of abdomen. 3. Describe the anatomical characteristics of the abdominal wall structures: liver, pancreas, spleen, kidney. 4. Describe the physiological functions of the GIT and abdominal organs. 5. Explain the process of digestion: tell how a morning meal of daal bhaat is processed from injestion to elimination. 6. Identify the indications that a patient should be referred for higher level treatment.	1. Terminology related to the gastrointestinal tract and abdominal organs. 2. Identification of the components and characteristics of the nine abdominal quadrants. 3. Anatomical characteristics and physiological functions of the GIT and abdominal organs. 4. The process of digestion, absorption secretion and elimination.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, role play.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 5 Abdominal Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Acute abdomen	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the condition of acute abdomen. 2. Discuss the causes of Acute abdomen. 3. Identify the etiology, pathology, and clinical features of common causes of acute abdomen. 4. Identify investigations necessary for differential diagnosis of acute abdomen. 5. Describe the complications of acute abdomen. 6. Describe the health post management of acute abdomen and indications for immediate referral and transport to a higher level facility. 7. Describe post-operative follow-up management of abdominal surgery at the health post.	1. Clinical features of disease entities which may cause acute abdomen: acute gastroenteritis, acute pancreatitis, acute cholecystitis, peptic ulcer perforation, acute appendicitis, peritonitis, pelvic inflammatory disease, ectopic pregnancy and worms. 2. Principles of management for each of the above conditions.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 5 Abdominal Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Liver diseases, abscess, injury	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the anatomy and physiology of the liver. 2. Describe the functions of the liver. 3. Identify the clinical features of liver injury in abdominal trauma which requires immediate stabilization and referral. 4. Describe the etiologies, pathologies, and clinical features of gall stones, liver abscess, and hepatoma.	1. Liver anatomy and physiology. 2. Clinical features of liver injury. 3. Clinical features, differential diagnosis and treatment of gall stones, amoebic liver abscess, liver abscess, tumor of the liver.

5. Identify investigations necessary for differential diagnosis. 6. Describe the indications which require referral to a higher level facility.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 6 Genitourinary Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Genito-urinary tract injury	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the correlative anatomy of the genitourinary system. 2. Describe the structure and function of the kidney. 3. Describe the mechanism of urine formation. 4. Describe spermatogenesis and sperm pathway. 5. Describe the procedure of vasectomy and potential complications. 6. Describe basic emergency treatments with genitourinary injury.	1. Anatomy of the kidney, ureter, bladder and urethra. 2. Physiology of the kidney 3. Anatomy and physiology of the male and female reproductive organs. 4. Spermatogenesis and sperm pathway. 5. Clinical features of surgical complications of vasectomy and their management. 6. Emergency management of genital injuries.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 6 Genitourinary Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Urinary stones and urinary tract infection	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Define UTI, hematuria and dysuria and its causes and management. 2. Describe how to perform the three test tubes test to differentiate hematuria origin. 3. Describe the mechanism of urinary stone formation. 4. Describe how to counsel patients for prevention of stone formation. 5. Differentiate between the clinical features of urinary tract infection (UTI) and urinary stones. 6. Describe the investigations needed to make a differential diagnosis of UTI or urinary stones. 7. Explain the action of urinary tract analgesics and antispasmodic medicine in the treatment of urinary pain and urinary colic. 8. Identify indications for referral to a higher level facility.	1. Causes and investigations of UTI and hematuria. 2. Etiologies, clinical features and investigations for infections of the urinary tract: urethritis, cystitis, pyelonephritis. 3. Etiologies, clinical features and investigations for infections of the male reproductive system: epididymo-orchitis, prostatitis. 4. Urinary stone formation and classification. 5. Predisposing and contributing factors of urinary stone formation. 6. Symptoms, signs, and treatments of urinary stones. 7. Etiologies, clinical investigations, and differential diagnosis of hematuria.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.

Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 6 Genitourinary Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Acute retention of urine, BEP	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Define BEP. 2. Identify the causes and clinical features of urinary retention and incontinence. 3. Identify steps in conservative management: reassurance, urinary catheterization. 4. Identify conditions indicating resistance to conservative treatment. 5. Describe the process for sterile suprapubic needle puncture, required in such resistant cases. 6. Describe the procedure for rectal palpation of the prostate gland. 7. Identify the clinical features of benign prostatic hypertrophy. 8. Identify indications for referral to a higher level facility.	1. Causes of acute urinary retention. 2. Symptoms and signs of acute urinary retention. 3. Management of acute urinary retention. 4. Technique for rectal examination of the prostate. 5. Etiologies, clinical features and treatments for benign prostatic hypertrophy (BEP)
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 6 Rectal and anal Conditions	Hrs. theory Hrs. lab/practical
Sub-unit: Rectal and anal disorder	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the procedure for examining the rectum through manual palpation. 2. Describe the procedure for stool specimen examination. 3. Describe the causes, clinical features and treatments for rectal bleeding and other common rectal disorders. 4. Identify treatments available among the health post resources. 5. Describe indications that require referral to a higher level facility. 6. Discuss preventive health teaching to reduce the incidence of rectal disease.	1. Rectal anatomy and anal sphincter. 2. Procedure and interpretation of findings for rectal examination. 3. Etiologies, clinical features and treatments for: rectal bleeding, hemorrhoids, anal fissure, fistula, rectal prolapse, rectal polyp, ischial rectal abscess.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 7 Malignant & Nonmalignant disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Head and neck disorder	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the superficial and deep surgical anatomy of the head and neck. 2. Describe the examination technique for differentiating benign and malignant tumors of the head and neck. 3. Describe how to conduct a simple curative operation for the superficial benign skin tumor. 4. Describe clinical features and management of pressure sores and gangrenes.	1. Head and neck anatomy. 2. Clinical features of congenital tumors and lesions: dermoid cyst, sinus and fistula, thyroglossal, branchial cyst and fistula. 3. Clinical features of salivary gland tumors and thyroid gland tumors, benign salivary gland tumor, goiter and tubercularlymphadenitis. 4. Clinical features of tuberculosis lymphadenitis.

5. Describe the clinical features which suggest that a malignant tumor may be present, requiring referral for specialty examination and treatment.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 7 Malignant & Nonmalignant disorders	Hrs. theory Hrs. lab/practical
Sub-unit: Benign and malignant tumour of skin	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Differentiate benign and malignant skin lesions by morphological characteristics. 2. Describe the clinical features of gastrointestinal tumors, as found through history taking and physical examination. 3. Identify the causes and contributing factors in the development of these malignancies. 4. Identify indications which require referral for specialized diagnosis and treatment of malignant conditions. 5. Discuss the value and strategies of community education for early detection and prevention of cancer.	1. Clinical features of benign skin tumors, precancerous skin lesions, and malignant lesions (basal cell cancer, squamous cell cancer, melanoma). 2. Clinical features of: GIT and abdominal organ tumors, tongue cancer, esophageal cancer, stomach cancer, colorectal cancer, hepatoma. 3. Clinical features of benign and malignant tumors of the head and neck.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: 7 Malignant & Nonmalignant Masses	Hrs. theory Hrs. lab/practical
Sub-unit: Surgical breast diseases	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Demonstrate the physical examination of the breast, including lymph node palpation. 2. Teach the procedure for breast self examination and counsel the patient to examine her own breasts monthly. 3. Identify signs which may indicate the presence of a malignant lesion. 4. Differentiate between mastitis and breast abscess. 5. Describe or demonstrate how to teach a woman the appropriate treatments for acute mastitis. 6. Demonstrate how to perform incision and drain of breast abscess according to guidelines. 7. Describe the instructions for post-operative care of the Incision and Drainage wound by the patient. 8. Describe indications which require referral to a higher level facility.	1. Anatomy and physiology of the breast. 2. Procedure and reasons for breast self examination. 3. Common causes of breast lump. 4. Differentiate breast abscesses from other breast mass. 5. Etiologies, clinical features, differentiation of acute mastitis and breast abscess, benign and malignant breast tumor. 4. Guidelines for procedure of incision and drain, including needle aspiration to confirm abscess.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: instructor led discussion, classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.

Course: Surgery I	Hrs. theory Hrs. lab/practical

Unit: 8 Skin	Hrs. theory Hrs. lab/practical
Sub-unit: Burns and scalds	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Differentiate burns and scalds. 2. Discuss the incidence of burns and common causes of burns in Nepal. 3. Describe how to estimate the extent of burns by the "rule of nines." 4. Describe how to evaluate the depth of a burn. 5. Describe how to estimate prognosis by burn depth and extent. 6. Describe the treatment of burn tissue. 7. Discuss ways to control the severe pain of burn wounds. 8. Describe indications for fluid therapy, and type of fluid therapy required for selected burn cases. 9. Describe indications for referral to a higher level facility. 10. Discuss ways to reduce the incidence of burns in Nepal.	1. Etiological classification of burns. 2. Depth classification of burns. 3. Application of the "rule of nines" to estimate extent. 4. Fluid therapy for burn victims. 5. Burn wound management. 6. Pain management for burn victims.. 7. Prognosis, mortality and prevention of burn injuries. 8. Refferal after stabilization of burn (primary management at the site).
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I (shifted from first aid)	Hrs. theory Hrs. lab/practical
Unit: 9 Orthopedics	Hrs. theory Hrs. lab/practical
Sub-unit: Fractures, splints, immobilization	Hrs. theory 5 Hrs. tutorial 3
Objectives:	Content:
1. Describe the clinical features of a closed fracture. 2. Differentiate between the symptoms of a dislocation and a fracture. 3. State the management of an open fracture. 4. Describe ways to immobilize selected fractures 5. Discuss situations which indicate that immobilization of the neck and spine is required. 6. Describe measures to immobilize the neck and spine. 7. Demonstrate lifting and transporting a patient who must remain immobile. 8. Explain why all fractures should be referred to a higher level facility for management. 9. Describe prevention measures which should be included in community education, such as the use of a safety harness when working at great heights.	1. Define fracture and types of fracture. 2. Mention the sign and symptoms of fracture. 3. Assessment of fractures and dislocations. 4. Immobilization techniques. 5. Pathology of spinal injury. 6. Principles of safe lifting, body mechanics, patient stability.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play, First Aid Manual
Unit: Physiotherapy and Rehabilition	Hrs. theory 15 Hrs. lab/practical 10
Sub-unit: Introduction to Physiotherapy and Rehabilition	Hrs. theory 1 Hrs. lab/practical
Objectives:	Content:
a. History of Physiotherapy and Rehabilitation b. Modalities used in Physical therapy c. Conditions that are treated with physical therapy d. Conditions which are prescribed for rehabilitation	a. Introduction to physical therapy and Rehabilitation. b. Exercise therapy, Therapeutic Massage, Electrotherapy, Magnetotherapy, Hydrotherapy and Cryotherapy c. Indication of physical therapy. d. Concept of rehabilitation and its application.
Evaluation methods: written and viva exams, performance	Teaching / Learning Activities/Resources: classroom

observation in real or simulated settings.	instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: Physiotherapy and Rehabilition	Hrs. theory 15 Hrs. lab/practical 10
Sub-unit: 2. Applied Anatony and Physiology	Hrs. theory 6 Hrs. lab/practical
Objectives:	Content:
1. Discuss the name of major muscles of joints 2. Describe the range of motion of joints 3. Movements at joints 4. Discuss nerves responsible to supply the muscles of upper and lower limbs 5. Discuss nerve conduction and muscle contraction 6. Discuss assessment of muscle power	1. Recall Origin, insertion, Nerve supply and action of - Sternocliedomastoid, Trapezius, Biceps brachi, Triceps, Long flexors and extensors of wrist and fingers, Ileopsoas, gluti, Quadriceps, Hamstring, Tibialis anterior, Gastrocnemius and Soleus, 2. Types and range of Synovial joints 3. Nerves arised from Brachial plexus and Lumbosacral plexus. 4. Physiology of nerve supply 5. Physiology of muscle contraction 6. Muscle work. 7. Manual muscle power tersting
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: Physiotherapy and Rehabilition	Hrs. theory 15 Hrs. lab/practical
Sub-unit: 4. **Therapeutic Exercises**	Hrs. theory 5 Hrs. lab/practical 5
Objectives:	Content:
a. Define therapeutic exercises for some health conditions. b. Explain deformity correction c. Describe gait training d. Explain physiotherapy for chest conditions e. Tell techniques of therapeutic massage and its application.	a. Types, effects and uses of therapeutic exercises. b. Strengthening exercises c. Soft tissue stretching and joint mobilisation exercises d. Application of therapeutic exercises for – Spondyl;osis, spondylolisthesis, retrolisthesis, postural/mechanical back pain, Degenerative and inflammatory joint dioseases, fractures, soft tissue injuries, Stroke, CP and Spinal injuries e. Indication and contraindication of chest physio f. Breathing exercises g. Postural drainage h. Indication, contraindication and Techniques of Therapeutic massage i. Application of therapeutic massage in Neck pain, back pain, edema, atrophy and scars.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.
Course: Surgery I	Hrs. theory Hrs. lab/practical
Unit: Physiotherapy and Rehabilitation	Hrs. theory 15 Hrs. lab/practical 10
Sub-unit: 5. Gait and posture	Hrs. theory 3 Hrs. lab/practical 5
Objectives:	Content:
a. Discuss abnormal gaits its causes and correction b. Explain crutch walking c. Differentiate normal and abnormal posture d. Describe leg length discrepancy	a. Normal and abnormal gait b. Types and application of crutch gait c. Measurement of crutch. d. Measurement of leg length. e. Normal and abnormal human posture f. Posture correction
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, anatomical models, videos, supervised clinical practice.

Course: ***Clinical Pathology***

Hours Theory: **60**
Hours Practical: **40**
Assessment Marks: **100 (25+25+25+25)**

Course Description:

This is an introductory course to basic clinical pathology and is divided into four different units. Unit first is about medical microbiology involving morphology of different categories of microorganisms, their relation to human diseases, basic identification techniques and, their growth & sterilization properties. Unit two contains medical parasitology and deals about mode of infection, pathogenicity, laboratory diagnosis & preventive measures of important intestinal as well as blood & tissue parasites of man including different kinds of defense mechanisms of a body. Unit three deals about human blood & its constituents together with different haematological techniques. Unit four is about medical biochemistry including the biochemical processes of - digestion & absorption of foods, metabolism of different kinds of foods & their disturbance effects in our body together with the physiological roles of different kinds of vitamins & enzymes.

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

1. Describe different kinds of microorganisms related to human diseases.
2. Describe different kinds of parasites and their pathogenic effects to a human body.
3. Describe the formation and functions of different components of blood.
4. Describe the biochemical processes of different kinds of foods in our body.
5. Identify the role of vitamins & enzymes in our body.
6. Perform basic microbiological, biochemical and haematological tests in the laboratory setting.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended Texts:

1. Dr. Bharatmani Pokhrel. A Hand book of clinical microbiology, Gorakhnath Desktop printing and Support, Kathmandu.

2. A Text book of Medical Laboratory Technology (Volume I and II), Rajesh K. Gupta and Binod K. Gupta, Samikshaya Books, Bagbazar, Kathmandu.

3. Chatterjee, K.D. 1981. Parasitology. Chatterjee Medical Publishers, Calcutta, India.

4. Chatterjea, M.N. and Shinde, R. 1998. Textbook of Medical Biochemistry. Jaypee Brothers Medical Publishers (P) Ltd., India.

5. Chevalking, H., Tuladhar T. & Shrestha U. 1992. Integrated Sciences. Health Learning Materials Centre, P.O. Box 2533, Ktm., Nepal.

6. Mukherjee, K.L. 1997. Medical Laboratory Technology, Volume I, II, III. Tata McGraw-Hill Publishing Company Limited, New Delhi, India.

Reference Books:

1. Berezov, T.T. and Korovkin, B.F. 1992. Biochemistry. Mir Publishers, Moscow, Russia.

2. Paniker, C.K. 1993. Textbook of Medical Parasitology. Jaypee Brothers Medical Publishers (P) Ltd., New Delhi, India.

Course: Clinical Pathology	Hrs. theory		Hrs. lab	
Unit: 1 Medical microbiology	Hrs. theory		Hrs. lab	
Lesson: **1.1 General Introduction to Microbiology**	Hrs. theory	2	Hrs. lab	
Objectives:	Content:			
1. Describe the morphology of bacteria: cocci, bacilli, vibrio, spiral, and spirochaetes. 2. Describe the morphology of virus: polyhedral, hellical, hexagonal, spherical, etc. 3. Describe the morphology of fungi: yeasts and molds. 4. Describe the morphology of parasitic protozoa/helminthes in general. 5. Describe the classification of microorganisms: bacteria, viruses, fungi, protozoans and helminths. 6. List at least 20 different bacterial diseases. 7. List at least 10 viral diseases. 8. List at least 10 fungal diseases. 9. List at least 5 protozoan diseases. 10. List at least 10 helminthes diseases. 11. Name the corresponding causative organisms of each of the above diseases.	1. Morphology of different kinds of microorganisms. 2. Classification of microorganisms on the basis of morphology. 3. Common diseases caused by microorganisms.			
Evaluation methods:	Teaching / Learning Activities:			
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice, appropriate visual means for morphology of different microorganisms.			
Course: Clinical Pathology	Hrs. theory	70	Hrs. lab	40
Unit: 1 Medical microbiology	Hrs. theory	10	Hrs. lab	
Lesson: **1.2 Basic bacteriological investigations**	Hrs. theory	3	Hrs. lab	2
Objectives:	Content:			
1. Explain the theory & principle of Gram staining. 2. Perform Gram staining according to guidelines. 3. Explain the theory & principle of acid fast bacillus (AFB) staining. 4. Perform AFB staining according to guidelines. 5. Define culture and culture media. 6. List culture media for bacteria, viruses, and fungi. 7. Describe methods for antibiotic susceptibility testing: (a) Tube dilution technique. (b) Paper diffusion technique.	1. Theory, principles and procedure for Gram staining and AFB staining. 2. Culture media and cultivation techniques of bacteria, viruses and fungi. 3. Antibiotic susceptibility testing.			
Evaluation methods:	Teaching / Learning Activities:			
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice			
Course: Clinical Pathology	Hrs. theory	60	Hrs. lab	40
Unit: 1 Medical microbiology	Hrs. theory	10	Hrs. lab	
Lesson: **1.3 Bacterial growth and sterilization**	Hrs. theory	3	Hrs. lab	2
Objectives:	Content:			
1. Define bacterial growth and generation time. 2. Derive the growth rate of bacteria. 3. Draw the growth curve of bacteria 4. Describe the different phases of growth – lag, log, stationary, decline & survival, etc. 5. Describe factors influencing bacterial growth.	1. Bacterial growth characteristics, generation time and factors influencing bacterial growth. 2. Physical and chemical methods of sterilization.			

6. Define sterilization. 7. Describe physical methods of sterilization. a) Most heat (steam under pressure and fractional sterilization) b) Dry heat (hot air sterilization, incineration) c) Radiation (x- rays, gamma rays, cathode rays, etc.) d) Filtration. 8. Describe chemical methods of sterilization (formaldehyde, gluteraldehyde, ethylene oxide, β– propiolactone, etc) 9. Identify the usual materials to be sterilized by each of the above methods of sterilization.	
Evaluation methods:	Teaching / Learning Activities:
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice
Course: Clinical Pathology	Hrs. theory Hrs. lab
Unit: 2 Medical parasitology	Hrs. theory Hrs. lab
Lesson: **2.1 Intestinal Parasites**	Hrs. theory 10 Hrs. lab 6
Objectives:	Content:
1. Describe mode of infection, pathogenicity , laboratory diagnosis and preventive measures of: *a)* *Ascaris* b) Hookworm c) *Trichuris* d) *Enterobius* e) *Taenia* f) *Echinococus* g) *Hymenolepis* h) *Entamoeba* i) *Giardia* j) *Trichomouas.*	1. Mode of infection, pathogenicity, laboratory diagnosis and prevention of intestinal parasites.
Evaluation methods:	Teaching / Learning Activities:
- Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice, slides
Course: Clinical Pathology	Hrs. theory Hrs. lab
Unit: 2 Medical parasitology	Hrs. theory Hrs. lab
Lesson: **2.2 Blood and tissue parasites**	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Describe modes of infection, pathogenicity, laboratory diagnosis and preventive measures for: a) *Plasmodium* b) *Leishmania* c) *Wuchereria*	1. Modes of infection, pathogenicity, laboratory diagnosis and prevention of blood and tissue parasites of body.
Evaluation methods:	Teaching / Learning Activities:
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice, slides

Course: Clinical Pathology	Hrs. theory 60	Hrs. lab 40
Unit: 2 Medical parasitology	Hrs. theory 20	Hrs. lab
Lesson: **2.3 Defense mechanisms of the body**	Hrs. theory 3	Hrs. lab
Objectives:	Content:	
1. Describe the defense mechanisms of body (individually, specific and non-specific). 2. Identify external defense mechanisms of body. a) Skin, mucous membranes and other mechanical barriers. b) Coughing, sneezing, perspiring and related processes. 3. Describe non-specific defense mechanisms of body (interferon, phagocytosis, complement and propredерin, Natural Killer (NK) cells). 4. Describe specific defense mechanisms of body (active and passive immunity and their types). 5. Define antigens and antibodies and give examples of each. 6. Describe the types of antibodies (immunoglobulins). 7. Describe the mechanism of antigen – antibody reaction (primary stage, secondary stage and tertiary stage).	1. Different kinds of defense mechanisms of body. 2. Terminology related to defense mechanisms of body. Immunology Rh factor Immune System Phagocyte Chemotaxis Chemoattractant Opsin Complement Ontigen B-lymphocyte T-lymphocyte Natural Killer cells Antibody Immuroglobulia Oncogene Memory Cell Gammaglobulia Active Immunity Passive Immunity Histamine	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice	
Course: Clinical Pathology	Hrs. theory	Hrs. lab
Unit: 3. Haematology	Hrs. theory	Hrs. lab
Lesson: **3.1 Blood and anticoagulants**.	Hrs. theory 6	Hrs. lab 4
Objectives:	Content:	
1. Describe the general composition of blood. 2. Describe the formation mechanism of RBC, WBC, Platelets and plasma. 3. List functions of WBC, RBC, and plasma cells. 4. Describe the structure, function, estimation (Shali's method) and normal values of hemoglobin. 5. Describe methods of blood collection for: a) Hematological investigations. b) Biochemical investigations. c) Microbiological investigations. 6. Define anticoagulants, their types and use, etc. 7. Describe test method (Bulk dilution and Pipette dilution) for WBC total count, test-method for WBC differential count with their normal values. 8. Describe test methods (Wintrobe method) and normal value of erythrocyte sedimentation rate (ESR) of blood.	1. Blood characteristics, hematological tests, and blood collection techniques.	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice	

Course: Clinical Pathology	Hrs. theory 60	Hrs. lab 40
Unit: 4 Clinical Biochemistry	Hrs. theory 22	Hrs. lab
Lesson: **4.1 Carbohydrates**	Hrs. theory 6	Hrs. lab
Objectives:	Content:	
1. Define carbohydrates. 2. Classify carbohydrates. a) Monosaccharides i) depending upon number of carbon atoms ii) depending upon aldehyde or ketone group b) Disaccharides c) Oligosaccharides d) Polyasaccharides i) Homopolysaccharides ii) Heteropolysaccharides. 3. Tell the chemical properties of carbohydrates: i) Reaction with phenyl hydrazine ii) Reaction with acids iii) Reaction with alkalies 4. Describe digestion and absorption of carbohydrates (give biochemical reactions of digestion of carbohydrates in the GI tract) 5. Describe the process of glycolysis, glycogenesis, glycogenolysis, gluconeogenesis and Kreb's citric acid cycle. 6. Explain the carbohydrate metabolism disturbance in diabetes mellitus. 7. Describe the glycemic effects of diabetes mellitus caused by inadequate or unavailable insulin. 8. Tell about the correction of hyperglycemia through administration of insulin.	1. Definition, classification, chemical properties and metabolism of carbohydrates.	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice	
Course: Clinical Pathology	Hrs. theory	Hrs. lab
Unit: 4 Clinical Biochemistry	Hrs. theory	Hrs. lab
Lesson: **4.2 Proteins**	Hrs. theory 4	Hrs. lab
Objectives:	Content:	
1. Define proteins 2. Classify proteins a) on the basis of shape and size (fibrous and globular proteins) b) on the basis of functional properties (defense, contractile, respiratory, structural, enzymes, hormones). c) on the basis of solubility and physical properties. i) Simple proteins – protamines, histones albumins, globulins, gliadines (prolamines), glutelins , scleroproteins or albuminoids, etc. ii) Conjugated proteins – nucleoproteins, mucoproteins , glycoproteins, phosphoproteins, chromoproteins (hemo-, flavo and visual purple proteim), lipoproteins, metalloproteins , etc. iii) Derived proteins (from simple and conjugated proteins) - coagulated proteins cooked meat, cooked egg albumin and	1. Definition, classification, chemical properties and metabolism of proteins.	

alcohol precipitated proteins, proteoses, peptones, peptides, etc. 3. List chemical properties of proteins – color reaction, denaturation. 4. Write down the reactions involved during digestion of proteins. 5. Write down the reactions involved during transamination, deamination and urea cycle with enzyme systems involved.	
Evaluation methods:	Teaching / Learning Activities:
	Textbooks, Reference books, Journals, etc.
Course: Clinical Pathology	Hrs. theory 60 Hrs. lab 40
Unit: 4 Clinical Biochemistry	Hrs. theory 20 Hrs. lab
Lesson: **4.3 Lipids**	Hrs. theory 4 Hrs. lab
Objectives:	Content:
1. Define lipids 2. Classify lipids i) Simple lipids – neutral fats, waxes ii) Compound lipids- phospholipids, glycolipids, sulfolipids, aminolipids and lipoproteins. iii) Derived lipids- several fatty acids, mono and di – glycerides, alcohols, etc. iv) Miscellaneous – carotenoids , squalene, Vitamins E and K, etc. 3. List chemical properties of lipids. 4. Describe chemical properties of lipids - saponification, hydrogenation and esterification, etc. 5. Describe digestion (biochemical reactions) and absorption of lipids. 6. Define cholesterol and list its physiological roles. 7. Write down the reactions involved during ketosis, β-oxidation of fatty acids and biosynthesis of triglyceroid with enzyme systems involved during the reactions.	1. Definition, classification, chemical properties, digestion and absorption and metabolism of lipids.
Evaluation methods:	Teaching / Learning Activities:
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice
Course: Clinical Pathology	Hrs. theory Hrs. lab
Unit: 4 Clinical Biochemistry	Hrs. theory Hrs. lab
Lesson: **4.4 Enzymes**	Hrs. theory 4 Hrs. lab
Objectives:	Content:
1. Define enzymes. 2. Classify enzymes into the six basic types – oxidoreductases, hydrolases, ligases (synthetases), transferases, lyases, isomerases. 3. Define different units of enzymes: a) International Union of Biochemistry (1961): U mole/min. b) International system of Units (I): Katal (kat) – mole/sec. c) Derive relationship between the two: IU = 16.67n kat. 4. Define isoenzymes with examples. 5. List isoenzymes of LDH, ALK – Phosphatase and CPK and mention their clinical significances.	1. Definition, classifications and different units of enzymes. 2. Definition and clinical significance of isoenzymes of lactate dehydrogenase (LDH), Alakaline phosphatas (Alk- phosphatase) and creatine phosphokinase (CPK)

Evaluation methods:	Teaching / Learning Activities:
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice
Course: Clinical Pathology	Hrs. theory Hrs. lab
Unit: 4 Clinical Biochemistry	Hrs. theory Hrs. lab
Lesson: **4.5 Vitamins**	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. Define vitamins. 2. List general properties of vitamins. 3. Classify vitamins – fat-soluble and water-soluble. 4. Give chemistry of vitamins. 5. List sources of each of the vitamins. 6. Describe physiological roles of all vitamins.	1. Definition, classification, chemistry and sources and physiological roles of vitamins.
Evaluation methods:	Teaching / Learning Activities:
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice
Course: **Clinical Pathology – Practical**	Hrs. theory Hrs. lab
Unit: 1. Experiments on clinical pathology	Hrs. theory Hrs. lab
Lesson: **Practical applications**	Hrs. theory Hrs. lab 24
Objectives:	Content:
1. Identify handling techniques of different laboratory goods. 2. Perform gram stain and AFB stain. 3. Perform stool examination for ova, cyst and parasites. 4. Perform microscopic examination of urine for urinary deposits. 5. Perform chemical examination of urine for sugar and albumin. 6. Perform urine test for ketone bodies and bile pigment. 7. Perform urine test for bile salt and urobilinogen. 8. Perform blood glucose determination. 9. Perform urea estimation. 10. Perform preparation, staining and examination of thick and thin blood smears. 11. Estimate hemoglobin level. 12. Demonstrate TLC, DLC and ESR of blood.	1. Handling techniques of different laboratory goods. 2. Different – microbiological and biochemical investigations.
Evaluation methods:	Teaching / Learning Activities:
Written examination, viva, observation of performance in lab	Classroom instruction, textbook/reference book self study, journals, laboratory practice, Textbooks, etc.

Course: **Obstetrics and Gynecology**

Theory: **80**
Practical: **80**
Assessment Marks: **100 (50+50)**

Course Description:
The obstetric component of this course prepares the student to manage cases of normal pregnancy: antenatal care, labor and delivery, and postnatal care of mother and newborn. Additionally, the student is prepared to manage basic complications of these periods, and to identify, stabilize and transport cases requiring referral for expert management. The gynecology component prepares the student to identify and manage common uncomplicated cases of female genitourinary conditions and to recognize indications for referral to higher level health care facilities.

Course Objectives

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

1. Perform a thorough gynecological and obstetrical history taking.
2. Perform a bimanual pelvic exam and identify abnormal conditions.
3. Perform antenatal examinations to identify normal/abnormal progress of pregnancy.
4. Counsel pregnant women regarding safe motherhood practices.
5. Manage common uncomplicated pregnancy related and gynecological conditions.
6. Perform a normal delivery and provide antenatal care to mother and newborn.
7. Identify indications that a pregnancy is high risk or requires expert management and make appropriate referral.
8. Identify abnormal conditions of labor, delivery and neonate and manage the cases using health post resources when necessary.
9. Identify complications which require immediate referral; stabilize and transport such cases to a higher level facility.
10. Implement the policies of the National Guidelines for Maternity Care.
11. Counsel mothers to use safe motherhood practices.
12. Provide community education which promotes safe motherhood.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended Texts:

1. National Maternity Care Guidelines Nepal. Department of Health Services, Nepal, Family Health Division. GON-MCH Nepal. Current edition.
2. Lifesaving Skills for Midwives. WHO/UNICEF, Geneva. Current edition.
3. National STDs Management Guidelines.
4. Reproductive Health, National and International Perspectives. Dhirga Raj Shrestha.

Reference Texts:

1 National Reproductive Health Strategy, by the Department of Health Services, Nepal, Family Health Division. HMG-MCH Nepal. Current edition.
2 HMG of Nepal Safe Motherhood Policy, by Family Health Division, DOHS, MOH, Kathmandu, Nepal. Current edition.
3 Dutta, D.C., Textbook of Obstetrics. New Central Book Agency, India. Current edition.
4 Dutta, D.C., Textbook of Gynecology. New Central Book Agency, India. Current edition.
5 Dawn, C.S., Textbook of gynecology and Contraception. Dawn Books, India. Current edition.
6 Dawn, C.S., Textbook of Obstetrics and Neonatology. Dawn Books, India. Current edition.
7 Midwifery Manual. Health Learning Materials Centre, Institute of Medicine, Kathmandu. Current edition.
8 Tawara, T., Domiciliary Midwifery. Health Learning Materials Centre, Institute of Medicine, Kathmandu. Current edition.

Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 1 Anatomy and physiology	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the function of each component of the female reproductive system and lower urinary system. 2. Describe the processes of normal ovulation, menstruation, menopause and conception. 3. Identify the role of each of the female hormones. 4. Explain the common causes for female infertility. 5. Discuss hygiene and cultural beliefs relating to the menstrual process.	1. Anatomy and physiology of female reproduction and lower urinary tract. 2. Terms and patterns of normal menstruation (onset of puberty, monthly cycles, characteristics of menstrual bleeding, menopausal symptoms). 2. Interferences with female reproduction**.**
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Minimum Standards: theory – 40%, lab 60 % accuracy by end of the course.	
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 2 Gynecological history & physical exam	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Discuss how a Nepali woman may be affected by the experience of a gynecological examination, because of her cultural habits and values. 2. Describe ways to promote the comfort of the patient during the gynecological exam. 3. State the information taken during the gynecological history. 4. Describe the procedure for breast exam. 5. Describe the procedure for bimanual pelvic exam. 6. Demonstrate the technique for use of the vaginal speculum in a simulated situation. 7. State the normal and abnormal findings of a pelvic exam. 8. In a simulated setting, teach a woman how to perform a breast self-exam.	1. Normal anatomy of female reproductive system. 2. Terms for describing gynecological functioning and abnormalities. 3. Techniques for examination of female reproductive organs (breasts, vulva, vagina, cervix, uterus, tubes, ovaries). 4. Principles of patient education.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 3 Menstruation disorders	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Identify the symptoms and treatment for dysmenorrhea, endometriosis, and premenstrual syndrome. 2. Discuss the common causes for menstrual irregularity. 3. Identify causes of abnormal vaginal bleeding,	1**.** Common menstrual disorders (Dysmenorrhoea, premenstrual syndrome, menorrhagia, metrorrhagia and dysfunctional uterine bleeding). 2. The treatment of uncomplicated disorders. 3. Common menopausal disorder and its management.

which are unrelated to pregnancy. 4. Tell how to differentiate and treat the causes of vaginal bleeding (unrelated to pregnancy). 5. Describe the common disorders associated with menopause and the treatments for each. 6. Discuss the factors, which indicate that a woman should be referred for expert treatment.	4. Symptoms of complicated or serious conditions related to menstruation
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 4 Disorders of the breast	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the function of each component of the female breast. 2. Describe the breasts changes that occur during pregnancy and lactation. 3. Discuss the causes and treatments for nipple problems related to breastfeeding. 4. Discuss the causes and treatments for mastitis. 5. Differentiate between breast abscess and simple mastitis. 6. Describe the causes, symptoms and treatment of eczema of the breast. 7. Describe the steps in breast self examination. 8. List indications for referral of women with abnormal breast symptoms.	1. Anatomy & physiology of the breast. 2. Development of the breast, and anatomic variations. 3. Effects of pregnancy & lactation on breast tissues. 4. Common problems of the breast feeding, cracked nipples, mastitis, breast abscess. 5. Breast masses including classification causes, symptoms, management approach. **6.** Strategies for treating common problems of breastfeeding**.** 7. Eczema of the breast 8. Procedure for breast self examination. **9.** Symptoms of breast masses.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 5 Diseases of the vagina, vulva and cervix	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe common infections of the vagina and vulva and treatments for each. 2. Discuss how to use the National STD Management Guidelines for diagnosis by symptoms. 3. Describe variations in vaginal discharge that characterize vaginal infection (color, volume, odor, consistency) 4. Describe the signs and symptoms of the sexually transmitted infections/diseases (STI's/STD's). 5. Tell the complications of STD's. 6. Explain the relationship between STD's and cancer of the reproductive organs. 7. Describe signs of cancerous conditions of the vulva, vagina and cervix. 8. State the signs of Bartholin's cyst. 9. Explain why the treatment of Bartholin's cyst,	1. Characteristics and treatments for common disorders (monilial, trichomonal, gonoccocal, bacterial infections) 2. National STD Management Guidelines. 3. Characteristics and treatment for communicable diseases of the reproductive & urinary tracts**.** 4. Long term effects of chronic or untreated diseases of the reproductive tract.

cancer, or infections non-responsive to treatment should be referred for higher level care.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 6 Disorders of the uterus, ovaries & fallopian tubes	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Identify the symptoms and treatments of endometriosis. endometrial fibroids, uterine or ovarian tumors. 2. Identify the symptoms and differential diagnosis of Pelvic Inflammatory disease (P. I. D). 3. Discuss the causes and treatments for PID. 4. State indications which require referral of the patient for higher level care.	1. Common disorders of the uterus, (endometerosis, endometrial fibrosis, endometrial tumors) fallopian tubes and ovaries. 2. Differential diagnosis of PID. 3. Relationship of PID and STI. 4. The risks of untreated conditions of the internal reproductive organs.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 7 Female urinary tract infections	Hrs. theory 2 Hrs. lab/practical
Objectives:	Content:
1. Differentiate between upper urinary tract infections (UTI) and lower urinary tract infections. 2. Describe the treatment for UTI. 3. Describe the diagnosis and treatment of chlamydia and gonorrhea UTI. 4. State the signs of cystocele and prolapsed uterus. 5. Describe the management of cystocele and prolapsed uterus. 6. Discuss the role of the Health Post Incharge in teaching staff and patients ways to prevent cystocele and prolapsed uterus. 7. Discuss the causes and treatment of stress incontinence and urinary retention. 8. Identify the indications for referral to higher level care.	1. Symptoms and differential diagnosis of upper & lower UTI. 2. Treatment for common UTI. 3. Anatomical relationship of difficult childbirth and inadequate support of the uterus and bladder. 4. Delivery practices which reduce the occurrence of cystocele and uterine prolapse. 5. Muscle exercises and treatments for urine leakage and urinary retention.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 8 Genital Prolapse	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Identify sign and symptoms of genital prolapsed. 2. List factors affecting genital prolapsed. 3. List the stages of genital prolapsed. 4. Describe the advice and treatment for genital prolapsed.	1. Definition, causes and stages of genital prolapsed. 2. Sign, symptoms and complication of genital prolapsed. 3. Techniques of assessment of female genital organs.

	4. Methods to reduce the risk of complication of genital prolapsed. 5. Correct management of genital prolapsed.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 9 Infertility	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the structural and functional component of male and female genital organs. 2. Define infertility. 3. Describe common causes of infertility in females (including males) 4. Discuss the causes and treatment of infertility. 5. Indication for referral of women/men or both.	1. Anatomy and physiology of male and female genital organs. 2. Anatomical and physiological variation in both sexes. 3. Strategies for treating common problems of infertility. 4. Referral system.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 10 Family Planning methods	Hrs. theory 1 Hrs. lab/practical 2
Objectives:	Content:
1. Define and explain different types of contraceptives methods. 2. Explain proper use of contraceptives methods. 3. Recommend appropriate drug or other contraceptive method. 4. Identify drug and non drug treatment. 5. Describe ways to control the population.	1. Definitions and examples of different contraceptive devices. 2. Guidelines for safe use of contraceptives method. 3. Pharmacological action, dose, effects, adverse effects, indication, contra indication of contraceptive methods. 4. Complication of different contraceptive methods.

Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Gynecology	Hrs. theory Hrs. lab/practical
Sub-unit: 11 Sexual assault and abuse	Hrs. theory 2 Hrs. lab/practical
Objectives:	Content:
1. Define the various forms of sexual abuse and sexual assault. 1. Discuss the incidence, laws and customs related to sexual assault, trafficking, incest and sexual abuse. 2. Discuss factors that may contribute to the incidence of sexual assault, incest, sexual abuse. 3. Tell the signs which alert the Health Post Incharge that a patient may be the victim of sexual assault, incest, sexual abuse. 4. Tell how the Health Post Incharge would modify the gynecological history taking and physical exam to be sensitive to the feelings of the abused person. 5. Describe ways that the Health Post Incharge can do health education to prevent sexual assault, incest, sexual abuse, and to encourage reporting of victimization. 6. Describe the time limitations and procedure of post-coital contraception (emergency contraception).	1. Related laws, incidence and ethnic beliefs about sexual assault, trafficking, incest, sexual abuse. 2. The relationship between the incidence of abuse and the protection of rights of vulnerable populations (women, children, mentally weak). 3. Emotional needs of victims of abuse. 4. Management of post-coital contraception.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Obstetrics & Gynecology	Hrs. theory Hrs. lab/practical
Unit: Obstetrics	Hrs. theory Hrs. lab/practical
Sub-unit: 1 Foetal Development	Hrs. theory 2 Hrs. lab/practical
Objectives:	Content:
1. Describe fertilization and implantation of the zygote. 2. Explain the formation of monozygotic and dizygotic twins. 3. Discuss embryonic development, 0-8 weeks. 4. Describe placenta development and function. 5. Describe foetal circulation. 6. Describe foetal development from the second to ninth months. 7. Explain why the embryo/foetus is especially at risk from teratogens during the first 3 months of development. 8. Describe the effects of alcohol, tobacco, anaemia, protein deficiency vitamin or mineral deficiency on the physical and mental development of the foetus. 9. Tell when foetal movement and foetal heart sounds can first be observed. 10. Describe the positions assumed by the foetus during pregnancy.	1. Anatomy and physiology of conception, embryionic and foetal development. 2. Foetal circulation and placenta function. 3. Interferences with normal growth and development. 4. Health education measures to promote healthy babies.
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion, models, charts, textbook self study

Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Obstetrics	Hrs. theory Hrs. lab/practical
Sub-unit: 2 Normal pregnancy	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Identify signs & symptoms indicating pregnancy. 2. Tell how to calculate EDD (Expected date of delivery). 3. Describe the progressive changes to mother and fetus during each month of pregnancy. 4. Describe common minor health conditions of pregnancy and methods to reduce these problems. 5. Tell the nutritional advice to give a pregnant woman. 6. Discuss the role of Vitamin A supplements in preventing night blindness and the risks related to night blindness. 7. List factors which may cause abnormal fetal development. 8. Describe the schedule of antenatal immunizations. 9. State important warning signs, which a woman should report to the health worker.	1. Physiology of normal pregnancy and fetal development. 2. Diagnosis of pregnancy . 3. Using formulas to estimate delivery date 4. Methods to reduce common discomforts of pregnancy such as backache, constipation, morning sickness, varicose veins, vulval itching. 5. Increased nutritional needs in pregnancy 6. Medications, toxins, habits, infections and other factors which are teratogenic. 7. Ante-natal assessment of fetal well being. 8. Purposes and recommendations for immunizations during pregnancy 9. Symptoms which may indicate a complication of pregnancy
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Obstetrics	Hrs. theory Hrs. lab/practical
Sub-unit: 3 Complications of pregnancy	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Identify the factors or symptoms, which indicate a risk for pregnancy complications requiring referral for expert management. 2. Identify the symptoms of threatened abortion and tell what to advise, for preserving the pregnancy. **3.** Describe the various types of abortion which require referral for expert treatment. 4. Differentiate between the various causes of vaginal bleeding. 5. Differentiate between the symptoms of pre-eclampsia and eclampsia. 6. Describe the advice and treatment for pre-eclampsia.	1. The symptoms and risks related to : hyperemesis gravidarum, ectopic pregnancy, placenta previa, acute abdomen, multiple fetus, small for dates, polyhydramnios, hydatidiform mole, hypertensive disorders of pregnancy, cephalo-pelvic disproportion, malpresentation fetus, premature rupture of membranes, Rh incompatibility. 2. The symptoms and risks related to maternal anaemia, heart disease, tuberculosis, endocrine disease, diabetes mellitus, jaundice, genital tract infection, urinary tract & renal disease, use of tobacco, alcohol or drugs, severe malnutrition or obesity. 3. Pregnancy history which indicate increased risk for complications: repeated pregnancy loss, still birth, premature delivery, neonatal death, baby with congenital defect, post partum hemorrhage, retained placenta, prolonged labor, assisted deliveries, caesarean section, perineal surgery, fibroid/cyst/cancer of reproductive organs, history of subfertility. 4. Definitions of abortion (threatened, spontaneous, induced, complete, incomplete, septic) and management of each at the health post or through referral. 5. Accidental and non-placental causes of antepartal

	vaginal bleeding. 6. Indications for referral to hospital when patient exhibits symptoms of pre-eclampsia.
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Obstetrics	Hrs. theory Hrs. lab/practical
Sub-unit: 4 Normal labor and delivery	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Describe the confirmation of labor 2. Describe the stages of normal labor and delivery for primipara and multipara women. 3. Describe the assessment of the progress of labor: cervical changes, effacement, dilation, mucus show, amniotic release, crowning, duration & frequency of contraction, desire to push. 4. Describe the use of the partograph in assessing the progress of the three stages of labor. 5. Describe measures to promote comfort and the progression of labor. 6. Describe the assessment of the presentation, rotation & descent of the fetal occiput, both vaginally and externally. 7. Describe the procedures for the management of second stage labor. 8. Describe procedures for the active management of third stage labor.	1. The anatomy and physiology related to normal labor. 2. Assessment of the normal progression of the fetus through the birth canal. 3. Stages of Normal labor. 4. Principles and management of normal labor. 5. The procedure for assisting in the normal delivery of a baby. **6.** The principles and procedures for active management of the third stage of labor
Evaluation methods: written exams	Teaching / Learning Activities/Resources: classroom instruction and discussion.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Obstetrics	Hrs. theory Hrs. lab/practical
Sub-unit: 5 Complications of labor and delivery	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. List the symptoms & causes for complications of labor & delivery. 2. Describe the treatment for premature labor. 3. List the signs & symptoms of prolonged labor/fetal distress/maternal distress. 4. Describe how to assess the need for performing episiotomy. 5. Discuss the criteria for referral of patient with prolonged labor to higher level care center. 6. Describe the process for assessment and treatment of retained placenta, cervical or vaginal tears, uterine atony. *7.* Describe how to differentiate the causes of post partum hemorrhage and tell the treatment for each. 8. Demonstrate the procedure for removal of retained placenta. 9. Demonstrate the procedure for suturing of a simple episiotomy, using local anaesthesia.	1. Definitions, causes, symptoms and treatments for complications of L & D: premature labor, prolonged/obstructed labor, maternal distress, fetal distress, breech delivery, cord prolapse, hand prolapse, postpartum hemorrhage, retained placenta, maternal injuries (vaginal or cervical tears, rupture of uterus, inversion of uterus) 2. Prompt, regular uterine massage for prevention & treatment of uterine atony. 3. Procedure for the manual removal of retained placenta. 4. Methods to reduce the risk of complications of labor and delivery. 5. Correct use of oxytocin after delivery.
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role-play.

Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Obstetrics	Hrs. theory Hrs. lab/practical
Sub-unit: 6 Newborn care	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. Explain the reasons for putting the newborn to breast immediately after birth 2. Describe the procedure for clamping, tying and cutting the umbilicus. 2. Describe suctioning of the nose and mouth. 3. Describe stimulation and resuscitation of the nonbreathing newborn. 4. State the normal range for: weight, length, cardiac rate, and respiratory rate. 5. Explain how to compute the apgar score for newborns. 6. Discuss the risks of hypothermia/hyperthermia and ways to maintain normal body temperature of the newborn. 7. *Perform a newborn exam according to guidelines*. 8. Identify ways to determine the learning needs and learning readiness of the new mother. 9. Counsel the new mother about care of the newborn. 10. Describe the health post management of newborn infections: umbilical sepsis, conjunctivitis, candidiasis, septicemia. 11. Identify conditions that require referral to higher level health care.	1. Hormonal effects of immediate breastfeeding which produce placental expulsion; hypothermia prevention benefits of immediate breastfeeding. 2. Techniques of newborn cord care. 3. Maintaining respiration and temperature in newborns. 4. Assessment of normal physiological signs for newborns. 5. Techniques of newborn assessment-APGAR scoring system. 6. Describe stimulation and resuscitation of the non breathing child. 7. Necessary newborn care by mothers (umbilical sepsis, conjunctivitis, septicemia). 8. Management of newborn infections.
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Obstetrics	Hrs. theory Hrs. lab/practical
Sub-unit: 7 Postnatal care	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. State the aims of postnatal care 2. Tell what things to assess when examining the postpartum patient. 3. List the postpartum danger signs to teach the new mother 4. Describe he aims of the 6-week check up. 5. Discuss the symptoms and management of postpartum complications.	1. The progress of normal postpartum recovery 2. Danger signs during postnatal recovery: fever, convulsions, p.v. bleeding or odorous discharge, wound inflammation, calf tenderness, uterine tenderness/swelling, dysuria, sleeplessness or depression. 3. Signs/symptoms and management of postpartum complications: puerperal sepsis, breast infection, deep vein thrombosis, wound infection, urinary tract infection, puerperal psychosis, fistula.
Evaluation methods: written exams	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role-play.
Course: Obstetrics/Gynecology	Hrs. theory Hrs. lab/practical
Unit: Obstetrics	Hrs. theory Hrs. lab/practical
Sub-unit: 8 Postpartum teaching	Hrs. theory 3 Hrs. lab/practical 2
Objectives:	Content:
1. List the topics to include when counseling the new mother and family. 2. Describe the characteristics, which show that a new mother has readiness for learning.	1. Skills and knowledge necessary for good parenting. 2. Teaching/learning principles for adult learning. 3. Ethnic beliefs related to postpartum care.

3. Discuss cultural beliefs and values, which may promote or interfere with new mother teaching. 4. Identify the health benefits of exclusive breast feeding. 5. *Demonstrate the steps in teaching the new mother to breastfeed*. 6. State the common reasons for failure in breastfeeding, along with prevention strategies. 7. Describe the increased nutritional needs of the lactating mother. 8. State the reasons for postponing pregnancy for 3-4 years after delivery. 9. Tell the immunization schedule for infants and the reason for immunizations. 10. Discuss the reasons a family should take extra care with hygiene following the birth of a baby. 11. Describe symptoms which require a mother to bring her baby for health care.	4. Techniques for assisting the baby to learn to latch onto nipple and nurse successfully. 5. Prevention and management of lactation problems such as sore/cracked nipples, low milk production, mastitis, foods/medicines to avoid, etc. 6. Need for increased fluid, calcium, protein, and vitamins during lactation. 7. Reasons and methods for beginning family planning 8. Principles of immunization in disease prevention 9. Principles of disease prevention through sanitation 10. Indications of complex health conditions of newborns: severe dehydration, sepsis, persistent cough, respiratory distress, high fever, meningitis, and persistent diarrhea, skin infections.
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role-play.

Course: Clinical Pharmacology and Pharmacy

Hours Theory: **60+60=120**
Hours Practical: **60**
Assessment Marks: **100**

Course Description:

This course introduces the student to the rational use of drugs commonly available in the health post and primary health center. This course teaches students to identify adverse drug reactions and manage them properly. The Pharmacy Practical includes simple preparations that may need to be performed in the health post dispensary, and the procedures for dispensing and managing drug supplies.

General Objectives

Upon completion of this course the student will be able to:

1. Select appropriate medicines for conditions according to guidelines provided by clinical pharmacology and disease control and treatment policy.
2. Identify adverse drug reactions and their management.
3. Identify indications and contraindications of commonly used drugs.
4. Select alternative drug as a substitute of first line drug which is contraindicated.
5. Prepare simple ointments, lotions and solutions.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended Textbooks:

1. Joshi, M.P. and Adhikari, R.K., Manual of Drugs and Therapeutics. Distributed by Health Learning Materials Center, Kathmandu, Nepal. 1996.
2. Current Index of Medical Specialties. Bio-Gard Private Limited, Bangalore, India. Current edition.

Recommended References:

1. Kafle, K.K. & Pinniger, R.G., Diagnostic and Treatment Manual for Primary Health Care in the District. Health Learning Materials Center, Tribhuvan University, Nepal.

2. Tripathi, K.D., Essentials of Medical Pharmacology. Published by Jaypee Br. , New Delhi. 1999 or current edition.

2. Satoskar, R.S. et al. Pharmacology and Pharmacotherapeutics. Published by Popular Prakashan, Mumbai. 1999 or current edition.

3. Laurence, D.R., et al., Clinical Pharmacology 8th ed. Published by Churchill Livingstone, London. 1997 or current edition.

4. Handbook for Drug Retailers and Wholesalers. Produced by HMG Nepal, Department of Drug Administration. 1992 or current edition.

Course: Pharmacology	Hrs. theory	Hrs. lab
Unit: 1. Introduction to pharmacology	Hrs. theory 10	Hrs. lab 6
Objectives:	Content:	

Objectives:

1. Define pharmacological terms.
2. Classify drug, explain its sources.
3. Identify side effects (S/E), toxic effects, withdrawal effects, allergies, and adverse drug reactions (ADR).
4. Describe preventive measures to minimize adverse drug reaction.
5. Provide emergency management of ADR.
6. Calculate child dose.
7. Identify chemical, proprietary and non-proprietary name of commonly using drugs.
8. Identify the importance of pharmacodynamic study.
9. List safe drugs for pregnant and lactating woman.
10. Explain the importance of pharmacokinetic study.
11. Mention different dosage form.
12. List causes and preventive measures of microbial resistance.

Content:

1. Definition of pharmacology, pharmacodynamics, pharmacokinetics, pharmacy, clinical pharmacology, drug, medicine, poison, toxicology, indication and contraindication.
2. Classification of drug according to use, action and source
3. Adverse effects
    a. Definitions, classifications and examples
        - type 1: S/E, toxic effects and withdrawal effects
        - type 2: allergy (anaphylaxis, delayed hypersensitivity, cytotoxic type reaction, immunecomplex mediated reaction), idiosyncrasy
    b. Adverse drug reaction, classification and important manifestations
    c. Preventive measures of ADR
4. Dosing
    a. Definition of and classifications of dosing
    b. Calculation of child dose (Young's formula, Dilling's formula, Fried's formula and percent method)
    c. Definition, cause, type and preventive measures of microbial resistance.
4. Drug’s nomenclature: chemical name, non-proprietary and proprietary name
5. Definition of drug action and effect; fundamental types; identified main factors modifying effects and their implication on dosage adjustment and restriction of use
7. Teratogenic drugs
    a. Definition of teratogenic effects with examples
    b. Guidelines for safe use of drug in pregnancy
    c. Drugs to be avoided and can be used safely in pregnancy and lactating women
    d. Principles to be followed during Geriatric prescribing
8. Definition of pharmacokinetics, its importance and fields
    a. absorption: definition of, process, factors affecting enteral absorption
    b. bioavailibility: definition.
    c. protein binding: plasma protein and muscular tissue protein binding.
    d. distribution and penetration: placental barrier and blood brain barrier
    e. metabolism: definition, classification of metabolites, list its process; definition of presystemic metabolism
    f. elimination of drug: list routes of drug elimination
9. Dosage forms: definition of and classify

	a. solid dosage form (tablet, capsule, powder, granules) b. semisolid dosage form (ointment, suppository, pessary) c. liquid dosage form: i. for oral: syrup, tincture, suspension, elixir ii. for parenteral: vial, ampule, iii. infusion iv. for local: paints, tincture, liniment, lotion d. miscellaneous: cool items, aerosol
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts
Course: Pharmacology	Hrs. theory Hrs. lab
Unit 2: Locally acting drugs	Hrs. theory 5 Hrs. lab 2
Objectives:	Content:
1. List different locally acting preparation according to conditions. 2. Apply correctly. 3. Describe special precautions, Contraindication, Indication(C/I), adverse effect and its management.	1. Definition of local route, local application, local anaesthetic, germicide, keratolytic agent, soothing agent, astringent and oxidizing agents. 2. Adverse effect, preparation, dose, merits and demerits, contraindications (C/I) and indications for lignocaine, gentian violet, mercurochrome, acriflavin, potassium permanganate, zinc permanganate, spirit, calamine powder, zinc oxide, zinc sulphate, calamine lotion, salicylates, sulfur, benzoic acid, Whitfield ointment, benzyl benzoate, chlorhexidine, cetrimide, chloroxylenol and iodine, nystatin, clotrimazole and neomycin. 3. Process of application of different preparations on various conditions, like application of benzyl benzoate for scabies and pediculosis
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts
Course: Pharmacology	Hrs. theory Hrs. lab
Unit: 3 Anti-cancer and Antimicrobial agents	Hrs. theory 18 Hrs. lab 12
Objectives:	Content:
1. List chemotherapy of respiratory tract infection, urinary tract infection (UTI), gonorrhea, syphilis, diphtheria, whooping cough, tetanus, enteric fever, meningitis and septicemia according to guidelines provided by clinical pharmacology authorized body of government of Nepal. 2. Identify 1st and 2nd line drugs for various infections. 3. Identify adverse effects and their management. 4. Follow guidelines for rational use. 5. Select chemotherapy for sputum positive pulmonary tuberculosis; identify adverse drug reactions (ADR) (Adverse Drug Reaction) and their management. 6. Select MDT (Multi Drug Therapy) for MB & PB leprosy according to guideline of leprosy control division; identify ADR (Adverse Drug Reaction), MDT (Multi Drug Therapy) resistance and its management. 7. Select chemotherapy of benign, cerebral and resistance	1. Definition of antimicrobial agents: antibacterial, antifungal, sulfonamides, antiviral, antiprotozoal, antineoplastic, anthelmintic 2. Definition and classification of antibiotics 3. β-lactum antibiotic: introduction and mode of action (MoA). a. penicillins: preparation, A/E(Adverse Effect), C/I (Ccontraindication/Indication), merits, demerits and therapeutic uses of penicillin G, penicillin V, ampicillin, amoxycillin, carbenicillin, methicillin, cloxacillin b. Cephalosporins: adverse effects (A/E), C/I, merit, demerit of first, second, third and fourth generation cephalosporins 4. Macrolides: MoA, preparation, A/E, C/I, merit, demerit and therapeutic uses of erythromycin,

malaria. 8. Identify ADR (Adverse Drug Reaction) on chemotherapy of malaria and its management. 9. Select chemotherapy of invasive dysentery, chronic intestinal amoebiasis and systemic anaerobic infections. 10. List chemotherapy of leishmaniasis. 11. Select ideal antihelmintic and use it appropriately. 12. Identify conditions requiring use of systemic antifungal drug and its use rationally. 13. Describe how to use acyclovir rationally.	azithromycin. 5. Tetracycline's: MoA, preparation, A/E, C/I, merits, demerits and therapeutic uses of oxytetracycline, doxycycline and minocycline 6. Chloramphenicol: MoA, preparation, A/E, C/I, guidelines for chloramphenicol therapy and therapeutic uses 7. Cotrimoxazole: composition, MoA, A/E, C/I, merit, demerit and therapeutic uses. 8. Aminoglycosides: MoA, A/E, C/I, dose, merit, demerit and therapeutic uses of streptomycin, gentamycin, amikacin 9. Quinolones: MoA, A/E, C/I, merit, demerit, and therapeutic uses of ciprofloxacin, norfloxacin, ofloxacin and nilidixic acid 10. Antitubercular drugs: a. list first and second line antitubercular drugs b. identify MoA, A/E, C/I of rifampicin, isoniazide, pyrazinamide, ethambutol, streptomycin c. principle of antitubercular therapy d. Short course chemotherapy and chemoprophylaxis according to guideline of (Nepal Tuberculosis Programme) NTP 10. Antileprotic drug: a. List antileprotic drugs available b. MoA, A/e, C/I of dapsone, clofazimine c. ROM therapy and MDT for multibacillary and pausibacillary leprosy 11. Antimalarial drugs: a. definition of, available antimalarial drugs b. MoA, A/E, C/I, preparation, merit, demerit and therapeutic uses of chloroquine, primaquine c. Chemoprophylaxis, chemotherapy (presumptive and radical for benign, falciparum and cerebral malaria) 12. Antiamoebic drugs: a. definition of and classify it b. MoA, A/E, C/I, preparation and therapeutic uses of metronidazole, tinidazole and diloxanide c. chemotherapy of invasive intestinal amoebiasis, chronic intestinal amoebiasis and hepatic amoebiasis, giardiasis, trichomoniasis 14. Drugs for leishmaniasis: a. definition and examples b. toxic effects and dose of sodium stibogluconate, pentamidine 15. Drugs for helminthic infections: a. definition and examples b. classification: vermicide and vermifuge c. MoA, A/E, C/I and therapeutic uses of mebendazole, albendazole, piperazine, pyrental, niclosamide, praziquantel, DEC d. list 1st and 2nd line drug for infection due to roundworm, hook worm, thread worm, whip worm,

	S. stercoralis, H. nana, V. bancrofti, T. saginata and solium, E. granulosus. 16. Antifungal drugs: a. definition and examples b. A/E and indication of griseofulvin, miconazole, ketoconazole 17. Antiviral drugs: a. definition and examples b. A/E, C/I and therapeutic uses of acyclovir
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts
Course: Pharmacology	Hrs. theory Hrs. lab
Unit: 4. Drugs used in Common GI problems	Hrs. theory 7 Hrs. lab
Objectives:	Content:
1. Prescribe drug therapy for APD and peptic ulcer rationally. 2. Select ideal antiemetics according to guidelines of rational use of antiemetics. 3. Apply process of atropinization in treatment of poisoning and identify therapeutic uses and contraindications of atropine. 4. Identify ADR due to over-atropinization and its management. 5. Select an ideal antispasmodic and use it rationally. 6. Choose and use laxative according to guideline and can explain contraindication. 7. List antimotility drugs and their disadvantages on therapy of diarrhea. 8. Select ideal antimotility drug and use rationally for non-specific mild diarrhea.	1. Antacids: a. definition and classification b. MoA, A/E, therapeutic use of aluminum hydroxide, magnesium trisilicate, sodium bicarbonate 2. Ulcer healing drugs: H_2 receptor antagonist (ranitidine, famotidine), proton pump inhibitor (omeprazole); A/E and therapeutic uses; antibiotic therapy. 4. Drug therapy for APD, peptc ulcer 5. Antiemetics: a. definition and types b. MoA, A/E, C/I and therapeutic uses of promethazine, metoclopramide, domperidom c. guidelines for rational use of antiemetics 6. Antispasmodics a. definition and examples b. MoA, effects on various systems, A/E, therapeutic uses and C/I of atropine. Process of atropinization in poisoning c. A/E and therapeutic uses of belladona, hyoscine d. A/E, C/I and therapeutic uses of pentazocine 7. Laxatives and purgatives a. definition, classification with properties and examples b. MoA, A/E, dose and therapeutic uses of magnesium sulfate, liquid paraffin, senna preparations, bisacodyl, isapgol c. choice and use of laxative and its contraindications 8. Antimotility drugs: a. definition and examples b. brief description , therapeutic use of codeine, diphenoxylate, loperamide, pectin, bismuth salt, prepared chalk, kaolin
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts
Course: Pharmacology	Hrs. theory Hrs. lab

Unit: 5. Drugs used in common respiratory problems	Hrs. theory 6 Hrs. lab
Objectives:	Content:
1. Select ideal bronchodilator and describe its therapeutic use on asthma, status asthmaticus and Chronic Obstructive Pulmonary Disease (COPD). 2. Identify A/E, C/I of bronchodilators and manage ADR. 3. Select ideal drugs for cough, allergic disorders rationally. 4. Administer drug rationally for indication of emesis in case of poisoning.	1. Definition of antitussive, classify it with examples 2. Definition of bronchodilator 3. MoA, effects on various systems, A/E, C/I and therapeutic uses of ephedrine, salbutamol, terbutaline, aminophylline, deriphyllin 4. Definition of antihistamine and classify it. 5. MoA, A/E, therapeutic uses of chlorpheniramine, pheniramine, terfenadine, astimazole, cetrizine 6. Brief description on ipecacuanha, ammonium salt, bromhexine, potassium salt, volatile oils and vasaka syrup
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts
Course: Pharmacology	Hrs. theory 120 Hrs. lab 60
Unit: 6 Rehydration therapy	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Identify conditions which need rehydration therapy. 2. Provide rehydration therapy according to guidelines of clinical pharmacology and CDD child health division. 3. Recognize ADR and its management during PRT.	1. Definition of dehydration and its causes 2. Oral rehydration therapy (ORT): definition and advantages 3. Oral rehydration salts (ORS): composition, preparations, dosages, indications and process of administration. 4. Parenteral rehydration therapy (PRT): definition of, state drawbacks and necessities; composition, merit, demerit and indications for normal saline, dextrose solution, DNS, ringer lactate and plasma expanders; adverse effects of parenteral solution.
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts

Course: Pharmacology	Hrs. theory 120	Hrs. lab 60
Unit: 7. Vaccines, antisera and immunoglobulins	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. Explain EPI according to Child Health Division. 2. Prescribe rationally different vaccines and antisera like ARV, hepatitis B, J.E., TAB, cholera, ATS, ADS, anti-snake venom polyvalent. 3. Test hypersensitivity for administration of antisera and desensitization techniques for safe and effective use.	1. Vaccine: definition of, types with examples and its role 2. Antisera: definition, examples and its role 3. Immunoglobulins: definition, examples and its role 4. Type, dose, time of administration, A/E, efficacy of: BCG, DPT, polio oral, measles, TT, antirabies, hepatitis B, J.E., TAB, cholera, ATS, ADS, anti-snake venom polyvalent, ARS.	
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts	
Course: Pharmacology	Hrs. theory 120	Hrs. lab 60
Unit: 8. Vitamins and minerals	Hrs. theory 3	Hrs. lab
Objectives:	Content:	
1. Identify conditions for rational use of different vitamins and minerals. 2. Select vitamins and minerals appropriately.	Preparation and therapeutic uses of: vitamin A, vitamin B-complex, vitamin C, vitamin E, vitamin B_{12}, folic acid, iron, iodine and calcium.	
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts	
Course: Pharmacology	Hrs. theory 120	Hrs. lab 60
Unit: 9. NSAIDS	Hrs. theory 3	Hrs. lab
Objectives:	Content:	
1. Select and prescribe analgesic and antipyretic rationally. 2. Select and prescribe anti-inflammatory rationally. 3. Identify S/E, C/I and ADR and its treatment. 4. Prescribe appropriately in other conditions like valvular heart diseases and dysmenorrhoea.	1. Definition and examples 2. Antipyretic, analgesic and anti-inflammatory mechanism 3. Potency, A/E, C/I and therapeutic uses of: aspirin, paracetamol, ibuprofen, naproxen, indomethacin, nimesulide	
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts	
Course: Pharmacology	Hrs. theory 120	Hrs. lab 60
Unit: 10. Hormones and related drugs	Hrs. theory 6	Hrs. lab
Objectives:	Content:	
1. Identify C/I of ergometrine and oxytocin. 2. Identify the therapeutic use of ergometrine and oxytocin and use appropriately. 3. Identify general principles to follow before and during pharmacotherapy with corticoids. 4. Select ideal conditions for use of oral contraceptive combined preparation and depoprovera injection as per guidelines of family planning. 5. Describe the management of side effects of hormonal contraceptives. 6. Identify therapeutic and preventive use of iodine.	1. Antithyroid drugs: a. definition and classification b. A/E, C/I and indication of: thiourea derivatives, iodide, radioactive iodide and β- blockers 2. Pharmacological action and effects, A/E, preparation, C/I, indication and dosage of: oxytocin, ergometrine and methylergometrine 3. MoA, preparations, A/E, C/I, indication and dosage of conventional insulin and oral antidiabetic drugs 4. Action and effect, preparation, A/E, indication, dose, relative contraindication of corticosteroids. 5. Identify general principles to follow before and	

	during pharmacotherapy with corticoids. 6. Action and effect, preparation, A/E, C/I and therapeutic uses of oral contraceptives and depoprovera
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts
Course: Pharmacology	Hrs. theory Hrs. lab
Unit: 11. CNS acting drugs	Hrs. theory 5 Hrs. lab
Objectives:	Content:
1. Define and explain different types of CNS acting drugs. 2. Explain clinical guidelines for use of hypnotic, antidepressants and narcotics. 3. Identify drug dependence and its management to stop addiction. 4. Describe ways to control the misuse of narcotic drugs.	1. Definition and examples of: sedative, hypnotic, anxiolytic, anticonvulsant, antiepileptic, tranquilizer, antidepressant, antipsychotic, antiparkinsonian, opiod analgesic, drug abuse, drug addiction and habituation. 2. A/E, C/I and indications for phenobarbitone, diazepam, alprazolam, lorazepam, phenytoin, imipramine, amitryptaline, chlorpromazine, codeine and pentazocine 3. Definition of narcotics, its misuse and ways to manage 4. Definition of drug dependence, classifications, aetiology, effects and clinical features on the body of habitué; helping measures to stop drug addiction.
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts
Course: Pharmacology	Hrs. theory 120 Hrs. lab 60
Unit: 12. Drugs used in cardiovascular problems	Hrs. theory 3 Hrs. lab
Objectives:	Content:
1. Identify therapeutic uses, process of digitalization and monitor case using digoxin 2. Describe how to control hypertensive emergency 3. Prescribe aspirin rationally in rheumatic and other valvular heart diseases	1. Definition and introduction of cardiac glycosides and antihypertensive drugs. 2. MoA, A/E, C/I, process of digitalization, special precaution and therapeutic uses of digoxin. 3. Moa, A/E, C/I and therapeutic uses of nifedipine and β-blockers. 4. Therapeutic uses of aspirin.
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts

Course: Pharmacology	Hrs. theory 120	Hrs. lab 60
Unit: 13. Diuretics	Hrs. theory 3	Hrs. lab
Objectives:	Content:	
1. Identify conditions demanding use of diuretics 2. Describe the rational use of different diuretics	1. Definition and classifications of diuretics. 2. MoA, A/E, C/I and therapeutic uses of: furosemide, benzothiazide, spirinolactone, mannitol and acetazolamide.	
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts	
Course: Pharmacology	Hrs. theory 120	Hrs. lab 60
Unit: 14. Pharmacy	Hrs. theory 10	Hrs. lab
Objectives:	Content:	
1. Select and dispense medicine properly 2. Identify expired and damaged drug 3. Apply drug act and regulation during its management 4. Explain properties of rational drug therapy	1. Definition, parts, importance and abbreviations of prescription. 2. Definition, need, criteria to compose EDL. 3. Definition, characteristics of expired and damaged drugs and reasons to not to use of expired and damaged drugs. 4. Identify identified main environmental factors affecting quality of drug. 5. Definition, aims, importance of drug storing; criteria of ideal storeroom; steps of storing. 6. Definition, aims, right ways of packing; concept of economic packing and tips to economize. 7. Definition, aims, importance, types of labeling; points to be necessarily identified in patient labeling. 8. Definition, aims, importance of patient counseling and points to be dealt with during counseling. 9. Definition and fundamental steps of dispensing. 10. Drugs and the law a. Drug acts and regulation b. Purposes of regulation c. Banned drugs: definition, causes and examples d. Controlled drugs: definition, causes and examples 11. Formulary: meaning, importance and examples. 12. Pharmacopoeia: meaning, importance and examples. 13. Therapy: definition and types a. Drug therapy: definition, problems due to unnecessary widespread use of drugs b. Principles of drug therapy c. Rational and irrational drug therapy: meaning and examination d. Guidelines for rational drug therapy.	
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts	

Course: Pharmacology	Hrs. theory 120 Hrs. lab 60
Unit: 15. Pharmacy Practical	Hrs. theory 5 Hrs. lab 30
Objectives:	Content:
1. Prepare, pack, label, store and dispense solution, lotion, ointment and powders. 2. Prepare performance guide for each preparation.	1. Pack, label, store and dispense the medicine prepared in laboratory. 2. Prepare gentian violet, Mercurochrome, acriflavin, potassium permanganate, zinc permanganate solution according to accepted formula. 3. Prepare Whitfield and sulfur ointment according to accepted formula. 4. Prepare calamine lotion according to accepted formula. 5. Prepare Lugol's solution and tincture of iodine according to accepted formula. 6. Prepare antacid according to accepted formula. 7. Prepare tooth powder according to accepted formula.
Evaluation methods: written exam, viva	Teaching / Learning Activities & Resources: classroom instruction, handouts

Course: **Environmental Health**

Hours Theory: **90**
Hours Practical: **10**
Assessment Marks: **100**

Course Description:
This course introduces the student to the specialized skill and knowledge needed to provide environmental health services. The content is taught using classroom instruction and practical experiences in community based programmes and primary health care services during field practice at the Health Post and home visits. This course includes information about the relationship between environment and health, water resource management and conservation, waste management, food hygiene, healthful and sanitary housing, air quality management, control of rodents, arthropods and insects, occupational health, climate change.

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

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

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended Textbooks:

1. Park's Textbook of Preventive and Social Medicine, by K. Park. Published by M/S Banarasidas Bhanot, Jabalpur, India. Current edition.

2. **United Nations Environment Program (UNEP) Publications International Center for Integrated Mountain Development,(ICIMOD) Publications**

Reference Books:
State of Environment, Published by ICIMOD

Course: Environmental Health	Hrs. theory	Hrs. lab
Unit: 1. Environmental Health Concepts	Hrs. theory	Hrs. lab
Sub-unit: Definition of Terminologies	Hrs. theory 1	Hrs. lab
1. Define: Environment Environmental Health Environmental Sanitation Environmental Pollution Carbon Point Climate Change 2. Evaluate and describe the environmental health of your home community. 3. Give examples of environmental sanitation efforts in Nepal. 4. Describe examples of local, national, and global pollution. 5. Tell one thing you do to improve the environmental health of your community.	1. Definition of Environment, Environmental Health, Environmental Sanitation and Environmental Pollution. 2. Examples of environmental health, sanitation and pollution. 3. Individual and collective efforts to promote environmental health.	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs	
Course: Environmental Health	Hrs. theory	Hrs. lab
Unit: 1. Environmental Health Concepts	Hrs. theory	Hrs. lab
Sub-unit: Relation of Environmental Health	Hrs. theory 1	Hrs. lab
1. Describe the relationship between environment and health. 2. Define the terms: agent, host, and environment. 3. Give examples of agent, host and environment. 4. Give examples of diseases which have become more common because of changes in the land use, population migration, or environment in Nepal.	1. Relationship of environment and health - Agent - Host - Environment	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs	
Course: Environmental Health	Hrs. theory	Hrs. lab
Unit: 1. Environmental Health Concepts	Hrs. theory	Hrs. lab
Sub-unit: Environmental hazards and effects	Hrs. theory 1	Hrs. lab
1. Define environmental hazards and give examples. 2. Differentiate between biological and chemical hazards. 3. Describe the long term and short term effects of selected biological and chemical hazards. 4. Analyze different types of environmental hazards and suggest ways to reduce the harmful effects of environmental hazards.	1. Definition of environmental hazards 2. Types of effects of environmental hazards (Biological & Chemical)	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, viva, practical	Classroom instruction, teacher led discussion, textbook, hand-outs, Case Study	

Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 1. Environmental Health Concepts	Hrs. theory Hrs. lab
Sub-unit: Basic environmental threats	Hrs. theory 2 Hrs. lab
1. discuss basic environmental threats in Nepal 2. Identify different types of environmental threats. 3. Give examples of the three types of environmental threat. 4. Describe how you would implement measures to reduce one of these threats, as a health post manager. 5. Discuss the effects of the climate change on health.	1. Concept of environmental threats 2. Different types of environmental health threats - Intensification of Agriculture - Industrialization & health - Energy crisis & health 3. Effects of climate change on health.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs, Case Study
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 1. Environmental Health Concept	Hrs. theory Hrs. lab
Sub-unit: Environmental health issues in global and national context	Hrs. theory 2 Hrs. lab
1. Discuss the extent of environmental pollution as a health issue globally. 2. Identify three important environmental health issues in the world today. 3. Give examples of each of these issues in Nepal. 4. Analyze different types of health problems related to each form of pollution.	1. Concept of environmental pollution health issues 2. environmental pollution issues of global & national importance: - Water pollution - Air pollution - Noise pollution
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs, Case Study
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 2. Water	Hrs. theory Hrs. lab
Sub-unit: Introduction of Water	Hrs. theory 2 Hrs. lab 2
1. State the value requirement, nature and cycle of water 2. Define safe and wholesome water 3. Identify the uses of water	1. Value requirement, nature and water cycle. 2. Safe and wholesome water. 3. Uses of water - Domestic use - Public purpose - Industrial purpose - Agriculture purpose - Power production - Tourism
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion

Course: Environmental Health	Hrs. theory	Hrs. lab
Unit: 2. Water	Hrs. theory	Hrs. lab
Sub-unit: Source of water	Hrs. theory 1	Hrs. lab
1. Identify various sources of water 2. Identify merits & demerits of different sources. 3. Discuss the reasons why some areas of Nepal experience water shortages more often now, than 40 years ago. 4. Explain the relationship between deforestation and water shortages in Nepal. 5. Relate water shortages with quality of life and health. 6. Discuss ways to prevent water shortages.	1. Sources of water - Rain - Surface water - Ground water - Shallow wells - Deep wells - Springs	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion	

Course: Environmental Health	Hrs. theory	Hrs. lab
Unit: 2. Water	Hrs. theory	Hrs. lab
Sub-unit: Water pollution	Hrs. theory 3	Hrs lab 2
1. Define water pollution 2. Describe causes of water pollution 3. Explain the prevention of water pollution 4. Identify important water borne diseases.	1. Definition of water pollution 2. Cases of water pollution - Organic cause - Inorganic cause 3. Prevention of water pollution - Safe water supply - Sanitary well - Proper drainage system - Proper management of sewage and waste - Change in health habits of people - Health education. 4. Different types of diseases - Water borne - Water based - Water related - Water washed - Diseases due to chemicals	
Evaluation methods:	Teaching / Learning Activities:	
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit	

Course: Environmental Health	Hrs. theory	Hrs. lab
Unit: 2. Water	Hrs. theory	Hrs. lab
Sub-unit: Purification of water	Hrs. theory 5	Hrs. lab 2
1. Describe different ways to achieve water purification. 2. Describe different methods of water purification at the household level. 3. Describe how to disinfect well water. 4. Describe the methods of water purification on a large scale. 5. Describe the features of a sanitary well	1. Water purification in large scale & small scale 2. Household water purification Boiling Chemical Filtration 3. Disinfection of well 4. Large scale water purification Slow sand filtration Rapid sand filtration 5. Features of sanitary well	

Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 2. Water	Hrs. theory Hrs. lab
Sub-unit: Drinking water programs in Nepal	Hrs. theory 3 Hrs. lab 2
1. Describe the current drinking water systems in Nepal. 2. Identify various drinking water programmes of Nepal. 3. Analyze the drinking water situation of Nepal and give your idea on ways to improve this.	1. Drinking water system of both rural and urban area 2. Drinking water programming of Kathmandu Valley Melamchi water project 3. Drinking water situation of Nepal
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion
Course: Environmental Health	Hrs. theory Hrs. lab __
Unit: 2. Water	Hrs. theory Hrs. lab _
Sub-unit: Water quality	Hrs. theory 3 Hrs. lab 2
1. State the criteria and standards for water quality according to WHO and the Ministry of Health. - list the standards for good physical quality - list the standards for good chemical quality - list the standards for good biological quality 2. Give examples to illustrate low quality in each classification.	1. Criteria and standards of water quality 2. Water quality standards in regarding - Physical quality - Chemical quality - Biological quality
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 3. Waste	Hrs. theory Hrs. lab
Sub-unit: Introduction of waste	Hrs. theory 1 Hrs. lab
1. define waste 2. give examples of solid waste and identify their sources. 3. give examples of liquid wastes and identify their sources. 4. give examples of hazardous wastes and identify their sources.	1. Types of waste -Solid waste -Liquid waste - Hazardous waste
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 3. Waste	Hrs. theory Hrs. lab

Sub-unit: Solid waste	Hrs. theory 1 Hrs. lab
1. Identify examples of biodegradable and non-biodegradable solid wastes in Nepal. 2. Describe national efforts in Nepal and other countries to reduce the amount of non-biodegradable wastes. 3. Describe national and local efforts to introduce recycling of solid wastes. 4. Discuss ways the health post manager could educate the community and mobilize efforts to reduce solid waste problems.	1. Biodegradable and non-biodegradable solid wastes. 2. Strategies to reduce solid waste problems.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 3. Waste	Hrs. theory Hrs. lab
Sub-unit: Solid waste Management	Hrs. theory 2 Hrs. lab 2
1. Explain the 3R concept of minimizing waste 2. Describe the disposal of waste in urban areas in Nepal and other countries. 3. Discuss the purposes and effectiveness of Nepal's anti-litter campaign. 4. Describe the disposal of waste in rural areas. 5. Analyze solid waste management in a typical urban household. 6. Describe the process of methane production from animal and human wastes. 7. Identify the advantages and disadvantages of each method of solid waste disposal. 8. Analyze solid waste management systems; under what situation is it best to use each method?	1. Minimizing waste 3R concept: - Reduce waste - Reuse waste - Recycle waste 2. Disposal of waste - Collection - Storage - Transportation - Ultimate disposal - Sanitary land filling - Dumping - Composting - Incineration 3. Disposal of waste in rural area - Burial - Manure pit
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 3. Waste	Hrs. theory Hrs. lab
Sub-unit: Hazards of solid waste	Hrs. theory 1 Hrs. lab 1
1. Denitrify both health hazards and environmental hazards created by solid waste mismanagement. 2. Give examples when solid waste mismanagement resulted in health problems in other countries. 3. Identify an example of solid waste mismanagement in your own community.	1. Health hazards and environmental hazards from unhygienic or careless disposal of solid waste.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab

Unit: 3. Waste	Hrs. theory Hrs. lab
Sub-unit: Hospital waste management	Hrs. theory 2 Hrs. lab 2
1. Identify different kinds of hospital waste. 2. Describe the communicable disease risks from improper disposal of excreta, vomit, urine, contaminated dressings, blood, used needles and other sharp instruments, broken glass, mercury. 3. Describe the correct management of hospital wastes according to hospital waste management guideline. 4. Analyze the sanitation facilities at your clinical setting with regard to toilets and handwashing. 5. Describe the characteristics of a safe needle disposal system. 6. Describe the management system of liquid and solid wastes at your clinical setting.	1. Hospital waste 2. Hazards of hospital waste 3. Management of hospital waste -separation of waste -using incineration - management of mercury 4. Hospital waste management guideline according to WHO
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 3. Waste	Hrs. theory Hrs. lab
Sub-unit: Excreta disposal in the community	Hrs. theory 4 Hrs. lab 2
1. Identify human waste 2. Describe health hazards due to improper excreta disposal 3. Describe methods of excreta disposal using a pit latrine. 4. Describe the advantages and disadvantages of different types of pit latrines. 5. Describe the features of a water sealed latrine.	1. Human waste 2. Health hazards from improper excreta disposal 3. Methods of excreta disposal - unsewered areas - sewered areas 4. Types of latrine - pit latrine - ventilated improved pit latrine (VIP latrine) - aqua privy - chemical closet - deep trench and shallow trench latrine. 4. Features of water sealed latrine.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical

Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 3. Waste	Hrs. theory Hrs. lab
Sub-unit: Liquid waste management	Hrs. theory 4 Hrs. lab 2
1. Identify the components of liquid waste. 2. List sources of liquid waste. 3. Describe the management of liquid waste in household (small scale) & urban areas. 4. Describe the workings of each liquid waste disposal method. 5. Analyze the liquid waste management in household and urban areas of Nepal 6. Identify the advantages and disadvantages of different methods of waste management. 7. Tell the appropriate situation for using each waste management system.	1. Sources and components of liquid waste 2. Liquid waste management: at the household/institution level a. soakage pit b. soak well c. seepage pit d. dispersion trench e. septic tanks f. at the urban area g. waste water treatment plant reed bed
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 4. Food hygiene	Hrs. theory Hrs. lab
Sub-unit: Concept of food hygiene	Hrs. theory 2 Hrs. lab
1. Define food hygiene. 2. Explain importance of food hygiene. 3. Identity different food hygiene methods. 4. Discuss rules for food handling which ensure sanitary, hygienic conditions of eating places. 5. Tell which branch of government has responsibility and authority for evaluating sanitation of public eating places and food preparation industries.	1. Definition of food hygiene 2. Importance of food hygiene 3. Types of food hygiene - general food hygiene - milk hygiene - meat hygiene 4. Sanitation of eating places.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab ___
Unit: 4. Food hygiene	Hrs. theory Hrs. lab __
Sub-unit: Food borne disease	Hrs. theory 2 Hrs. lab ___
1. Discuss the incidence of food poisoning. 2. Identify common food borne diseases. 3. Identify foods which carry a high risk of containing toxins. 4. Give examples of bacterial, plant, and chemical poisons, which are ingested with food. 5. Differentiate between food borne infections and bacterial food poisoning.	1. Food borne disease: food intoxication and food infection. 2. Food intoxication (food poisoning) Bacterial food poisoning Plant poisoning Chemical poisoning 3. Food borne infection. 4. Food security
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 4. Food hygiene	Hrs. theory Hrs. lab

Sub-unit: Sources of food contamination.	Hrs. theory 2 Hrs. lab
1. Define food contamination. 2. Identify and describe sources of food contamination. 3. Give an example showing how a cook in a restaurant who has enteric infection can spread the bacteria to the customers. 4. Describe how milk might become bad if not refrigerated properly.	1. Definition of food contamination 2. Sources of food contamination - Human factors - Environmental factors.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 4. Food hygiene	Hrs. theory Hrs. lab
Sub-unit: Food Preservation.	Hrs. theory 3 Hrs. lab 2
1. Define food preservation 2. Identify purpose of food preservation. 3. Describe different methods of food preservation. 4. Analyze the food preservation practiced in Nepal. 5. Discuss the role of the health post manager in community education about safe food preservation.	1. Definition of food preservation. 2. Importance of food preservation. 3. methods of food preservation - Drying - Smoking - Cooking - Pickling - Fermentation - Pasteurization - Parboiling - Refrigeration/freezing - Canning & bottling
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 4. Food hygiene	Hrs. theory Hrs. lab
Sub-unit: Food additives, food fortification and food adulteration.	Hrs. theory 3 Hrs. lab 2
1. Define food fortification. 2. Explain importance of food fortification. 3. Explain different food fortification practices in Nepal. 4. Define food additives and describe different types of food additives. 5. State the hazards of using food additives. 6. Define food adulteration and discuss its hazards. 7. Describe different food adulteration practices.	1. Definition of food fortification 2. Importance of food fortification 3. Food fortification practical 4. Definition of food additives 5. Types of food additives 6. Hazards due to food additives 7. Definition of food adulteration 8. Hazards due to food adulteration 9. Food adulteration practiced in Nepal.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 4. Food hygiene	Hrs. theory Hrs. lab
Sub-unit: Milk hygiene.	Hrs. theory 2 Hrs. lab 2

1. State what is meant by milk hygiene. 2. Identify milk borne diseases. 3. Describe the processes/components of milk hygiene.	1. Definition of milk hygiene 2. Milk borne diseases 3. Components of milk hygiene Health animal Hygienic milking Preliminary treatment Pasteurization 4. Methods of Pasteurization - Holder method - HTST method - UHT method 5.Handling before consumption.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 4. Food hygiene	Hrs. theory Hrs. lab
Sub-unit: Meat hygiene.	Hrs. theory 3 Hrs. lab 2
1. Explain why meat hygiene is necessary for public health. 2. Identify meat borne disease 3. Describe the process of meat inspection 4. State the characteristics of sound & unsound meat. 5. Identify the requirements for safe storage of meat. 6. Describe the minimum standards required of slaughterhouse businesses. 7. Discuss the enforcement of meat handling standards. 8. list the concepts to include in a health education program for community awareness of safe meat hygiene practices	1. Meat hygiene 2. Meat borne disease 3. Meat inspection 4. Ante mortem inspection 5. Post mortem inspection 6. Characteristics of sound and unsound meat. 7. Storage of meat. 8. Slaughter house and its minimum standards.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 5. Housing	Hrs. theory Hrs. lab
Sub-unit: Concepts of housing.	Hrs. theory 1 Hrs. lab
1. Define housing, human settlement, residential environment, slum. 2. Discuss how the three kinds of housing are alike and different. 3. Describe social goals of housing. 4. Describe how well the social goals of housing are met by each of the three kinds of housing.	1. Definition of housing, human settlement, residential environment and slum. 2. Social goals of housing.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 5. Housing	Hrs. theory Hrs. lab
Sub-unit: Principles of housing.	Hrs. theory 2 Hrs. lab
1. Discuss the basic principles of housing.	1. Principles of housing

2. Describe criteria for healthful housing. 3. Analyze your present housing situation, using the criteria. 4. Discuss ways you could improve your current housing situation.	Physiological Psychological Healthful Free from accidents 2. Criteria for healthful housing
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 5. Housing	Hrs. theory Hrs. lab
Sub-unit: Housing standards	Hrs. theory 2 Hrs. lab
1. Define the term "standards." 2. Explain how housing standards can help improve living conditions. 3. Discuss the health hazards of housing which lacks good ventilation and lighting. 4. Describe important housing standards used in urban areas. 5. Describe the housing standards used in rural areas, and explain why these are different from urban housing standards. 6. Tell what construction requirement is required to protect from earthquake collapse.	1. Basic housing standards in terms of site, material, space, light, ventilation, waste disposal etc. 2. Types and ways to provide adequate ventilation. 3. Rural housing standards.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab _
Unit: 5. Housing	Hrs. theory Hrs. lab __
Sub-unit: Housing & health	Hrs. theory 1 Hrs. lab __
1. Discuss the increased health risks to people who live in sub-standard housing. 2. Describe the negative effects which poor housing has on a person's social and psychological health. 3. Discuss the environmental damage, which occurs when groups of people live in temporary, sub-standard housing. 4. Discuss community solutions to substandard housing problems in Nepal.	1. Effect of poor housing in terms of health & environment.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 5. Housing	Hrs. theory Hrs. lab

Sub-unit: Overcrowding	Hrs. theory 2 Hrs. lab
1. Define overcrowding 2. State accepted standards with respect to overcrowding. 3. Describe the social, psychological and behavioral effects of overcrowding. 4. Explain the reasons for providing separation of persons by gender.	1. Definition of overcrowding 2. Effects of overcrowding 3. Accepted standards with respect to overcrowding in terms of : - Persons per room - Floor space - Ventilation 4. Sex separation.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, teacher led discussion, textbook, hand-outs, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 5. Housing	Hrs. theory Hrs. lab
Sub-unit: Health issues in housing and their effects.	Hrs. theory 3 Hrs. lab
1. Discuss the causes, effects, and control of noise pollution 2. Describe the types, sources and effects of radiation exposure. 3. Discuss ways to reduce exposure to natural radiation and harmful effects of the sun. 4. Describe ventilation standards and their purposes. 5. Describe different ways to ensure adequate ventilation. 6. Identify health risks related to poor ventilation.	1. Noise pollution : - Definition - Effects of noise exposure - Acceptable noise levels - Control of noise. 2. Radiation - Sources of radiation exposure - Types of radiation - Effects of radiation - Radiation protection 3. Ventilation - Standards of ventilation - Types of ventilation.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 5. Housing	Hrs. theory Hrs. lab
Sub-unit: Housing Situation and National Policy.	Hrs. theory 2 Hrs. lab
1. Explain the housing situation of Nepal 2. Describe current National Housing Policy.	1. Housing situation of Nepal 2. Current National Housing Policy.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	- Classroom instruction, group discussion, field visit, practical

Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 6. Air	Hrs. theory Hrs. lab
Sub-unit: Introduction of air pollution.	Hrs. theory 3 Hrs. lab 2
1. Describe air and its composition. 2. Define air pollution . 3. Describe effects of air pollution on health and society. 4. Describe sources air pollution. 5. Describe indicators of air pollution. 6. Identify persons who are at risk when air pollution is high. 7. Analyze the air pollution in your own community.	1. Air & its composition 2. Definition of air pollution 3. Effects of air pollution - Health aspect - Social and economic aspects 4. Sources of air pollution a) Automobiles b) Industries c) Domestic sources d) Tobacco smoking e) Other source 5. Air pollutants 6. Indicators of air pollution.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 6. Air	Hrs. theory Hrs. lab
Sub-unit: Prevention and control of pollution.	Hrs. theory 1 Hrs. lab 2
1. Describe measures for the prevention and control of air pollution. 2. Identify methods for disinfection of air. 3. Analyze air pollution prevention and control measures in your community and in Nepal.	1. Measures of air pollution control and prevention. 2. Disaffection of air - Mechanical ventilation - Ultraviolet radiation - Chemical mists - Dust control.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 6. Air	Hrs. theory Hrs. lab
Sub-unit: Major issue in air pollution.	Hrs. theory 3 Hrs. lab
1. Describe the theory of the green house effect, its causation and effects. 2. Describe the current situation of ozone depletion, its causation and effects (impacts). 3. Explain what is meant by “acid rain.” 4. Describe the causes and impact of acid rain. 5. analyze the pros and cons of industrialization, which reduces poverty, and improves social conditions, but at a cost to our environment.	1. Definition, causes and effects of - Green house effects - Ozone depletion - Acid rain. - Global warming and its impact on health and ecology
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 1 Noise pollution	Hrs. theory Hrs. lab
Sub-unit: Noise and radiation pollution	Hrs. theory 1 Hrs. lab

1. Discuss causes, effects, and control of noise pollution. 2. Describe the types, sources and effects of radiation exposure. 3. Discuss ways to reduce exposure to natural radiation and the harmful effects of the sun. 4. Relate exposure to harmful sunrays to cataracts and skin cancer.	1. Definition of noise pollution, effects of chronic exposure to noise, safe noise levels, control of noise. 2. Sources, types, effects, and protection from radiation exposure.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical

Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 7. Rodentology	Hrs. theory Hrs. lab
Sub-unit: Rodents and their effects	Hrs. theory 2 Hrs. lab
1. Define rodentology. 2. Identify different types of rats, their characteristics, biotic, and habits. 3. Identify the disease potentials created by the presence of rat populations in a community. 4. Describe economic destruction by rodents.	1. Definition of rodentology 2. Different types of rats, their characteristics, biotic, and habits, and disease potential due to rats. # Domestic rodents. - Black rat (Ratters rattus) - Sewer rat (R. norvegicus) - Roof rat (R. alexandrinus) - House mouse # Wild rodents. Esp. Tarai India. 3. Rodent borne diseases: bacterial, viral, rickettsial, parasitic, others. 4. Economic destruction by rodents.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 7. Rodentology	Hrs. theory Hrs. lab
Sub-unit: Rodents Control Measures.	Hrs. theory 2 Hrs. lab
1. Describe rodents control measures. 2. Identify the advantages of each method. 3. Describe the role of the health post manager in community efforts to control of rodents.	1. Rodents control measures a) Rodents survey technique b) Environmental Sanitationary c) Trapping d) Rodenticides e) Furmigation f) Chemosterilants g) Biological Control
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical

Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 8. Entomology	Hrs. theory Hrs. lab
Sub-unit: Introduction of Entomology.	Hrs. theory 1 Hrs. lab
1. Define entomology and medical entomology 2. Identify medically important arthropods and insects. 3. Identify arthropod and insect borne diseases. 4. Describe the transmission of each of the common arthropod/insect borne diseases.	1. Definition of entomology and medical entomology. 2. Arthropod and insect borne diseases. 3. transmission modes: - direct contact - mechanical transmission - biological transmission - - propagative - - cyclo-propagative - - cyclo-developmental
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 8. Entomology	Hrs. theory Hrs. lab
Sub-unit: Arthropod borne diseases	Hrs. theory 1 Hrs. lab
1. Describe arthropods of medical importance. 2. Describe characters of arthropod borne diseases. 3. Identify characters of arthropods of medical importance. 4. Identify arthropod diseases.	1. Medical importance of arthropods. 2. Characters of mosquitoes, flies, human lice, fleas, tics, mits and Cyclops. 3. Characters of artopods. 4. Types of arthropod born diseases. 5. Transmission of arthropod born diseases. 6. Principles of arthropod control intregated approach.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 8. Entomology	Hrs. theory Hrs. lab
Sub-unit: Arthropod Control.	Hrs. theory 5 Hrs. lab
1. Describe principles of arthropod control. 2. Describe the measures to control arthropod and insect diseases. 3. Identify diseases caused by: mosquito, housefly, bed bug; redevid bug, hard tics, soft ticks, trombiculid mites, itch, mites, cycleps, cockroaches, louse, fleas. 4. Identify the actions of different types of insecticides and repellents.	1. Principles of arthropod control. - Environmental control - Chemical control - Biological control . - Genetic control 2. Medically important arthropods and insects and measures to control each of these. 3. Diseases transmitted by: mosquito, house fly, bed bug, reduvid bug, hard, ticks, soft ticks, trombiculid mites, itch mites, cyclops, cockroaches, louse, fleas. 4. Actions of different types of insecticides and repellents. 5. Insecticide resistance.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical
Course: Environmental Health	Hrs. theory Hrs. lab
Unit: 9. Occupational Health	Hrs. theory Hrs. lab

Sub-unit: Occupational diseases	Hrs. theory 1 Hrs. lab
1. Describe common occupational diseases in Nepal. 2. Describe the clinical features and causes of these occupational diseases. 3. Describe three forms of prevention of occupational diseases and give an example of each. 4. Analyze different occupational hazards which occur in your own community. 5. Describe the role of the health post manager in preventing occupational diseases.	1. Occupational diseases a) Diseases due to physical agents. b) Diseases due to chemical agents. c) Diseases due to biological agents d) Occupational dermatitis e) Diseases of psychological origin. 2. Prevention of occupational disease: - Medical measures - Engineering measures - Legislation.
Evaluation methods:	Teaching / Learning Activities:
Written examination, Viva, Practical	Classroom instruction, group discussion, field visit, practical

Course: Foundations of Health Education and Health Promotion

Hours Theory: 70
Hours Lab: 30
Assessment Marks: 50
Course Description:

This course teaches the educational aspects of public health management, which is an indispensable component for preventive health, a chief responsibility of the health post manager. The course teaches the concepts and theories of health behaviors and the procedure for planning, implementation and overall management of health education program. The aim of this course is to develop the necessary skills for effective application of health education at the health post level.

Objectives:
Upon completion of the course the learner will be able to:

1. Appreciate the significance of health education and health promotion in preventive, promotive, curative and rehabilitative health care.
2. Identify and apply the theories and principles of health behavioral sciences in the process of health education.
3. Identify, select and utilize suitable health education and health promotion methods and media for successful implementation of health service programs.
4. Plan, implement and evaluate health education and health promotion programs.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 60% accuracy in practical.

Recommended Textbooks:

1. Pradhan, H.B., A textbook of Health Education. Educational Resources for Health, 1995.
2. Park, J.E. and Park, K., Textbook of Social and Preventive Medicine (20th ed.) 1997.

Course: Foundations of Health Education	Hrs. theory Hrs. lab
Unit: 1. Introduction to Health Education	Hrs. theory Hrs. lab
Sub-unit: Overview of health education	Hrs. theory 2 Hrs. lab
Objectives: Students will be able to	Content:
1. Discuss the aims of health education. 2. Identify factors which influence health, and will therefore influence health education. 3. Give examples of the way each factor can affect health. 4. Discuss the significance of health education in preventive, promotive, curative and rehabilitative health care. 5. Give an example of how health education can help prevent disease. 6. Give an example of how health education helps in curing a disease. 7. Give an example of how health education can prevent disease.	1. The purpose and objectives of health education. 2. Definition of health education. 3. Factors influencing health: i) Heredity ii) Environment iii) life style iv) socio- economic and cultural condition v) health services vi) Geographical and environmental factors.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Course: Foundations of Health Education	Hrs. theory Hrs. lab
Unit: 1 Introduction to Health Education	Hrs. theory Hrs. lab
Sub-unit: Principles and scope of health education	Hrs. theory 2 Hrs. lab
Objectives: Students will be able to	Content:
1. Describe the scope of health education. 2. Explain the principles of health education; give an example for each one. 3. Discuss which heath post staffs are responsible for health education. 4. Tell how the health assistant can promote health education at the health post.	1. Scope of health education 2. Principles of health education 3. Persons responsible for health education.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Course: Foundations of Health Education	Hrs. theory Hrs. lab
Unit: 2 Fundamental Factors of Health Education	Hrs. theory Hrs. lab 10
Sub-unit: Motivation	Hrs. theory 2 Hrs. lab
Objectives: Students will be able to	Content:
1. Identify the theories and principles of motivation. 2. Apply the theories and principles of motivation in the process of health education. 3. Give an example of intrinsic and extrinsic motivation. 4. Explain how you might encourage a person to quit smoking by applying the principles of motivation. 5. Tell how to apply a theory of motivation to a health education class on dental care.	1. Meaning and definition of motivation. 2. Kinds of motivation. a. Instinct b. Intrinsic 3. Principles of motivation. - Rosenstock's principle. - Kurt Lewin's principle - Buchman's principle - Maslow's theory of human motivation 4. Importance of motivation in health education.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play

Course: Foundations of Health Education	Hrs. theory	Hrs. lab
Unit: 2 Fundamental Factors of Health Education	Hrs. theory	Hrs. lab
Sub-unit: Learning	Hrs. theory 5	Hrs. lab 2
Objectives: Students will be able to	Content:	
1. Describe the steps of the learning process. 2. Discuss factors which increase or decrease learning. 3. Explain the theories and principles of learning. 4. Give an example to illustrate the principle "relevancy improves learning" when teaching the mother of a newborn. 5. Apply other principles of learning to health education situations. 6. Describe the different ways of learning. 7. Identify your own ways of learning. 8. Describe the best way to teach "tooth brushing" to someone who learns by hearing; by seeing; by doing. 9. State Ralph Gary's principle of learning; give an example of this.	1. Meaning and definition of learning. 2. Ralph Gary's principle of learning. 3. Ways of learning. 4. Steps of learning process. 5. Factors affecting learning: - Biological factors such as age, condition of sensory organs. - Physical factors - Socio-cultural factors - Psychological factors 6. Ways of learning: - Learning by hearing. - Learning by seeing. - Learning by doing - Learning by repetition - Learning by imitation. 7. Ralph Gary's principle of learning.	
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play	
Course: Foundations of Health Education	Hrs. theory	Hrs. lab
Unit: 2 Fundamental Factors of Health Education	Hrs. theory	Hrs. lab
Sub-unit: Change process	Hrs. theory 1	Hrs. lab 2
Objectives: Students will be able to	Content:	
1. Explain the theories of change process. 2. Describe how change process is part of health education. 3. Identify one health behavior which is best changed by force. 4. Identify one health behavior which illustrates a change made by identification. 5. Describe an example of a health behavior change by internalization. 6. Explain why people resist changes. 7. Give examples of overcoming resistance to health behavior change.	1. Concept of change and change process. 2. Ways of bringing change: 8. Change by force 9. Change by identification 10. Change by internalization. 3. Resistance to change. 4. Ways of overcoming the resistances.	
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play	

Course: Foundations of Health Education and Health Promotion	Hrs. theory Hrs. lab
Unit: 3 Methods of Health Education	Hrs. theory Hrs. lab 10
Sub-unit: Methods overview	Hrs. theory 1 Hrs. lab 4
Objectives: Students will be able to	Content:
1. Describe the advantages and disadvantages of the different types of health education methods. 2. Select the suitable health education method for successful implementation of selected health education programmes. 3. Describe ways to make each method more successful.	1. Meaning and definition of methods of health education. 2. Advantages and disadvantages of each method. 3. Measures to make each method effective. 4. Individual method: Interview Counseling 5. Group methods: Group discussion, Demonstration, Role play, Field trip, Mini-classroom instruction, textbook, handouts, group discussion and Lecture. 5. Criteria for the selection of appropriate methods.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Course: Foundations of Health Education	Hrs. theory Hrs. lab
Unit: 3 Methods of Health Education	Hrs. theory Hrs. lab 10
Sub-unit: Mass group methods	Hrs. theory 4 Hrs. lab
Objectives:	Content:
1. Describe the methods for providing education to large groups of people. 2. Identify the advantages and disadvantages of each method. 3. State the criteria for selecting an appropriate method. 4. Give an example of an appropriate way to use each method in a health education effort.	1. Mass method: 11. Classroom instruction, textbook. handouts, group discussion 12. Exhibition 13. Campaign 2. Criteria for the selection of appropriate methods.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Course: Foundations of Health Education	Hrs. theory Hrs. lab
Unit: 4. Media of Health Education	Hrs. theory Hrs. lab 10
Sub-unit: Overview of media	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Describe the advantages and disadvantages of the different types of health education media. 2. Identify criteria used for selecting appropriate media for a method of providing education. 3. Select the appropriate media for health education programmes. 4. Describe how to prepare and use audio and visual aids.	1. Meaning of each media: a. audio aids: radio cassette player. b. visual aids: poster, pamphlet, flip chart, model, real objects, bulletin board, wall chart, photographs, flannel graph. 2. Advantages and disadvantages of each media. 3. Criteria for the selection of media. 4. Process of preparing each media. 5. Measures to use each media effectively.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play

Course: Foundations of Health Education	Hrs. theory Hrs. lab
Unit: 2 Fundamental Factors of Health Education	Hrs. theory Hrs. lab
Sub-unit: Communication	Hrs. theory 1 Hrs. lab 4
Objectives: Students will be able to	Content:
1. Define communication. 2. Discuss types of communication. 3. Discuss principles of communication. 4. List the basic elements of communication. 5. Identify barriers of communication.	1. Scope of communication. 2. Importance of communication. 3. Principles of communication. 4. Ways of communication. 5. Methods of communication.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Course: Foundations of Health Education and Health Promotion – Practical	Hrs. theory Hrs. lab
Unit: 5. Planning of Health Education Programmes	Hrs. theory Hrs. lab
Sub-unit: Principles of planning	Hrs. theory 2 Hrs. lab
Objectives: Students will be able to	Content:
1. Describe the need for planned health education programmes. 2. Give examples of useful data collection for selecting a needed educational programme. 3. State an example showing how to set priorities of health education needs. 4. Differentiate between general and specific objectives. 5. Describe ways to decide what and how much to teach in an educational programme. 6. Identification of target groups. 7. Selection of appropriate methods and media of health education. 8. Identification of necessary and available resources. 9. Development of details plan of evaluation eg. Time, criteria and methods of evaluation.	1. Definition concept and importance of planning of health education programme. 2. Steps of planning: a. Collection of data and information b. Identifying health and health education needs on priority basis. c. Setting goals and objectives: General objective and Specific objective. d. Identification of target group. e. Selection of appropriate methods and media of health education. f. Identification of necessary and available resources. g. Development of detailed plan of evaluation. E.g. Time evaluation, criteria evaluation and methods evaluation. 3. Development of contents.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Course: Foundations of Health Education	Hrs. theory Hrs. lab
Unit: 5. Planning of Health Education Programmes	Hrs. theory Hrs. lab
Sub-unit: Application of planning	Hrs. theory 2 Hrs. lab
Objectives: Students will be able to	Content:
1. Describe what is meant by “target group” and give an example. 2. Discuss resources available to the health post worker. 3. Explain the importance of making plans with sufficient detail. 4. Identify criteria and methods for evaluating a programme. 5. Use all the components of planning to plan a health education programme.	1. Development of contents to teach 2. Identification of target group. 3. Selection of appropriate methods and media of health education. 4. Identification of necessary and available resources. 5. Development of a detail plan for evaluation. a. time of evaluation. b. criteria of evaluation . c. methods of evaluation.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play

Course: Foundations of Health Education – Practical	Hrs. theory Hrs. lab
Unit: 6. Implementation of Health Education Programmes	Hrs. theory Hrs. lab
Sub-unit: Principles of implementation	Hrs. theory 3 Hrs. lab
Objectives: Students will be able to	Content:
1. State the strategies of implementation. 2. Give examples of ways to build commitment for a program on vitamin A distribution. 3. Describe ways of training manpower for a program on vitamin A distribution. 4. Identify some local or national resources for a vitamin A distribution program. 5. Tell how a health post incharge might monitor and supervise the activities of workers for the program. 6. Explain why recording and reporting of program results are important.	1. Implementation and its strategies. a) Building commitment b) Training of manpower c) Mobilizing resources d) Organizing community e) Monitoring of the program. f) Supervision of health education workers g) Recording and reporting 2. Training of Human Resources 3. Community Organization 4. Evaluation of Health Education
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Course: Foundations of Health Education – Practical	Hrs. theory Hrs. lab
Unit: 7. Implementation of Health Education Programmes	Hrs. theory Hrs. lab
Sub-unit: Application of the process	Hrs. theory 2 Hrs. lab
Objectives: Students will be able to	Content:
1. Describe the benefits of evaluating a health education program. 2. Explain how the program manager uses each of the stages of evaluation. 3. Give examples of process evaluation and impact evaluation.	1. Definition and meaning of evaluation. 2. Importance of evaluation. 3. Stages of evaluation: 14. In the beginning (process evaluation) 15. In the middle of the program. 16. In the end of the program (impact evaluation).
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Course: Foundations of Health Education - Practical	Hrs. theory Hrs. lab
Unit: 7. Implementation of Health Education Programmes	Hrs. theory Hrs. lab
Sub-unit: Principles of Health Education program evaluation	Hrs. theory 5 Hrs. lab
Objectives: Students will be able to	Content:
1. Give examples of ways to measure adequacy, relevancy, and efficacy of an educational program. 2. Stages of Evaluation. 3. Describe how a program could be found "inappropriate" by an evaluator. 4. Discuss advantages and disadvantages of each method of evaluation. 5. Apply the process of evaluation to a simulated or real educational program.	1. Stages of evaluation Diagnostic evaluation, process evaluation/formative evaluation and summative evaluation. 2. Criteria of evaluation: 17. Adequacy 18. Relevancy 19. Efficacy 20. Appropriateness 3. Methods of evaluation: 21. Interview 22. Observation 23. Study of office records and reports 24. Meeting and discussion. 4. Process of evaluation - Formulating the objectives of evaluation - Determining proper methods and developing appropriate tools of evaluation. - Collecting the information and data. - Analyzing and interpreting. - Providing recommendations and suggestions.
Evaluation methods: written examination, viva, community	Teaching / Learning Activities: classroom instruction,

project performance	textbook self-study, handouts, group discussion, role play
Course: Foundations of Health Education - Practical	Hrs. theory Hrs. lab
Unit: 7. Implementation of Health Education Programmes	Hrs. theory Hrs. lab
Sub-unit: Health education material	Hrs. theory Hrs. lab 5
Objectives: Students will be able to	Content:
1. Collect health education materials from different organizations. 2. Prepare simple media for health education a. Poster b. Pamphlet c. Flip chart d. Flannel graph	1. Resources for community education materials. 2. Procedures for developing simple media.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Course: Foundations of Health Education – Practical	Hrs. theory Hrs. lab
Unit: 7. Implementation of Health Education Programmes	Hrs. theory Hrs. lab
Sub-unit: practice of health education methods	Hrs. theory 1 Hrs. lab 4
Objectives: Students will be able to	Content:
1. Identify the important characteristics of the following health education methods in the classroom. 2. Practice using these methods in the laboratory setting. 3. Use these one or more of these methods effectively in the health education program: a. Counseling b. Group discussion c. Role play d. Demonstration e. Classroom instruction, textbook. handouts, group discussion f. Exhibition.	1. Apply theory learned from previous lessons.
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play
Course: Practice of Health Education	Hrs. theory Hrs. lab
Unit: 7. Implementation of Health Education Programmes	Hrs. theory Hrs. lab
Sub-unit: Application of the health education process	Hrs. theory Hrs. lab 10
Objectives: Students will be able to	Content:
1. Use the planning and implementation process to develop a health education program for a selected problem. a) Conduct education diagnosis survey to identify the health education need of the selected community. b) Prepare a modular health education plan for deliberation of health education in selected community or health post. 5. Set goal and objectives of the health education program. 6. Development of contents of messages of the health education. 7. Identification of the target group 8. Selection of appropriate methods and media of health	1. Apply theory learned in previous lessons to health education programes in selected health problems: a) Communicable diseases- malaria, tuberculosis, leprosy, parasitic diseases. b) Malnutrition c) Breastfeeding d) Diarrhoea, e) Acute respiratory infections f) Family planning g) Vaccine Preventable Diseases (VPDs) Immunization h) Child survival i) Maternal health Safe motherhood programs j) Environmental sanitation problems. k) Alcoholism and drug abuse

education. 9. Identify of necessary and available resources for the health education program. 10. Development of a detail plan for evaluation of the health education program. c) Conduct health education sessions in the community and health post. d) Evaluate the health education sessions. e) Follow up for ensuring the most effectiveness of the program.	l) STDS and HIV/AIDS m) Accident prevention n) Health education during disasters and epidemics o) School health. p) Mental health q) Oral health r) Non-communicable diseases s) Avian influenza t) Neonatal health u) Gender violence and gender discrimination
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play

Course: Foundation of Health Promotion	Hrs. theory	Hrs. lab
Unit: 8. Health Promotion	Hrs. theory	Hrs. lab
Sub-unit: Health Promotion	Hrs. theory 5	Hrs. lab
Objectives: Students will be able to	Content:	
1. Define the term health promotion. 2. Find out the scope of health promotion. 3. Identify the principles of health promotion 4. Discuss on Ottawa Charter	Class discussion and presentation on 1. Definition of health promotion. 2. Scopes of health promotion 3. Principles of health promotion 4. Ottawa charter	
Evaluation methods: written examination, viva, community project performance	Teaching / Learning Activities: classroom instruction, textbook self-study, handouts, group discussion, role play	

Course: Primary Health Care/Family Health

Hours Theory: 100
Hours Practical: 80
Assessment Marks: 100

Course Description:

This public health course is organized into five units. The first unit provides an overview of primary health care including primary health care services in Nepal. It also teaches the basic concepts of health and health care of populations. The second unit addresses current issues and concepts in nutrition, related to health. In the third unit major health issues of mothers and children are taught, the problems and the solutions. In unit four the principles and applications of family planning services are discussed in full. Unit five presents the foundations of applied population science, including mathematical calculations of data. The practical components are taught in Maternal Child Health and Family Planning clinics and during community field practicum at Primary Health Care Centers and Health Posts.

Course Objectives
Upon completion of this course the student will be able to:

1. Interpret fundamental concepts of health and health care.

2. Identify principles and strategies of Primary Health Care and PHC services.

3. Describe the roles and responsibilities of the Health Post Incharge in PHC delivery of services.

4. Summarize the components of a nutritious diet and the health consequences of deficiencies.

5. Assess the nutritional status of an individual or a community and solve common nutritional problems of public health importance through Primary Health Care activities.

6. Identify common maternal child related problems found in Nepal and resolve these through implementation of Nepal Government programs at the Health Post level.

7. Counsel clients for family planning services by assessing client needs, assisting with appropriate choice, teaching and providing materials for family planning, and arranging for follow up service.

8. Implement Nepal Government Family Planning Programme from the health post level.

9. Calculate common demographic indicators such as population growth, rate, population pyramid.

10. Illustrate the effects of population overgrowth in its different aspects.

11. Identify measures for controlling population overgrowth and conduct population education at the community level.

12. Evaluation of Health for All by 2000 strategy

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended Texts:

3. Park's Textbook of Preventive and Social Medicine, by K. Park. Published by M/S Banarasidas Bhanot, Jabalpur, India. Current edition.

4. Child Nutrition and Health by Ramesh K. Adhikari & Miriam E. Krantz. Published by Health Learning Materials Center, Tribhuvan University, Institute of Medicine, Kathmandu Nepal. Current edition.

5. Essential Preventive Medicine, by O.P. Ghai, Piyush Supta. Published by Vikas Publishing House, India. Current edition.

Recommended Reference Texts:

Primary Health Care Topics

1. Primary Health Care: Health For All (series # 1). Published by WHO/UNICEF. 1978

2. Reproductive Health, National and International Perspectives, Dhirga Raj Shrestha

3. National Health Policy (current), Ministry of Health, Nepal.

Nutrition Topics

1. Tapaiko Swastha TapaikoHatma, by Aruna Upreti, Ashmita Mahila Prakashass Griha.

Maternal Child Health Topics

1. National Maternity Care Guidelines Nepal, by the Department of Health Services, Nepal, Family Health Division. Published by HMG-MCH Nepal. Current edition.

2. National Reproductuve Health Strategy, by the Department of Health Services, Nepal, Family Health Division. Published by HMG-MCH Nepal. Current edition.

3. HMG of Nepal Safe Motherhood Policy, by Family Health Division, DOHS, MOH, Kathmandu, Nepal. Current edition.

4. Manual on Feeding Infants and Young Children, by M. Cameron & Y. Hofvander. Published by Oxford University Press, Delhi, India. Current edition.

Family Planning Topics

1. Natinoal Medical Standards for Contraceptive Services by Family Health Division, DOHS, MOH, Kathmandu, Nepal. Current edition.

2. Contraceptive Technology, by Johns Hopkins University Population Program. Published by Johns Hopkins University/WHO. Current edition.

3. Contraceptive Technology, by Robert A. Hatcher et al. Published by Irvington Publisher, Inc, New York.

Population Science Topics

1. An Introduction to the Study of Population, by B.D. Misra. Published by South Asian Publishers, New Delhi, India.
2. Principles of Population Studies, by A.A. Bhende & Y. Kanitkas. Published by Himalaya Publishing House, Mumbai, India.
3. Demography and Population Studies, by O.S. Srivastava. Published by Vikas Publishing House, India.

Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab 80
Unit: Primary Health Care (PHC)	Hrs. theory 20 Hrs. lab 10
Sub-unit: Health care of people: concept of health	Hrs. theory 1 Hrs. lab
Objectives: Students will be able to	Content:
1. Define the concept of health as given by WHO. 2. Explain the differences between physical, mental and social dimensions of health. 3. List methods for evaluating each of these. 4. Give an example of a physical health problem, a mental health problem, and a social health problem.	1. Concept of health given by WHO. 2. Physical mental and social dimensions of health. 3. Methods for assessing physical, mental and social health.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab
Sub-unit: Health care of people: determinants of health	Hrs. theory 1 Hrs. lab
Objectives: Students will be able to	Content:
1. List determinants of health by category. 2. Give examples of diseases of health problems related to each particular determinant of health. 3. Explain how a particular determinant is related to a disease /health problem.	1. Determinants of health. 2. Relationships between disease and the determinants of health
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab
Sub-unit: Health care of people: concepts of health care	Hrs. theory 1 Hrs. lab
Objectives: Students will be able to	Content:
1. Describe the scope of health care. 2. State definitions of the levels of health care: promotive, preventive, curative, rehabilitative. 3. Distinguish between individual health and public health. 4. List purposes of public health. 5. Define health promotion as given by WHO. 6. Give examples of promotive health services for physical, mental and social health needs.	1. Scope of health care: promotive, preventative, curative, rehabilitative. 2. Functions and goals of public health. 3. Activities and goals of promotive health services.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab
Sub-unit: Health care of people: preventive, curative, and rehabilitative health care.	Hrs. theory 1 Hrs. lab
Objectives: Students will be able to	Content:
1. Discuss the concept prevention. 2. Categorize levels of prevention. 3. State the goals of primary, secondary and tertiary levels of prevention. 4. Give examples of health services in each level of	1. Preventive health services 2. Levels of prevention 3. Curative medicine 4. Rehabilitative health services.

prevention. 5. Compare different levels of prevention. 6. Define the concept and scope of curative medicine. 7. Describe the concepts and purposes of rehabilitation. 8. List different types of rehabilitative services. 9. Give examples of different types of rehabilitative services.	
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab
Sub-unit: Health care of people: indicators of health	Hrs. theory 1 Hrs. lab
Objectives: Students will be able to	Content:
1. Discuss the various health indicators and give an example of each. 2. Explain how health indicators are used. 3. Identify the categories of health indicators. 4. Name health indicators related to each category. 5. Compose a health profile of Nepal based on health indicators.	1. Different types of health indicators. 2. Uses of health indicators. 3. Health profile of Nepal.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab
Sub-Unit: 1 Primary Health Care and Health for All	Hrs. theory 1 Hrs. lab
Objectives: Students will be able to	Content:
1. State in brief the history and background of "Health for All" (HFA). 2. Summarize the vision of "Health for All" given by WHO 3. State in brief the historical background of Primary Health Care (PHC). 4. Describe the relation between HFA and PHC. 5. Define the concept of PHC given by the Alma –Ata declaration. 6. List the elements of PHC. 7. List essential health care service.	1. Principles and goals of the “Health for All” program. 2. Health as a right for all citizens. 3. History and elements of Primary Health Care. 4. Relationship between Health for All and Primary Health Care. 5. Scope of PHC services. 6. Roles and responsibility of the patients and clients 7. Components of essential health care service in Nepal.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab
Sub-Unit: Strategies of Primary HealthCare	Hrs. theory 1 Hrs. lab
Objectives: Students will be able to	Content:
1. Explain the major strategies of PHC given by the Alma-Ata declaration. 2. Give examples of measures related to each strategy.	1. Strategies of PHC.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab

Sub-unit: Responsibility for PHC	Hrs. theory 1 Hrs. lab
Objectives: Students will be able to	Content:
1. Summarize individual, family, community, state and international responsibility for PHC. 2. Discuss ways to promote co-ordination among these organizations. 3. Describe barriers to coordination.	1. Scope of responsibility for PHC. 2. Strategies and barriers for coordination.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab
Sub-unit: Community participation in PHC	Hrs. theory 2 Hrs. lab 2
Objectives: Students will be able to	Content:
1. Describe what is meant by community participation 2. Explain why community participation in PHC is desirable. 3. List examples of community participation. 4. List examples of ingredients of community participation. 5. Discuss strategies for promoting community participation in Primary Health Care. 6. Describe some barriers to community participation and Tell ways to reduce these.	1. Concept of community participation. 2. Importance of community participation. 3. Strategies for achieving community participation.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab
Sub-Unit: Primary Health Care in Nepal	Hrs. theory 4 Hrs. lab 2
Objectives: Students will be able to	Content:
1. List development milestones of PHC in Nepal. 2. Discuss existing PHC delivery in Nepal. i) List government and non-government institutions involved in the delivery of PHC. ii) Describe the categories of health manpower involved in the delivery of PHC. iii) Summarize national strategies for PHC. iv) List the names of national health programs related to PHC v) Summarize national health activities related to PHC vi) Summarize the targets of national health policy.	1. Historical development of PHC activities in Nepal. 2. Existing PHC delivery in Nepal. 3. National health activities related to PHC in Nepal. 4. Targets of National health policy.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts

Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab
Sub-unit: Challenges of PHC in Nepal	Hrs. theory 2 Hrs. lab
Objectives: Students will be able to	Content:
1. Identify major challenges of PHC in Nepal. 2. Interpret in Nepalese context the following challenges of PHC: i) Population overgrowth ii) Malnutrition iii) Poor environmental sanitation iv) Infections diseases v) Economic status vi) Educational status vii) Gender discrimination viii) Health service delivery ix) Infrastructures x) Prevailing social values, norms and belief.	1. Major challenges of PHC in context of Nepal.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 1 Primary Health Care	Hrs. theory 20 Hrs. lab
Sub-unit: Role of Health Post Incharge in PHC	Hrs. Theory 2 Hrs. lab 4
Objectives: Students will be able to	Content:
1. Discuss the roles of the Health Post Incharge in PHC. 2. Summarize the following roles of HA Health Post Incharge in the context of Nepali culture and government. i) Service provider ii) Manager iii) Teacher iv) Supervisor v) Trainer vi) Motivator vii) Leader viii) Change agent ix) Facilitator	1. Roles of Health Post Incharge in PHC: a. Implementation of Ministry of Health activities b. Implementation of Nepal Government activities. 2. Influences of Nepali culture and government on Health Post Incharge roles. 3. Visit Health Posts
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 2 Nutrition	Hrs. theory 20 Hrs. lab
Sub-unit: Protein	Hrs. theory 1 Hrs. lab
Objectives: Students will be able to	Content:
1. Name essential amino acids. 2. Define biologically complete proteins. 3. List examples of food that have biologically complete proteins. 4. List chief food sources of proteins state supplementary action of proteins 5. Cite daily requirements of proteins 6. Name protein deficiency disease. 7. Identify unalterable groups of protein deficiency.	1. Essential amino acids 2. Biologically complete proteins 3. Food sources of proteins 4. Supplementary action of proteins 5. Daily requirement of protein 6. Protein deficiency.

Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 2 Nutrition	Hrs. theory Hrs. lab
Sub-unit: Fats & Carbohydrate	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. Name important saturated and unsaturated fatty acids. 2. State the importance of unsaturated fatty acids in the prevention of heart disease. 3. Define essential fatty acids. 4. Tell examples of essential fatty acids. 5. List the functions of fat. 6. Tell examples of visible and invisible fats. 7. State the changes in fatty acids during hydrogenation. 8. Cite the daily requirement for fat. 9. List food sources of fat. 10. List fat deficiency diseases/syndromes. 11. List functions of carbohydrate. 12. Differentiate between simple and complex carbohydrates. 13. Tell the daily requirement of carbohydrate. 14. List names of staple foods rich in carbohydrates. 15. Identity the names of carbohydrate deficiency diseases.	1. Saturated and unsaturated fatty acids. 2. Importance of unsaturated fatty acids. 3. Essential fatty acids 4. Main food sources of unsaturated fatty acids 5. Hydrogenation 6. Functions of fat and carbohydrate 7. Daily requirement of fat and carbohydrate 8. Deficiency disease/syndromes of fat and carbohydrate.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 4 Nutrition	Hrs. theory Hrs. lab
Sub-unit: Vitamins	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. Describe how vitamins are classified. 2. Describe the functions of each vitamin: A, D, E, K, B1, B2, B3, B6, B12, Folic acid and vitamin C. 3. Cite the daily requirement of above listed vitamins. 4. List the names of deficiency disease syndromes related to the above listed vitamins 5. Tell the name of major food sources of above mentioned vitamins. 6. Identify population groups that are vulnerable for deficiency diseases.	1. Functions of vitamins. 2. Daily requirement of vitamins. 3. Deficiency disease/syndrome of vitamins. 4. Major food sources of vitamins. 5. Vulnerable populations. 6. Vitamin A distribution programs.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 2 Nutrition	Hrs. theory Hrs. lab
Sub-unit: Minerals	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. List the names of minerals required for good health. 2. State the functions of calcium, iron, iodine and fluorine. 3. List major sources of the minerals listed above. 4. Cite the daily requirement of the minerals listed above. 5. List deficiency diseases/syndromes of the minerals listed above. 6. Identify vulnerable (risk) groups for these deficiencies.	1. Minerals required for body. 2. Functions of minerals in human body. 3. Major food sources of minerals. 4. Daily requirement of different minerals. 5. Deficiency disease/syndromes of minerals. 6. Risk populations for mineral deficiency. 7. Iodine deficiency prevention measures in Nepal.

7. Discuss the effectiveness of Nepal's iodine deficiency program.	
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
se : PHC/MCH	Hrs. theory Hrs. lab
Unit: 2 Nutrition	Hrs. theory Hrs. lab
Sub-unit: Balanced diet	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Discuss the national statistics for nutrition in Nepal. 2. Define balanced diet. 3. Calculate the nutritional value of your daily food intake for one week; compare this to the minimum daily requirement for a nutritious diet. 4. Identify meal plans which ensure a balanced diet, and which use locally available food stuffs. 5. Compare the nutritional values of polished (white) rice to unpolished (brown) rice, with regard to protein, vitamins, minerals, and calories. 6. State factors which diminish the nutrient value in food, such as over cooking. 7. State factors affecting the food and nutrient requirement. 8. Discuss ways the Health Post Incharge can use community education and community efforts to improve family nutrition.	1. Characteristics of a balanced diet 2. Meal plans for a balanced diet by locally available food. 3. Factors affecting the nutritional requirement and nutritional value.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts nutrition diary
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 2 Nutrition	Hrs. theory Hrs. lab
Sub-unit: Assessment of nutritional status.	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. List methods for assessment of nutritional status. 2. List clinical signs known to be of value for the assessment of nutritional status. 3. Describe the process of measurement used in anthropometry 4. Describe how to interpret the findings of anthropometric measurements. 5. List the names of the biochemical methods used to assess iron, vitamin A, thiamine, vitamin K and protein. 6. Interpret laboratory data to assess above listed nutrients. 7. Tell in brief about the tool of a dietary survey.	1. Methods for assessment of nutritional status: a. Clinical examination b. Anthropometry c. Biochemical method d. Dietary survey. 2. Interpretation of anthropometry. 3. Interpretation of biochemical tests used to assess nutritional status.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts

Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 2 Nutrition	Hrs. theory Hrs. lab
Sub-unit: Under nutrition	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Define what is meant by a state of under nutrition or	1. Definitions of under nutrition and malnutrition.

malnutrition. 2. Discuss the question: Does malnutrition cause poverty or does poverty cause malnutrition? 3. Describe the effects of malnutrition in morbidity and mortality. 4. State the IMCI criteria for the classification of malnutrition. 9. Discuss myths and misbeliefs which interfere with good nutrition, especially for women and girls. 10. Give examples when poverty or poor financial choices result in malnutrition 11. Describe ways to control and prevent under nutrition in the community.	2. Vicious cycle of malnutrition. 3. Effects of malnutrition 4. Classification of malnutrition. 5. Control and prevention of malnutrition in community.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 2 Nutrition	Hrs. theory Hrs. lab
Sub-Unit: Nutritional problems of public health	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Identify fetal abnormalities and maternal risks associated with malnutrition before and during pregnancy. 2. Tell magnitude of problem, distribution and risk groups for the following conditions: a. Low birth weight (LBW) b. Protein Energy Malnutrition c. Vitamin A deficiency d. Nutritional anemia e. Iodine deficiency disorders	Identify fetal abnormalities and maternal risks associated with malnutrition before and during pregnancy. Magnitude of problem, distribution and risk groups for LBW, PEM, Vitamin A deficiency, nutritional anaemia and iodine deficiency disorders.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 2 Nutrition	Hrs. theory Hrs. lab
Sub-Unit: Nutrition Factors in Selected Diseases	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Describe the relationship between nutrition/diet and cardiovascular disease, diabetes, obesity and cancer. 2. Tell nutritional measures for prevention and control of these diseases.	1. Relationship of nutrition with selected diseases. 2. Prevention and control of selected diseases by dietary regulation.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts

Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 2 Nutrition	Hrs. theory Hrs. lab
Sub-Unit: Nutrition education and food taboos and myths	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Define nutrition education tell benefits of nutrition education. 2. List the important features of nutrition education.	1. Definition of nutrition education 2. Benefits of nutrition education 3. Contents that should be emphasized in nutrition

3. Identify common food taboos or myths among Nepalese people that interfere or assist in taking a balanced diet.	education 4. Prevailing food taboos and myths in Nepal.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 3 Maternal-Child Health	Hrs. theory 30 Hrs. lab
Sub-unit: Introduction of Maternal-Child Health	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Define concept of Maternal Child Health (MCH) 2. List scope of MCH 3. Explain why mother and baby are treated as one unit. 4. Explain why each of the following provides reasons for advancing maternal health care (MHC) services in Nepal: a. mortality rates b. percent of population c. physical and physiological stress d. susceptibility of disease e. immunity f. gender discrimination	1. Rationale of MCH services 2. Factors contributing to the vulnerable health status of women and children 3. Definition and scope of MCH
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 3 MCH-Maternal Health	Hrs. theory Hrs. lab
Sub-unit: Maternal mortality	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1 Identify the rate for maternal mortality in Nepal. 2 Discuss the nutritional status of Nepalese woman. 3 Identify common food taboos, myths, cultural habits which interfere with proper nutrition for pregnant and lactating women. 4 Discuss ways the Health Assistant can help women overcome barriers to good maternal nutrition. 5 Identify direct and indirect obstetric causes of maternal death. 6 Describe social causes of maternal death 7. List common medical causes of maternal morbidity.	1. Incidence and trends in maternal mortality. 2. Reasons for poor nutritional status of woman in Nepal. 3. Major causes of maternal mortality and morbidity.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 3 MCH Maternal Health.	Hrs. theory Hrs. lab
Sub-unit: Safe motherhood	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. Discuss the history and purpose of Nepal's Safe Mother hood Program. 2. Identify the scope of maternity care. 3. Describe antenatal care provided at health post and recommended by national maternity care guidelines. 4. Describe delivery care provided at the health post and	1. Concept of safe motherhood. 2. Scope of maternity care. 3. Antenatal, delivery, postnatal and newborn care at health post level as recommended by national maternity care guidelines.

recommended by national maternity care guidelines. 5. Describe essential newborn care recommended by national maternity care guidelines. 6. Describe postnatal care recommended by National maternity care guidelines.	
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 3 MCH Maternal Health	Hrs. theory 30 Hrs. lab
Sub-unit: Obstetric Referrals	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Explain when and how to use obstetric referral guidelines recommended by national maternity care guidelines. 2. Prepare an obstetric referral slip (recommended by national maternity care guideline) for example case studies. 3. Give examples when referral is required.	1. Obstetric cases requiring referral to higher center. 2. Procedure for use of the obstetric referral slip.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 3 MCH Maternal Health	Hrs. theory Hrs. lab
Sub-unit: Reproductive Health	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Discuses the concept of reproductive health 2. Explain the importance of reproductive health 3. Describe the scope of reproductive health 4. Describe the integrated reproductive health package. 5. Describe the details of intervention and activities of the National Reproductive Health Package at sub health post, health post and PHC Level.	1. Concept of reproductive health. 2. Importance of reproductive health. 3. Scope of reproductive health. 4. Activities of reproductive health at SHP, HP, and PHC level.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts

Course: Primary Health Care/Family Health	Hrs. theory 100	Hrs. lab
Unit: 3 MCH Child health.	Hrs. theory 30	Hrs. lab
Sub-unit: Child mortality and morbidity in Nepal.	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Describe the current statistics for infant mortality in Nepal. 2. Under five child mortality in Nepal 3. List the major causes of neonatal deaths in Nepal. 4. List major causes of deaths of post-neonatal deaths in Nepal 5. List major causes of deaths of pre-school children 6. Compare the rates of various causes of post neonatal and pre-school child deaths. 7. Discuss the role of the Health Post Incharge in reducing child mortality and morbidity.	1. Child mortality and morbidity rates in Nepal. 2. Causes of child mortality and morbidity in Nepal. 3. Interventions available to the Health Post Incharge to promote child health.	
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts	
Course: Primary Health Care/Family Health	Hrs. theory 100	Hrs. lab
Unit: MCH Child Health	Hrs. theory 30	Hrs. lab
Sub-unit: At risk babies	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Discuss the criteria for identifying "at risk babies" 2. Describe ways to teach mothers and Traditional Birth Attendants about the criteria for “at risk babies,” and the importance of making prompt referral. 3. Identify the common causes for the poor condition of “at risk babies.” 4. Give examples of community education efforts to reduce the incidence of newborn mortality.	1. Criteria for "at risk babies" 2. Community education for referral and prevention of “at risk baby” conditions.	
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts, role play	
Course: Primary Health Care/Family Health	Hrs. theory 100	Hrs. lab
Unit: MCH Child Health	Hrs. theory 30	Hrs. lab
Sub-unit: Child growth and development	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. Describe kinds of growth and development: a. physical/motor b. psycho-social c. intellectual 2. Give examples of normal and abnormal growth and development for each of these. 3. Identify assessments of growth by using growth monitoring charts. 4. Interpret growth chart recommended by Child Health Division. 5. List major milestones of development of under-five children. 6. Demonstrate use of the growth chart recommended by Child Health Division. 7. Operate growth monitoring of under-five children.	1. Concept of growth and development 2. Assessment of growth and development. 3. Growth monitoring charts.	
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom	

	instruction, instructor led discussion, textbook self study, related charts and handouts, visit to child center, orphanage
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 3 MCH Child Health	Hrs. theory 30 Hrs. lab
Sub-unit: Infant feeding (Breast feeding)	Hrs. theory 4 Hrs. lab
Objectives:	Content:
1. Identify advantages of breast feeding 2. Define exclusive breast feeding. 3. Explain the benefits of colostrum feeding. 4. List common problems related to breast feeding. 5. Identify management of common problems related to breast feeding: i) Cracked nipple. ii) Mastitis and breast engorgement iii) Twins iv) Cleft-palate baby v) Baby unable to suck vi) Sick mother vii) Regurgitation 6. Describe frequency and duration of breast feeding. 7. Explain how to use alternatives if breast feeding cannot be used: i) Animal milk ii) Formula milk. 8. Practice giving counseling on breast feeding in a simulated setting.	1. Advantages of breast feeding. 2. Benefits of colostrum feeding 3. Benefits of exclusive breast feeding. 4. Management of common problems related breast feeding. 5. Recommendations regarding the frequency and duration of breast feeding. 6. Alternatives of breast feeding.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts, role play
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 3 MCH - Child Health	Hrs. theory 30 Hrs. lab
Sub-unit: Weaning	Hrs. theory 4 Hrs. lab
Objectives:	Content:
1. Define weaning. 2. Identify times of weaning. 3. Describe the process of weaning. 4. Describe preparation of the following weaning recipes: i) Sarbottam pitho ii) Satu iii) Roti iv) Jaulo v) Khichari vi) Lito 5. List common problems related to weaning 6. Describe the management of weaning related problems.	1. Concept of weaning. 2. Time and process of weaning 3. Preparation of weaning recipes 4. Common problems of weaning and their management
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts, make weaning recipes
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 3 MCH - Child Health	Hrs. theory 20 Hrs. lab
Sub-unit: Immunization	Hrs. theory 3 Hrs. lab
Objectives:	Content:

1. Define immunization. 2. Discuss the significance of immunization in disease prevention. 3. Outline the National Immunization Schedule. 4. State the doses and routes of administration of vaccines recommended by EPI Programme. 5. Discuss adverse effects following immunization and the management of these. 6. Discuss strategies for vaccine procurement and supply maintenance. 7. Outline recommended vaccine storage time and temperature at district and site-center. 8. Describe the principles and purpose of the "Cold Chain" procedure. 9. Describe the procedures for use of the Cold Chain equipment: cold box, vaccine carrier, flask, ice packs, and refrigerator / freezer.	1. Concept of immunization. 2. Effects on morbidity/mortality due to immunization efforts. 3. Immunization schedules. 4. Vaccine procurement and storage. 5. Doses, route of administration and common adverse effects. 6. Consequences of improper vaccine storage. 7. Cold Chain methods.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts, demonstrations
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: MCH Child Health	Hrs. theory 30 Hrs. lab
Sub-unit: Preventive and control measures for child morbidity and mortality	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. Discuss measures to reduce child mortality and morbidity, and explain how each contributes to child health. 2. Discuss the role of the Health Post Incharge in preventing childhood mortality and morbidity.	1. Measures for reducing child morbidity and mortality: ANC Immunization Growth monitoring Breast feeding Family planning Female education Proper management of acute respiratory infections and diarrhoeal diseases. Newborn care Environmental sanitation Health education 2. Health Post Incharge activities that reduce childhood mortality and morbidity.
Evaluation methods: written examinations, viva	Teaching / Learning Activities / Resources: classroom instruction, instructor led discussion, textbook self study, related charts and handouts

Course: Primary Health Care/Family Health	Hrs. theory	100	Hrs. lab
Unit: 4 Family Planning	Hrs. theory	20	Hrs. lab
Sub-unit: Introduction of family planning	Hrs. theory	2	Hrs. lab
Objectives:	Content:		
1. State the WHO definition of family planning (FP). 2. Describe the scope of family planning services. 3. Discuss the various rights of the client who seeks family planning counseling. 4. Explain individual and community health benefits of family planning. 5. Explain how family planning helps promote child-women's health. 6. Define the term "eligible couples." 7. Estimate the number of eligible couples from the total population of a selected community. 8. Explain how to calculate a contraceptive prevalence rate (CPR). 9. Calculate the current statistics for CPR in Nepal.	1. Definition of family planning 2. Scope of family planning services. 3. Client rights regarding family planning services. 4. Relationship between family planning and improved MCH. 5. Estimation of eligible couples and CPR. 6. Current statistics for CPR in Nepal		
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts		
Course: Primary Health Care/Family Health	Hrs. theory	100	Hrs. lab
Unit: 4 Family Planning	Hrs. theory	20	Hrs. lab
Sub-unit: Counseling and informed choice	Hrs. theory	2	Hrs. lab
Objectives:	Content:		
1. Describe the components of family planning counseling using the GATHER approach. 2. Explain why patient choice is essential for successful follow-through of contraception. 3. Conduct family planning counseling in a real or simulated setting.	1. Principles of informed choice and family planning counseling. 2. Process of family planning counseling which encourages individual informed choice. 3. GATHER counseling method: - G greet, give respect, privacy, full attention - A ask about persons' needs, situation - T teach about appropriate choices - H help persons select and understand the chosen method - E explain how to use and evaluate persons' learning - R refer for follow-up		
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts, role play,		
Course: PHC/MCH	Hrs. theory		Hrs. lab
Unit: 4 Family Planning	Hrs. theory		Hrs. lab
Sub-unit: Client assessment	Hrs. theory	2	Hrs. lab
Objectives:	Content:		
1. Describe what questions to ask when assessing factors which will affect the choice for family planning. 2. State the criteria for determining exclusion of pregnancy. 3. Identify tools that guide the counselor in helping a person/couple choose IUD or Combined Oral Contraceptives (COCs).	1. Factors influencing family planning method selection including "does the person/couple demonstrate…" a. self-discipline to use a method requiring pre-coital planning? b. ability to keep self supplied with contraceptive materials? c. mental ability to understand a multi-step method?		

	d. high risk to mother's health if pregnancy occurs? 2. Criteria for ensuring exclusion of pregnancy. 3. Client screening checklist for hormonal methods and IUCD.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: PHC/MCH	Hrs. theory Hrs. lab
Unit: 4 Family Planning	Hrs. theory Hrs. lab
Sub-unit: Adolescent Health	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. Discuss the reasons for the high rate of adolescent pregnancy in Nepal. 2. Summarize the physical health/psychological consequences of under age 20 pregnancy to the young mother and her child. 3. Explore ways to reduce pregnancy among girls under age 20 years. 4. Describe ways to modify the gynecological exam and family planning counseling for the family planning client under age 20. 5. Discuss the rights of young or unmarried clients who seek contraceptive advice. 6. Explore solutions to moral, ethical or legal dilemmas created by adolescents who seek advice about abortion, contraception, or sexually transmitted infections.	1. Statistics for adolescent pregnancy, cultural and gender role expectations, sexual exploitation of girls, misinformation about sexual development, and reproduction, other. 2. Physical and psychological effects of early pregnancy; relationship of immature parenting and childhood development problems. 3. Programs for empowerment of girls and women, legislative actions, national and community resources. 4. Strategies to reduce psychological and physical discomfort during examination and counseling. 5. Current Nepali laws regarding contraception to adolescents.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 3 Family Planning Counseling	Hrs. theory 20 Hrs. lab
Sub-unit: Contraceptive methods & condom use	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Explain the chief differences between the commonly used contraceptive methods 2. List examples of spacing and terminal methods. 3. Identify methods classified as clinical and non-clinical methods. 4. List examples of clinical and non-clinical methods. 5. Describe the essential information about condom use: a. Types available in Nepal b. Effectiveness c. Eligibility Client instructions d. Procedure of use e. Common errors of use/reasons for failure f. Non contraceptive benefits g. Common side effects and their management.	1. Classifications of contraceptive methods. 2. Different categories of contraceptive methods available in Nepal. 3. Correct application of the condom method. 4. Chief reasons for failure with the condom method.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab

Unit: 4 Family Planning	Hrs. theory 20 Hrs. lab
Sub-unit: Foaming tablets and spermicides	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. List the different varieties of foaming tablets and spermicides available in Nepal. 2. Explain why these methods have limited effectiveness and can cause increased risk of sexually transmitted infections. 3. Describe the effectiveness, eligibility, client instructions, procedure of use, incorrect use/common reasons for failure, common side effects and their management.	6. Foaming tablets and spermicides as methods of contraception: a. limitations of effectiveness b. increased risks c. correct use
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 4 Family Planning	Hrs. theory 20 Hrs. lab
Sub-unit: Natural methods and coitus interrupts	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. State the aims, effectiveness, limitations and eligibility of natural family planning methods. 2. Describe how to determine the "safe period" for coitus when pregnancy is not wanted. 3. Discuss ways a couple can maintain intimacy when coitus should be avoided. 4. State aim, effectiveness, eligibility and client instructions of coitus interruptus or abstinence. 5. Discuss the reasons coitus interruptus has a lower effectiveness rate than abstinence during fertile periods. 6. Describe the couple who would not be able to use these methods effectively.	1. Natural family planning methods: abstinence during fertile periods and coitus interruptus: effectiveness, advantages and disadvantages.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 4 Family Planning	Hrs. theory 20 Hrs. lab
Sub-unit: Hormonal contraceptives	Hrs. theory 2 Hrs. lab 2
Objectives:	Content:
1. Interpret the client screening checklist for hormonal methods recommended by National Reproductive Health Care Guideline. 2. Discuss combined oral contraceptives (COCs), Depo-Provera and Norplant : simple mode of action, types available in Nepal, effectiveness, procedure of use (timing, how to correct for missed pill), return of fertility, accessing supplies, precautions, contraindications, clinical assessment, common side effects and management of major side effects.	1. Combined oral contraceptives (COCs), Depo-Provera and Norplant: mechanism of action, management of method, contraindications, precautions. 2. Procedure for Depo injection, Norplant insertion.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts, observation of Depo injection, Norplant insertion
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab

Unit: 4 Family Planning	Hrs. theory 20 Hrs. lab
Sub-unit: Intrauterine contraceptive device	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Interpret client screening checklist for IUCD recommended by National Reproductive health Care Guideline 2. Discuss intrauterine contraceptive devices (IUD): simple mode of action, types available in Nepal, effectiveness, eligibility, procedure of use, return of fertility, precautions, contraindications, clinical assessment, common side effects and their management, major side effects and their management.	IUD: mechanism of action, management of method, contraindications, precautions.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts, observation of IUD counseling & insertion.
Course: Primary Health Care/Family Health	Hrs. theory 100 Hrs. lab
Unit: 4 Family Planning	Hrs. theory 20 Hrs. lab
Sub-unit: Voluntary surgical contraception	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Describe the procedures of vasectomy, laproscopy and minilap. 2. State the modes of action, effectiveness, eligibility, precautions and complications of each. 3. Demonstrate counseling of a couple who are undecided about choosing surgical contraception due to fear of impotency.	1. Vasectomy. 2. Laproscopy 3. Minilap
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts role play, observation of sterilization procedures
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 4 Family Planning	Hrs. theory Hrs. lab
Sub-unit: Post partum contraception	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Describe the reliability and duration of postpartum temporary infertility. 2. Identify the situation when a lactating woman should begin using additional protection. 3. Describe the effects of using the COCs on lactation. 4. Discuss the effectiveness and return of fertility with the lactational amenorrhoea method of contraception.	1. Postpartum infertility. 2. Contraception for breastfeeding women. 3. Lactational amenorrhoea method.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: Primary Health Care/Family Health	Hrs. theory Hrs. lab
Unit: 4 Family Planning	Hrs. theory Hrs. lab
Sub-unit: Emergency contraception	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Describe aims, types, eligibility, clinical procedure, client instructions and common side effects of emergency treatment with COCs and other hormonal methods.	1. Factors affecting the use of emergency contraception by COCs. 2. Management of emergency contraception. 3. Management of emergency contraception

2. Describe when IUD insertion may be used for emergency contraception. 3. Discuss how the current legal rulings regarding termination of unwanted pregnancy apply to the role of Health Post Incharge. .	through IUD insertion. 4. Current laws pertaining to termination of unwanted pregnancy.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course : PHC/Family Health	Hrs. theory Hrs. lab
Unit: 5 Population Issues	Hrs. theory 8 Hrs. lab
Sub-unit: Introduction of Population Science - Population composition	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Define population science/demography. 2. List the names of demographic processes. 3. List common attributes and principal measurements used in the study of population composition. 4. Estimate the sex ratio of this class. 5. Define the term: population pyramid. 6. Interpret selected types of population pyramids. 7. Demonstrate how to construct a population pyramid of Nepal.	1. Definition of population science/demography. 2. Demographic processes. 3. Population composition: i) Principal measurements. ii) Estimation of sex ration iii) Construction and interpretation of different types of population pyramid. 4. Population pyramid of Nepal.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course : PHC/Family Health	Hrs. theory Hrs. lab
Unit: 5 Population Issues	Hrs. theory Hrs. lab
Sub-unit: Population distribution, population size	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. List principal measurements used in the study of population distribution. 2. Identify the current population distributions of Nepal. 3. Identify current size and trend of world population growth. 4. Identify size and trend of population growth of Nepal. 5. Compare population growth between developed countries and Nepal.	1. Common measurements of population distribution. 2. Population distribution of Nepal. 3. Word population size and trend of population growth 4. Size and trend of population growth of Nepal. 5. Comparison of population growth between developed countries and Nepal.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts

Course: PHC/Family Health	Hrs. theory Hrs. lab
Unit: 5 Population Issues	Hrs. theory Hrs. lab
Sub-unit: Population Growth	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Discuss the concepts of positive and negative population growth. 2. List components of population growth. 3. Calculate annual population growth rate by- i) Rate of natural increase method ii) Balancing equation iii) Arithmetical progression or linear growth function,	1. Positive and negative aspects of population growth. 2. Components of population growth. 3. Calculation of annual population growth rate. 4. Formula for assessing population doubling time.

geometrical progression 4. State the formula for assessing population doubling time. 5. Estimate population doubling time of Nepal based on current annual growth rate.	
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course : PHC/Family Health	Hrs. theory Hrs. lab
Unit: 5 Population Issues	Hrs. theory Hrs. lab
Sub-unit: Population projection	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Define the term population projection. 2. Estimate the projected global population for ten years from now. 3. Estimate the projected population of Nepal by above listed methods. 4. Estimate the mid-year population using the balancing equation.	1. Meaning of population projection 2. Estimation of projected global population. 3. Estimation of projected population of Nepal. 4. Estimation of mid-year population by balancing equation.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course: PHC/Family Health	Hrs. theory Hrs. lab
Unit: 5 Population Issues	Hrs. theory Hrs. lab
Sub-unit: Demographic transition	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Identify different stages of demographic transition of selected developed countries. 2. List factors associated with demographic transition of developed countries. 3. Compare and contrast the demographic transition of developed and developing countries.	1. Demographic transition of developed countries. 2. Factors associated with demographic transition of developed countries 3. Contrast of demographic transition of developed and developing countries.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts

Course : PHC/Family Health	Hrs. theory Hrs. lab
Unit: 5 Population Issues	Hrs. theory Hrs. lab
Sub-unit: Effects of population overgrowth	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Discuss what characteristics constitute a condition of over population. 2. List different categories of population growth rates (declining to explosive) 3. Describe in brief effects of population overgrowth on economy and per-capita income, health, education and environment.	1. Definitions and concepts of overpopulation 2. Classification of population growth rates. 3. Effects of population overgrowth.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course : PHC/Family Health	Hrs. theory Hrs. lab
Unit: 5 Population Issues	Hrs. theory Hrs. lab
Sub-unit: Population growth control	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Describe following approaches of population growth control. i) Family planning services ii) Late marriage. iii) Women's empowerment iv) Economic development v) Economic rewards and penalties vi) Regulation of migration vii) Population education	1. Principles and methods for the application of measures of population growth control.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts
Course : PHC/Family Health	Hrs. theory Hrs. lab
Unit: 5 Population Issues	Hrs. theory Hrs. lab
Sub-unit: Population education in community	Hrs. theory 1 Hrs. lab
Objectives:	Content:
1. Describe what is meant by “population education.” 2. Describe the important components of population education for community people. 3. Describe in brief the scope of population education for different social settings.	1. Concepts of population education. 2. Components of population education for community people. 3. Scope of population education for specific social settings.
Evaluation methods: written examination, viva	Teaching Learning Activities / Resources: classroom instruction, teacher led discussion, text book self study, charts

Course: Epidemiology and Community Diagnosis

Hours Theory: 60

Hours Practical: 30

Assessment Marks: 100

Course Description:
This foundational course of community health practice is designed to develop the competencies and attitudes for application of epidemiological principles in community health diagnosis and health care practices.

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

1. Describe disease causation and modes of transmission, identifying the agent, host, and environmental factors, as the basis for environmental health of the community.
2. Use epidemiology to identify health problems of the community.
3. Investigate and manage an epidemic outbreak in the community.
4. Conduct a community diagnosis.
5. Describe the various health practices among the diverse ethnic groups of Nepal.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Reference Texts:

1. Park, K. Park's Textbook of Preventive and Social Medicine. M/S Banarasidas Bhanot, Jabalpur, India. Current edition.

2. Parker, D.J.P., Practical Epidemiology. ELBS Publications. Current edition.

3. Essential Preventive Medicine, by O.P. Ghai, Piyush Gupta. Vikas Publishing House, India. Current edition.

4. Basic Epidemiology. WHO publication.

Course: Epidemiology & Community Diagnosis	Hrs. theory 60 Hrs. lab 30
Unit: 1. Basic Epidemiology	Hrs. theory 23 Hrs. lab
Sub-unit: Concepts of Disease	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. Define the term disease (simple concept of disease) and give examples. 2. Describe the spectrum of disease, using examples. 3. Explain what is meant by the "iceberg phenomenon" of disease. 4. Concepts of disease causation: i) Germ theory ii) Explain the "epidemiological triad" concept of disease causation iii) Define the terms: agent, host and environment. iv) List examples of common agent, host & environmental, factors. v) Explain with an example the concept of "web of causations." vi) Define risk factors & risk groups. vii) Illustrate risk factors & risk groups in relation with particular diseases. 5. Explain in brief the natural history of disease. 6. State in brief concept of disease control, elimination, eradications & surveillance. 7. List the names of diseases/health problems that are under the control, elimination, eradication and surveillance of Nepal Government current health program.	1. Definitions of epidemiological terms eg. Rate Ratio Proportion Epidimic, Pandemic, Endemic. 2. Concepts of disease causation 3. History of disease 4. Mechanisms for control of disease by Nepal government. 5. Concept of risk factors and risks groups. 6. Concept of disease transmission and its control measures.
Evaluation methods: Written examination, Performance observation, oral test.	Teaching / Learning Activities: Demonstration and practice in handling of microscope.
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: 1. Basic Epidemiology	Hrs. theory 23 Hrs. lab
Sub-unit: Concepts and method of epidemiology	Hrs. theory 3 Hrs. lab
Objectives:	Content:
1. Explain the concept of epidemiology. 2. List the scope of epidemiology 3. State purpose/aim of epidemiology. 4. Describe the tools (rate, ratio, proportion) and common measurements (eg. mortality, morbidity, disability, determinants of health i.e. health related factors) used in an epidemiological study. 5. Descriptive epidemiology:- i) Explain what is meant by a descriptive epidemological study. ii) Describe the common characteristics/attributes examined in descriptive epidemiology. iii) Give at least one example of a disease/health problem related to such attributes. iv) State the uses of descriptive epidemiology. 6. Screening for disease: i) Define the concept of screening. ii) List the pre-requisites of a screening	1. Purpose and function of epidemiology. 2. Methods of epidemiological measurements. 3. Principles purposes and methodology of descriptive epidemiology. 4. Common characteristics and attributes of descriptive epidemiology: time, place & person distribution. 5. Principles, purposes and methodologies of screening.

test. iii) List the names of common diseases, target populations and tests used for screening.	
Evaluation methods: Written examination, Performance observation, oral test.	Teaching / Learning Activities: Demonstration and practice in handling of microscope.
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: 1. Basic Epidemiology	Hrs. theory 23 Hrs. lab
Sub-unit: Infections disease epidemiology	Hrs. theory 4 Hrs. lab
Objectives:	Content:
1. Define the terms: infection and infectious disease, epidemic, endemic, sporadic, pandemic, exotic, opportunistic infection, source of infection, reservoir of infection, iatrogenic infection. 2. Illustrate the above terms with disease examples. 3. Dynamics of disease transmission. i) Outline the transmission cycle of disease (chain of infection) ii) Describe the term "reservoir" in terms of human reservoir in non-living things. iii) Differentiate between direct and indirect modes of transmission; give examples of diseases for each. iv) Explain the terms "incubation period" and "period of communicability" in relation to a susceptible host. v) Identify the incubation period and communicable period of common diseases. 4. Infectious disease prevention and control: i) Describe methods for controlling the reservoir, interruption of transmission and protecting the susceptible host. ii) Discuss each method of control with relationship to a specific disease.	1. Terminology related to infectious disease epidemiology. 2. Principles and applications of the chain of infection. 3. Application of concepts of infectious disease study. 4. Principles and methodology of the prevention of infectious diseases.
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: 1. Basic Epidemiology	Hrs. theory 23 Hrs. lab 7
Sub-unit: Investigation and management of an epidemic	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. Describe the characteristic features of different types of infectious disease epidemics. 2. Describe in brief the steps/process of investigation and management of an infectious disease epidemic. 3. Use an example to illustrate the process of investigation and management of an infectious disease epidemic.	1. Characteristics of infectious disease epidemics. 2. Investigation and management of infectious disease epidemics.
Evaluation methods: Written examination, Performance observation, oral test	Teaching / Learning Activities: Demonstration and practice in handling of microscope
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab

Unit: Community Diagnosis	Hrs. theory 20 Hrs. lab 10
Sub-unit: Introduction to Community Diagnosis	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. Define community diagnosis. 2. Describe the benefits of using the community diagnosis process. 3. Explain the objectives of performing a community diagnosis. 4. Identify the steps of the community diagnosis process. 5. Describe the components of a community diagnosis, using a realistic example. 6. Differentiate between community diagnosis and clinical diagnosis.	1. Definition, aims and benefits of the community diagnosis process. 2. Steps of the community diagnosis process: a. Preparation of tools, techniques and work plan. b. Pre-testing of instruments c. Rapport building d. Data collection e. Data processing, analysis, interpretation f. Community presentation g. Planning and implementation of the Managed Health Project (MHP) h. Evaluation 3. Components of community diagnosis a. Demographic characteristics b. Social, economic and geographic characteristics c. Environmental health and sanitation d. KAP on health and health issue e. Maternal and child health f. Morbidity and disability g. Availability of health services and its utilization. h. Community resources i. Community leaders j. Culture and tradition 4. Differences between community diagnosis and clinical diagnosis.
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion, models, charts, textbook self study
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: Community Diagnosis	Hrs. theory Hrs. lab
Sub-unit: Data collection	Hrs. theory 2 Hrs. lab 4
Objectives:	Content:
1. Differentiate between primary and secondary data and their sources. 2. Give examples of primary and secondary sources. 3. Differentiate between quantitative and qualitative data, using examples. 4. Identify the purposes of census and sample surveys. 5. List sampling methods and explain the significance of sample size. 6. Describe methods of sampling. 7. Prepare, pre-test and rewrite a survey instrument.	1. Functions and characteristics of primary and secondary data. 2. Functions and characteristics of qualitative and quantitative data. 3. Purposes and characteristics of census and sample surveys. 4. methods of sampling: a. Probability Sampling - - simple random sampling - systematic (random) sampling - stratified sampling - cluster sampling - multistage sampling b. Non-probability sampling 5. Methods of data collection: a. use of questionnaire b. observation with check list c. interview d. focal group discussion

	e. Participatory Rural Appraisal (PRA) f. Rapid Rural Appraisal (RRA)
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion, models, charts, textbook self study
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: Community Diagnosis	Hrs. theory Hrs. lab
Sub-unit: Data processing	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Explain each step of data processing. 2. Apply data processing to a community diagnosis project in your field practice.	1. Application of data processing steps: a. data editing b. data coding c. data tabulation d. data analysis and interpretation e. data presentation
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion, models, charts, textbook self study
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: Community Diagnosis	Hrs. theory Hrs. lab
Sub-unit: Community presentation	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Explain the aims and goals of the community presentation of a community diagnosis. 2. Conduct a community presentation. 3. Identify the steps of a community presentation.	1. Important functions of a community presentation: a. to inform b. to motivate for action c. to involve community members 2. Steps of community presentation.
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion, models, charts, textbook self study
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: Community Diagnosis	Hrs. theory Hrs. lab
Sub-unit: Micro Health Project	Hrs. theory 2 Hrs. lab 1
Objectives:	Content:
1. List the three types of community health needs and give examples of each. 2. Describe how to prioritize the various health needs of a community. 3. Explain the concept of micro health project (MHP). 4. Plan, implement and evaluate a micro health project in your field practice.	1. Health needs assessment: a. felt health needs b. observed health needs c. real health needs 2. Principles of needs assessment 3. Introductions of a micro health project. 4. Steps of a MHP: a. planning of the MHP b. implementation of the MHP c. evaluation of the MHP
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion, models, charts, textbook self study
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: Community Diagnosis	Hrs. theory Hrs. lab

Sub-unit: Report writing	Hrs. theory 1 Hrs. lab 1
Objectives:	Content:
1. Explain the aims and benefits of project reports. 2. Describe the components of a project report. 3. Prepare a project report based on yhour field experience.	1. Important benefits of report writing. 2. Components of project report writing: a. title/title page b. acknowledgement c. preface/forward d. abstract/summary e. contents f. map (study area) g. project summary: - introduction - findings and discussion - conclusion and recommendations h. references / bibliography i. annex
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion, models, charts, textbook self study
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: Culture and Health	Hrs. theory 17 Hrs. lab 13
Sub-unit: Concepts of culture and health	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. define culture. 2. List the cultural characteristics and give an example for each. 3. Discuss how cultural habits influence health. 4. Give examples of how health influences cultural beliefs and norms.	1. Definitions and meanings of the term culture. 2. Cultural characteristics: a. beliefs b. norms c. taboos d. traditions e. customs f. superstitions g. religious practices h. social boundaries 3. Relationship between health, illness, behavior and culture.
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion, models, charts, textbook self study

Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: Culture & Health	Hrs. theory Hrs. lab
Sub-unit: Ethnic groups of Nepal and their cultures	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. List the main ethnic groups of Nepal and describe the chief cultural habits of each. 2. Identify the geographical sites where each ethnic group is prevalent. 3. Identify and evaluate traditional medical practices in Nepal.	1. Definition of ethnic group. 2. Ethnic groups living in Nepal and their main cultural features. 3. Traditional medical practices in Nepal.
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion, models, charts, textbook self study
Course: Epidemiology & Community Diagnosis	Hrs. theory Hrs. lab
Unit: Culture & Health	Hrs. theory Hrs. lab
Sub-unit: Effects of culture on health	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. For selected ethnic groups, discuss how cultural habits affect the health of that population; discuss both positive and negative aspects. 2. Discuss the possible origins of cultural beliefs, such as the belief that cow dung purifies, that saliva is unclean, that milk should not be taken during pregnancy. 3. Discuss the scientific principles related to these beliefs.	1. Nepali cultural practices and their effects on health: a. personal hygiene b. food selections c. preparation and storage of food d. food taboos e. sexual taboos 2. Diseases: causes, precautions and patient care.
Evaluation methods: written exams and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and discussion, models, charts, textbook self study

Course: **Basic Medical Procedures / First Aid**

Hours Theory: **50**
Hours Tutorial: **80**
Assessment Marks: **100**

Course Description:
This course provides the principles and techniques for performing the skills of medical care at the PCL General Medicine level, and includes a basic first aid course. The skills include basic history taking and physical examination, procedures for administering medications, wound care, performing invasive procedures, and simple suturing. The first aid course includes procedures for bandaging, cardiopulmonary resuscitation, and choking, in addition to basic first aid measures.

Course Objectives:
By completion of this course the learner will be able to:

1. Respond appropriately to first aid situations at the health post or elsewhere in the community.
2. Identify first aid situations which require referral to a higher level facility.
3. Perform a basic history taking and physical examination of the patient efficiently and thoroughly.
4. Perform selected basic invasive procedures and wound care according to guidelines.
5. Administer medications by each route safely and efficiently.
6. Maintain medical or surgical asepsis during procedures as needed.
7. Maintain hygienic conditions within the health post.
8. Identify topics for community education to promote safety and reduce preventable injuries.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended texts:

First Aid: the Authorised Manual of St. John's Ambulance Association (current edition)
Manual for Primary Health Care, Health Learning Materials Center, 1999/2055
Fundamentals of Nursing, Health Learning Materials Center

Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: BMP	Hrs. theory Hrs. tutorial
Sub-unit: 1 Professional Role	Hrs. theory 2 Hrs. tutorial
Objectives:	Content:
1. Discuss the ways the H.A. demonstrates qualities of: integrity, responsibility, commitment, respectfulness, healthful living, and desire for ongoing learning. 2. Discuss the consequences of unprofessional behavior. 3. Describe the hierarchy of authority within the Nepalese health care system. 4. Describe the role of the Nepal Professional Council. 5. Identify the appropriate steps to follow when confronted with unethical or illegal behavior of another health care worker. 6. Explain why Health Assistants have a responsibility to maintain current with continuing education.	1. The concept of professionalism. 2. Definitions and examples of: legal, ethical, and moral. 3. The hierarchy of authority in the health care system of Nepal. 4. The code of conduct for Health Post Incharge. 5. The purpose of certification for Health Post Incharge 6. Opportunities for continuing education.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role-play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: BMP	Hrs. theory Hrs. tutorial
Sub-unit: 2 Communicating Professionally	Hrs. theory 2 Hrs. tutorial
Objectives:	Content:
1. Discuss the process of "sending-receiving" verbal, nonverbal, and written communication 2. Describe factors, which aid or interfere with clear communication. 3. Discuss how cultural values affect clear communication of ideas. 4. Explain the importance of establishing a trusting relationship between Health Post Incharge and patient. 5. Describe ways to respectfully direct, inform, or make requests to others, in your role as Health Post Incharge. *6. Demonstrate through role play:* *a. Introducing self to co-workers, patients* *b. Establishing trust with a patient* *c. Requesting sensitive information from a patient* *d. Giving bad news to a patient/family* *e. Directing or correcting a subordinate* f. *Making a request to your supervisor*	1. Principles of effective communication 2. Ways to build rapport and trust 3. Respectful language
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role-play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: BMP	Hrs. theory Hrs. tutorial

Sub-unit: 3 Assessment of vital signs (V. S.)	Hrs. theory 2 Hrs. tutorial 4
Objectives:	Content:
1. State the indications and purposes for V.S. measurement. 2. Identify factors which interfere with accurate measurements. 3. Tell implications of abnormal findings. *4.* Explain the significance of accuracy in V.S. measurement. 5. Demonstrate proper techniques according to guidelines: a. Palpating pulses at six chief sites b. Counting respirations c. Taking temperature at 3 chief sites d. Measuring blood pressure e. Recording V.S. f. Caring for V.S. equipment	1. Anatomy & physiology of the functions of respiration, temperature and circulation. 2. Strategies for careful V.S. assessment. 3. Factors which influence the pulse, respirations and blood pressure. 4. Conditions which require measurement of V.S. 5. Strategies for recording V.S. data. 6. Procedures for care of V.S. equipment.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role-play.
Course: Basic Medical Procedures/First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 4 History taking & Physical Examination	Hrs. theory 2 Hrs. tutorial 6
Objectives:	Content:
1. Explain the purpose of the history & physical. 2. Describe strategies for organizing a history & physical. 3. List the components of a complete history & physical examination.. 4. Give examples when modifications must be made to the usual history and physical examination. 5. Describe ways to gain the trust of the patient and patient party. 6. Describe ways to provide privacy and promote comfort and cooperation of the patient. 7. Perform a history taking and physical examination in a simulated setting, according to guidelines. 8. Describe how symptom patterns and symptom correlations direct the process of differential diagnosis. 9. Examine the diagnostic diagram for "abdominal pain" in the Manual for Primary Health.	1. Ways to collect subjective and objective data about the patient. 2. What things to assess for each category: "General appearance." "Chief complaint/history of chief complaint" "History of present illness" "Past medical history" "Family history" "Social/personal history" 3. Inspection of the patient visually, and through sounds, smells, touch. 5. Techniques for auscultation. inspection palpation of chest and abdomen. Percussion abdomen 6. Techniques for assessing Jaundice, Anemia, Lymph nodes, Cyanosis, Clubbing, Oedema. 7. Techniques for examining all body systems. 8. The importance of clustering and analyzing data for patterns and correlations of symptoms, which direct the process of differential diagnosis.
Evaluation methods: written and viva exams, performance observation	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role-play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial

Sub-unit: 5 Administration of oral and topical medicines	Hrs. theory 2 Hrs. tutorial 2
Objectives:	Content:
1. Tell the advantages and disadvantages of the various routes for medication administration. 2. Explain how medicines are absorbed by the body from the GI tract, skin, or membranous tissue. 3. Tell what functions are served by topical medications. 4. Give examples of medicines, which can be absorbed through the skin. 5. Tell what things may interfere with the absorption of oral or topical meds. 6. Discuss ways to modify giving oral medicine when the patient is unable to cooperate with swallowing pills. 7. Describe the "5 rights" in the administration of all drugs. 8. Describe the procedure for administering drugs into the eye, ear, nose, rectum, vagina or onto the skin. 9. Discuss procedures for recording medication administration. 10. Demonstrate administration of drugs by all of the above routes according to guidelines.	1. Advantages and disadvantages of each mode of medicine administration. 2. Principles and physiology of medication absorption. 3. Procedure for safe administration of drugs by orally, by rectum, by vagina, on topically, into the eye conjunctiva and into the external ear. 4. Factors which increase or reduce the effect of oral and topical medications. 5. Safe medication administration procedures: right patient, right medicine, right dose, right route, right time.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 6 Administration of IM & IV medicines	Hrs. theory 4 Hrs. tutorial
Objectives:	Content:
1. Tell the advantages and disadvantages of drugs administration by the intramuscular (IM) and intravenous (IV) routes. 2. Identify the types of drugs which are administered by subcutaneous (SC or SQ) or intradermal (ID) routes. 3. Identify appropriate sites for IM administration in adults, children and infants. 4. Explain why there are increased risks when drugs is injected directly into the vein. 5. State the precautions which must be followed to protect the patient from harmful IV medicine administration. 6. Describe the procedures for administering IM and IV drugs, or beginning IV fluids, according to guidelines. 7. Describe the technique and reason for using the "Z track" method of IM administration. 8. Describe principles and procedures for safe needle disposal. 9. Demonstrate one-handed needle recapping, to use when a safe needle disposal container is not readily available. 10. Demonstrate administration of drugs by the	1. Principles and procedures for parenteral medications. 2. Safe needle management. 3. Risks of administering drugs directly into the vein. 4. Guidelines for administration of medicine via parenteral routes.

above routes according to guidelines.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: skill guidelines, textbook self study, classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 7 Medical-surgical asepsis	Hrs. theory 2 Hrs. tutorial
Objectives:	Content:
1. Differentiate between surgical asepsis (free from all organisms) and medical asepsis (free from pathogens) 2. Explain the principles and rationale for medical asepsis and surgical aspepsis. 3. Discuss the ways to maintain sanitation in the health post setting. 4. Demonstrate proper handwashing technique, according to guidelines. 5. State the principles and rationale for using careful handwashing. 6. Discuss when to use different kinds of handwashing procedures. 7. Demonstrate aseptic technique when using instruments for an aseptic procedure. 8. Demonstrate handling sterile instruments during a sterile procedure.	1. definitions and implications of sterile, aseptic and non-sterile. 2. procedures for application of principles of medical and surgical asepsis. 3. principles and procedures for handwashing and sanitation. 4. proper handling of aseptic and sterile equipment.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.

Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 8 Invasive Procedures	Hrs. theory 6 Hrs. tutorial
Objectives:	Content:
1. State the risks to a patient with each of these invasive procedures: urinary catheterization, Intravenous insertion, nasogastric insertion. 2. Explain what is meant by implied consent. 3. Discuss ways to make the invasive procedures less uncomfortable for the patient. 4. Tell the signs of complications for each of these invasive procedures. 5. Demonstrate these procedures according to the guidelines.	1. Application of medical and surgical asepsis to selected invasive procedures. 2. Patient rights to refuse invasive procedures. 3. Guidelines for selected invasive procedures, urinary catheterization (male & female, indwelling and straight catheterization), insertion of intravenous cannula and opening an I.V. line, nasogastric tube insertion and principles for tube feeding.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: First Aid	Hrs. theory Hrs. tutorial
Sub-unit: 9 Principles of First Aid	Hrs. theory 2 Hrs. tutorial
Objectives:	Content:
1. Discuss the aims of first aid and the responsibility of the first aider. 2. Describe the initial actions of the first aider. 3. List the essential principles of first aid. 4. Describe the steps of assessment, management and disposal of the casualty case.	1. Purpose of first aid 2. Essential principles of first aid 3. Procedures for assessment and intervention in first aid 4. Disposal and communication responsibilities 5. Principles of triage with multiple casualties
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play, self study from First Aid Manual
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: First Aid	Hrs. theory Hrs. tutorial
Sub-unit: 10 Dehydration, heat reaction, altitude sickness, hypothermia, frostbite	Hrs. theory 5 Hrs. tutorial
Objectives:	Content:
1. State examples of when persons might be at risk for dehydration, heat reaction, altitude sickness, hypothermia, frostbite. 2. Describe the signs and symptoms of dehydration, heat reaction, altitude sickness, hypothermia, frostbite. 3. Describe the recommended immediate treatment for each of these. 4. Describe indications that immediate referral to a higher level facility is necessary. 5. Explain how community education can prevent occurrences of dehydration, heat reaction, altitude sickness, hypothermia, frostbite or ensure a safe recovery.	1. Clinical features of mild, moderate and severe dehydration, heat reaction, altitude sickness, hypothermia, frostbite. 2. Correct use of rehydration salts and other treatments for dehydration, heat reaction, altitude sickness, hypothermia, frostbite. 3. Indications of severe cases of dehydration, heat reaction, altitude sickness, hypothermia, frostbite which require expert management.
Evaluation methods: written and viva exams,	Teaching / Learning Activities/Resources: classroom

performance observation in real or simulated settings.	instruction and demonstration, return demonstration, models, videos, role play, First Aid Manual
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 11 Animal bites, stings and poisoning	Hrs. theory 4 Hrs. tutorial
Objectives:	Content:
1. Discuss the incidence of injury due to animal bites, stings and poisoning. 2. Explain the importance of capturing and/or identifying the snake, animal or poison which harmed the casualty. 3. Discuss indications that a casualty is or may have a severe allergic reaction to an insect sting. 4. Describe the appropriate management for cases of animal bites, stings or poisoning. 5. Discuss why a tourniquet is no longer used for snakebite, and describe the recommended management. 6. Tell when vomiting is an appropriate and not appropriate way to manage poisoning. 7. Discuss why small children are at a high risk for poisoning, and how to prevent this. 8. Describe the recommended use of emergency medications for bites, stings and poisons. 9. Describe indications that the casualty should be removed to a higher level medical facility immediately. 10. Discuss ways to reduce the incidence of bites, stings and poisonings through community education.	1. Incidence, assessments, complications, treatments for animal bites, stings and poisoning. 2. Prevention and community education.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play, First Aid Manual
Course: First Aid / Basic Medical Procedures	Hrs. theory Hrs. tutorial
Unit: First Aid	Hrs. theory Hrs. tutorial
Sub-unit: 12 Wounds, burns and bandaging	Hrs. theory 3 Hrs. tutorial 2
Objectives:	Content:
1. Describe closed and open wounds, lacerations, contusions, and abrasions. 2. Describe how to manage a laceration, puncture wound, or gunshot wound. 3. Demonstrate selected types of bandaging. 4. Describe procedures for controlling hemorrhage: pressure dressings, pressure point constriction. 5. Tell indications for selecting to approximate a wound with “butterfly” taping, versus suturing. 6. Differentiate between different kinds of burns: chemical, friction, thermal, electrical. 7. Identify the characteristics of 1^{st}, 2^{nd} and 3^{rd} degree burns. 8. Describe the management of each degree burn. 9. Describe indications that a person with a wound should be transported to a higher	1. Terminology for various types if injury. 2. Recommended first aid treatment of closed or open wounds (abrasions, contusions, lacerations, puncture wounds, or burns). 3. Techniques of bandaging. 4. Control of hemorrhage. 5. First aid assessment and treatment of burns.

level facility.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 13 Hemorrhage	Hrs. theory 2 Hrs. tutorial
Objectives:	Content:
1. Describe the appropriate interventions for severe hemorrhage from: an extremity, abdominal wound, scalp wound, neck laceration. 2. Explain why a tourniquet is harmful for most circumstances of hemorrhage. 3. Describe the signs/symptoms of internal hemorrhage: abdominal, subdural, intracranial, thoracic. 4. State the interventions for stabilization of the person with severe blood loss. 5. Describe the precautions to use when transporting a patient who has had severe blood loss.	1. The difference between arterial versus venous bleeding. 2. Symptoms and implications of hemorrhagic shock. 3. Interventions for controlling internal and external hemorrhage.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 14 Management of severe breathlessness	Hrs. theory 6 Hrs. tutorial
Objectives:	Content:
1. Identify the common causes for breathlessness (shortness of breath). 2. Identify the distinguishing features characteristic of each cause of breathlessness. 3. Describe measures available at the health post to relieve breathlessness. 4. Identify the questions to ask to analyze the causes of breathlessness in the person. 5. Identify indications for referral to a higher level facility.	1. Causes of breathlessness: a. asthma b. pulmonary embolism c. pneumothorax d. pulmonary edema e. heart failure f. chronic obstructive pulmonary disease g. hysteria h. uremia 2. Distinguishing characteristics of common causes of breathlessness. 3. Management and referral.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 15 Heart attack	Hrs. theory 2 Hrs. tutorial
Objectives:	Content:
1. Describe the pathophysiology of myocardial infarction (M.I.) 2. Differentiate between angina and M.I.	1. Recall: Anatomy and physiology of the heart; pathology of myocardial infarction. 2. Clinical features of myocardial infarction and

3. Describe the common symptoms of M.I. 4. Identify immediate treatment for M.I. available at the health post. 5. Identify indications for immediate referral to a higher level facility.	angina. 3. Stabilization of M.I. case for transport to higher level facility.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: First Aid	Hrs. theory Hrs. tutorial
Sub-unit: 16 Epileptic seizure	Hrs. theory 2 Hrs. tutorial
Objectives:	Content:
1. Identify the causes and clinical features of epileptic seizure (fits). 2. Differentiate between epileptic seizure and hysterical fits. 3. Describe the appropriate management of a seizure (fit) for adults and children. 4. Tell when an emergency medication should be administered to the person experiencing unrelenting seizure (fit), and discuss the type, dosage and route of administration. 5. Demonstrate correct positioning to maintain the airway of an unconscious person. 6. Describe indications for immediate transport of the casualty for higher level care. 7. Discuss measures to educate the community about prevention and treatment for seizures.	1. clinical features of grand mal or other epileptic seizure (fit) 2. positioning for airway maintenance 3. recommended emergency medications for status epilepticus
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 17 Concussion and Stroke (CVA)	Hrs. theory 2 Hrs. tutorial
Objectives:	Content:
1. Describe the clinical features of a skull fracture. 2. Define concussion. 3. Describe the signs and symptoms of mild, moderate and severe concussion. 4. Identify the appropriate initial management of mild, moderate and severe concussion. 5. Describe the pathology of a stroke, or cerebral vascular accident (CVA). 6. Describe the signs and symptoms of mild, moderate or severe stroke. 7. Identify the immediate actions to take for the person who has had a mild, moderate, or severe stroke. 8. Identify indications that the person who has had a concussion or stroke should be transported to a higher level facility immediately.	1. signs and symptoms and management of mild, moderate and severe concussion 2. procedure for evaluating brain damage at 15 minute intervals (Central Nervous System Check) a. alertness & orientation b. voluntary movement/equilateral strength c. pain or numbness d. pupils equal and reactive to light e. reflexes normal f. vital signs g. vomiting/projectile vomiting
Evaluation methods: written and viva exams, performance observation in real or simulated	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration,

settings.	models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 18 Assessment of unconscious person	Hrs. theory 4 Hrs. tutorial
Objectives:	Content:
1. Define the terms related to assessment of level of consciousness. 2. Describe how to assess the ABC's of vital functions: a. airway clear b. breathing adequate c. circulation and cardiac function good 3. Identify the signs of common causes of unconsciousness. 4. Demonstrate placement of the unconscious person in recovery position or in shock position. 5. Explain why the Health Post Incharge should begin IV infusion for the unconscious patient. 6. Identify important information to ask of the persons accompanying the casualty. 7. Describe how to examine the body for evidence of injury or bites. 8. Identify emergency medications to use in the management of each of the causes of unconsciousness listed above. 9. Identify indications for immediate transfer to a higher level facility. 10. Discuss measures to ensure safe transport.	1. Definition of terms: a. full consciousness b. drowsiness c. stupor d. coma 3. Principles of emergency assessment. 4. Common causes of unconsciousness: a. asphyxia b. head injury c. shock d. fainting e. stroke f. poisoning g. heart attack h. convulsions i. diabetic emergency j. conversion disorder (hysteria) 5. Management of different causes of unconsciousness. 6. Indications and procedures for transfer.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: textbook self study, classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 19 Choking and obstructed breathing	Hrs. theory 3 Hrs. tutorial
Objectives:	Content:
1. Describe the symptoms of partial or complete airway obstruction due to choking. 2. Identify other common causes for airway obstruction. 3. Demonstrate how to position an unconscious person to maintain an airway. 4. Demonstrate how to assist the conscious and unconscious person with partial or complete airway obstruction by foreign body. 5. Identify indications for immediate referral to a higher level facility. 6. Describe the features of a community education program designed to prevent choking and teach the Heimlich maneuver.	1. Signs and symptoms of complete and partial airway obstruction. 2. Oedema of throat tissues, laryngospasm , obstruction by tongue with unconsciousness. 3. Positioning the unconscious patient. 4. Principles and procedure for performing the Heimlich maneuver. 5. Preventive measures and community education.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.

Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: First Aid	Hrs. theory Hrs. tutorial
Sub-unit: 20 CPR for drowning, cardiac arrest	Hrs. theory 3 Hrs. tutorial 2
Objectives:	Content:
1. Identify the conditions which require CPR. 2. Give examples of causes of asphyxiation or cardiac arrest. 3. Differentiate between "dry drowning" and "wet drowning". 4. State how many minutes a child or adult may survive without oxygenation to the brain. 5. Describe the symptoms of choking which indicate application of the Heimlich maneuver. 6. Describe the steps in assessment and intervention for the adult without respiration, pulse, or both 7. Tell the difference between CPR procedure for adult, child, infant, pregnant woman. 8. Describe ways to safely remove the source of electricity from a victim of electrocution before administering CPR. 9. Describe how to remove stomach contents from the victim of drowning, in order to increase ventilation by CPR.	1. Conditions which require CPR, and those which do not. 2. The process and principles of CPR 3. The process and principles of the treatment of choking with the Heimich maneuver 4. Circumstances which require modification of these procedures **5.** The anatomy and physiology of the heart and lungs .
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.
Course: Basic Medical Procedures / First Aid	Hrs. theory Hrs. tutorial
Unit: Basic Medical Procedures	Hrs. theory Hrs. tutorial
Sub-unit: 21 Multiple casualty/ multiple injury triage	Hrs. theory 2 Hrs. tutorial 1
Objectives:	Content:
1. Define the concept of triage and explain the purpose of triage. 2. Describe how to quickly assess airway, breathing, circulation and alertness. 3. List the other factors to assess, in order of importance. 4. State the rationale for decisions about which measures should be taken first. 5. Discuss the factors which may influence the decisions about which patients will receive priority for care. 6. Discuss the feelings a health worker may experience when he/she must apply the principles of triage to a multiple victim situation.	1. The principles and procedure of triage 2. Basic life support functions of the body 3. Legal and ethical issues of emergency care
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, videos, role play.

First clinical and community exposure in hospital and community setting

After completion of second year theory and simulation practice, student will be placed in 48 working days (48*7=336 hours) clinical practice in hospital setting.
Objective:
The students would be able to

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

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

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

After completion of second year theory and simulation practice, student will be placed in 12 working days (8 days program, 2 days report writing and 2 day presentation) in community practice in community (school) setting. Minimum 6*12=72 hours.
Objective:
Student will perform following activities:

1. Observe source of drinking water and recommend making sanitary. E.g. Chlorination, sodish technique and other available techniques.
2. Observe methods of excreta disposal and conduct health education session on sanitation barrier/sanitary latrine.
3. Evaluate nutritional status of school children: shakirtape, height and weight method.
4. Evaluate personal hygiene status of school children and conduct health education session.

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

Certificate in General Medicine

Third Year

Theory 60%

Practical: 40%

Theory Practical Ratio:	3:2
Total Working days:	270
Total working hours:	8 hours per day (9 am to 5pm including 1 hour break)
Total working hours per year:	1890 hours

No public and local holidays

Only holidays:	52 Saturdays, Dashain 3 days, Tihar 3 Days, Phagu Purnima 1 day, Teej (only female) 1 day, Total 60 days.
Final Exam:	35 days

First half of third year

Working days:	135 days
Working hours per day:	8 hours per day (9 am to 5pm including 1 hour break)
Total working hours per year:	945 hours

No public and local holidays

Holidays:	52 Saturdays, Dashain 3 days, Tihar 3 Days, Phagu Purnima 1 day, Teej (only female) 1 day, Total 60 days.
Final Exam preparation and exam:	35 days

Course: Medicine II – Pediatrics including Neonatology

Hours Theory: **50+10=60**
Hours Lab: **60**
Assessment Marks: **35**

Course Description:

This course provides the knowledge and skills necessary to assess the sick child, Neonatology manage the uncomplicated cases at the health post level, and identify indications for referral to a higher level facility for expert treatment. Emphasis is given to community health education for prevention or early treatment of childhood and neonates conditions and illnesses. This course also teaches the student to apply the principles and guidelines of the Integrated Management of Childhood Illnesses (IMCI) and neonatal health care in package.

Practicals involve application of learned theory during experiences in the pediatric hospital ward, out-patient pediatric clinic, maternal-child clinic, and health post attachment.

Course Objectives:
On completion of the course the student will be able to:
1. Assess, diagnose, and treat the common pediatric and neonates disorders and identify indications for referral of complex conditions.
2. Apply the CB-IMCI approach to assess, classify and manage the illness of children ages up to21 days to 15 years.
3. Apply strategies for health promotion and prevention of illness among children.
4. Apply fundamental principles for health promotion of neonates and children within the community.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended reference texts:

1. Baral, Manindra Raj, AZ Of Practical Paediatrics, Second Edition.
2. Adhikari, R., & Krantz, M., Child Nutrition and Health. Health Learning Materials Centre, Kahmandu. Current edition.Ghai, O.P., Essential Pediatrics. Interprint, India. Current edition.
3. Sharma, P.R., A Handbbook of Pediatric Problems. Health Learning Materials Centre, Kahmandu. Current edition.
4. IMCI Participants' Handbook, Facilitator Guide, Chart Booklet, Wall Charts, Video Exercise and other current guidelines from MOH, WHO, UNICEF. 2001.
5. Shrestha, Dhirga Raj, Reproductive Health (National and International Perspective), Latest Edition
6. Park, K., Textbook of Preventive and Social Medicine. M/S Banarasidas Bhanot, Jabalpur, India. Current edition.

Course: Medicine II	Hrs. theory 120	Hrs. lab 130
Unit: Pediatrics	Hrs. theory 40	Hrs. lab 60
Sub-unit: 1 Introduction to Pediatrics	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Discuss why the diagnosis and treatment of illness among infants and children differs from medical care of adults. 2. Explain why infants and children are considered a vulnerable population. 3. Review the statistics for infant/child mortality and morbidity in Nepal. 4. Discuss the socio-economic and cultural factors which may contribute to the high incidence of childhood illness. 5. Describe the important components of a health education programme on the prevention of childhood illnesses through sanitation, nutrition, and immunizations. 6. Describe the characteristics of normal infant and childhood development (physical, cognitive, psycho-social).	1. Principles and theory related to medical care of the pediatric patient. 2. Incidence and importance of pediatric medicine. 3. Factors influencing child wellness. 4. Normal growth and development of the infant and child.	
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Pediatrics	Hrs. theory	Hrs. lab
Sub-unit: 2 Pediatric examination	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. Describe how to modify the general demographic information collected when the patient is a child. 2. Discuss the additional information necessary to understand the history of present illness for a child patient 3. Identify questions to ask the guardian when collecting information about past illnesses. 4. Describe normal and abnormal features observed when performing examination of general appearance. 5. Tell the normal pediatric findings for pulse and respiration rates. 6. Summarize the modifications necessary when performing the systemic examination of a small child. 7. Identify the chief danger signs of the sick child age 2 months to 5 years, based on IMCI guidelines. 8. Tell what steps are necessary to check for each danger sign. 9. Describe the harmful condition or disease which the young child could be experiencing, for each of the danger signs. 10. State the IMCI sequence of treatment.	1. Components and modification for the pediatric history taking and physical exam 2. Demographic and social data related to child's family: father's occupation, use of tobacco/alcohol among family members, number and ages of siblings 3. Past illness information collection 4. General appearance: alertness to environmental stimuli, crying, flaccid, hyper-responsive to stimuli, hydration status, 5. Normal ranges for infants and children of vital signs. 6. Strategies to gain trust of the child before examining the body, using the guardian to comfort and reassure the child, avoiding unnecessary exposure of the body, performing simple inspections before palpating, 7. ICMI guidelines: a. general danger signs b. assessment of dangerous symptoms c. interpretation of dangerous symptoms 8. ICMI treatment sequence for children 2 months-5 years: a. assess and classify disorder b. identify treatment c. treat the child d. counsel the mother e. provide management of sick infant 1 week-2	

	months f. follow up
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics	Hrs. theory Hrs. lab
Sub-unit: 3 Neonatal conditions	Hrs. theory 3 Hrs. lab
Objectives:	Content:
1. Define the terms: still birth, newborn period, neonate, term baby, preterm baby, post-term baby, low birth weight (LBW) baby, perinatal period, post neonatal period. 2. Describe in brief the evaluation of a baby immediately after birth. 3. Describe the features of the normal full term (newborn infant) neonates. 4. Describe the common minor clinical problems observed in the normal (newborn infant) neonates. 5. Discuss the signs, treatment and prevention of hypothermia in the newborn. 6. List the common problems of LBW neonates. 7. Describe how to teach mothers to feed their LBW neonates and new born babies.	1. Terminology related to newborns 2. Evaluation of the newborn 3. Features of the normal and low birth weight (LBW) babies 4. Minor clinical problems with newborns 5. Problems and risks associated with LBW neonates 6. Prevention and management of hypothermia
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics	Hrs. theory Hrs. lab
Sub-unit: 4 Neonatal disorders	Hrs. theory 3 Hrs. lab
1. Identify the following theory about neonatal sepsis: a. causes / etiology b. common pathogens c. clinical features d. danger signs e. management at the health post level f. indications for referral 2. Explain why the feverish neonate should be covered only lightly with clothing, with head uncovered. 3. Identify the following theory about umbilical infection: a. causes / etiology b. common pathogens c. clinical features d. danger signs e. management at the health post level f. indications for referral 4. Identify the following theory about staphylococcal skin infection: a. causes / etiology b. common pathogens c. clinical features	1. Definition, etiology, clinical features, danger signs, and management of neonatal sepsis. 2. Etiology, clinical features, and management of umbilical infection. 3. Causes, clinical features and prevention of staphylococcal skin infection. 4. Clinical features and prevention of neonatal tetanus. 5. Etiology, clinical features, and management of ophthalmia neonatorum. 6. Causes, incidence, management and prognosis of physiological jaundice. 7. Common causes and management of neonatal seizures. 8. Assessment for congenital defects; conditions to be referred immediately.

d. danger signs e. management at the health post level f. indications for referral 5. Identify the following theory about neonatal tetanus: a. causes / etiology b. common pathogens c. clinical features d. danger signs e. management at the health post level f. indications for referral 6. Discuss the etiology, clinical features, health post level treatment and prevention of ophthalmia neonatorum. 7. Discuss the cause and management of physiological jaundice of the newborn. 8. Discuss the causes, clinical features and health post level management of neonatal seizure; tell indications for referral. 9. Identify the common congenital defects in newborns, their clinical features, and indications for immediate referral.	
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics	Hrs. theory Hrs. lab
Sub-unit: 5 Gastrointestinal disorders of children	Hrs. theory 3 Hrs. lab
1. Describe the etiology, clinical features and treatment of oral thrush. 2. Describe the signs, causes, management, and advice for mothers of gastro-oesophageal reflux. 3. List the common causes and management of vomiting. 4. Define the terms: diarrhoea, persistant diarrhoea, dysentery. 5. Tell the magnitude of morbidity and mortality of children from diarrhoeal diseases in Nepal. 6. Identify the agent factors, reservoir of infection, host factors, environmental factors and mode of transmission of diarrhoeal diseases. 7. Describe how to assess a child with diarrhoea based on the guidelines of Integrated Management of Childhood Illness (IMCI). 8. Describe the classification of diarrhoeal diseases according to the IMCI guideline. 9. Discuss the management of a child with diarrhoeal disease as recommended by IMCI. 10. Describe the counseling given to the mother about diarrhoeal disorders. 11. Discuss the prevention and control of diarrhoeal diseases.	1. Etiology, clinical features and treatment of oral thrush. 2. Signs, causes, management, and advice for mothers of gastro-oesophageal reflux. 3. Causes and management of vomiting. 4. Definitions, incidence, etiologies, management of diarrhoeal diseases according to IMCI guideines. 5. Prevention measures
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting

Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Pediatrics	Hrs. theory	Hrs. lab
Sub-unit: 6 Respiratory disorders	Hrs. theory 3	Hrs. lab
Objectives:	Content:	
1. Tell the normal respiratory rate of children age 2-12 months and 1-5 years. 2. Define the terms stridor, wheeze, and chest indrawing. 3. List common causes of wheezing and stridor in children. 4. Define the terms Acute Respiratory Infection (ARI) and pneumonia. 5. Describe how to differentiate between noninfectious chronic respiratory conditions and ARI. 6. Discuss the incidence and causes of ARI in children. 7. Describe the classifications of ARI as defined in the Integrated Management of Childhood Illness (IMCI) guidelines. 8. Identify the symptoms and recommended treatment of each category of pneumonia according to the IMCI guidelines. 9. Describe the counseling for the mother about childhood pneumonia. 10. List the complications of pneumonia in children. 11. Describe the etiology, clinical features, differential diagnosis and health post level teatment of chronic recurrent cervical adenitis.	1. Assessment of signs and symptoms of Acute Respiratory Illness (ARI). 2. Differentiation of ARI from chronic lung conditions. 3. Characteristics and management of cevical adenitis. 4. Incidence, causes, classifications, clinical features, management and prevention of ARI, according to IMCI guidelines.	
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Pediatrics	Hrs. theory	Hrs. lab
Sub-unit: 7 Infectious diseases - fever	Hrs. theory 3	Hrs. lab 2
2. List the common causes of fever in children. 3. Explain how to assess a child with fever. 4. Describe the classifications of fever based on criteria of IMCI guidelines. 5. Identify the management of each category of fever associated diseases as recommended by the IMCI guidelines. 6. Describe the components of counseling for mothers of children with fever, including follow-up visit.	7. Infectious and non-infectious causes for fever in children 8. Assessment using IMCI guidelines; includes looking, feeling, history taking. 9. IMCI classifications of fever 10. Management of fever as recommended by IMCI guidelines 5. Advice and counseling for children with fever.	
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Pediatrics	Hrs. theory	Hrs. lab
Sub-unit: 8 Infectious diseases – Measles, chickenpox and rubella	Hrs. theory 3	Hrs. lab 2
11. State in brief the epidemiological determinants of measles. 12. Describe the clinical features of measles	1. Epidemiological determinants of measles. a. agent factors b. host factors	

5. Identify the classification of measles as per the IMCI guideline. 6. Describe the management of each type of measles. 7. List the potential complications of measles. 8. State in brief the epidemiological determinants of chickenpox. 9. Describe the clinical features, differential diagnosis, complications and health post level management of chickenpox. 10. State in brief the epidemiological determinants of rubella. 11. Describe the clinical features, differential diagnosis, complications and health post level management of rubella. 12. Discuss the risks to a developing fetus, if it is exposed to rubella infection. 13. Describe measures for prevention of measles, chicken pox and rubella in the community.	c. environmental factors d. mode of transmission e. incubation period 2. Clinical features, classification, management, complications of measles. 3. Epidemiological determinants of chickenpox and rubella 4. Clinical features, differential diagnosis, complications and management of chickenpox and rubella. 5. Prevention and health teaching about measles, chickenpox and rubella.
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics	Hrs. theory Hrs. lab
Sub-unit: 9 Infectious diseases – Mumps, diphtheria, whooping cough, rheumatic fever, poliomyelitis	Hrs. theory 5 Hrs. lab 4
1. State in brief the incidence and epidemiological determinants of: a. mumps b. diphtheria c. whooping cough d. rheumatic fever e. poliomyelitis. 10. Identify the clinical features and the investigations necessary for a differential diagnosis of each of these. 11. Describe the recommended treatment at the health post level for each disease. 12. Discuss the complications and strategies for prevention of mumps, diphtheria, whooping cough, rheumatic fever, poliomyelitis .	1. Incidence, epidemiology, diagnosis, management and prevention of mumps, diphtheria, whooping cough, rheumatic fever, poliomyelitis.
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Sub-unit: 10 Skin disorders	Hrs. theory 5 Hrs. lab 2
1. Describe the etiologies, clinical features, and management of diaper rashes (napkin rash). 2. Describe the etiology, clinical features and management of impetigo, eczema, scabies, lice, fungal dermatitis among children. 3. Discuss health education and family counseling to prevent the incidence and spread of contagious skin disorders.	1. Causes, diagnosis and management of common skin disorders of children. 2. Prevention and management of child skin disorders.
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting

Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Pediatrics	Hrs. theory	Hrs. lab
Sub-unit: 11 Helminthes infestations	Hrs. theory 6	Hrs. lab 2
1. Describe the incidence and etiologies of commonly occurring helminthes infestations. 2. Identify the clinical features and the investigations necessary for a differential diagnosis of each of these. 3. Describe the recommended treatment at the health post level for each disease. 4. Identify the complications of untreated infestations. 5. Discuss health education programs to reduce the incidence of helminthes among children.	1. Incidence, etiologies, diagnosis, treatment, complications and prevention of common helminthes infestations: a. pinworm b. hookworm c. roundworm d. strongyloides e. tapeworm f. whipworm	
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Pediatrics	Hrs. theory	Hrs. lab
Sub-unit: 12 Nutritional disorders	Hrs. theory 5	Hrs. lab 2
Objectives:	Content:	
1. Discuss the evidence and extent of under-nutrition in Nepali children. 2. Identify the common nutritional disorders of Nepali children. 3. Discuss the chief causes and malnutrition and anemia among Nepali children. 4. Identify the complications and long term effects of chronic malnutrition and anaemia. 5. Describe how to assess a child for malnutrition and anaemia, based on criteria of the IMCI guidelines. 6. Classify the nutritional status of a child (a case example or a child in the practice setting) as per IMCI guidelines. 7. Describe the IMCI recommended management of each catagory of nutritional deficiency. 8. Describe in brief the clinical features and treatment of deficiencies in: vitamin A, thiamin (vitamin B-1), vitamin B-2, vitamin B-6, vitamin B-12, vitamin D, vitamin C and iodine. 9. Identify the effects of chronic deficiencies of these vitamins. 10. Discuss the principles and content of counseling for a child's guardian, related to feeding and follow-up.	1. Incidence, causes and evidence of malnutrition among Nepali children. 2. Assessment of nutritional status by IMCI guidelines. 3. Management of anaemia, protein and vitamin deficiencies according to IMCI guidelines. 4. Vitamin A treatment rational for: a. xerophthalmia/night blindness b. persistent diarrhea c. measles d. malnutrition 5. Community and individual education strategies, public solutions to malnutrition.	
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Pediatrics	Hrs. theory	Hrs. lab
Sub-unit: 13 Conditions of the ear	Hrs. theory 4	Hrs. lab 2
1. Describe how to examine a child to assess the ears, according to IMCI guidelines. 2. Discuss the incidence and causes of deafness.	1. Incidence, causes, diagnosis, treatment and prevention of common conditions of the inner and external ear.	

3. Describe the incidence and etiologies of middle ear infections among Nepali children. 4. Identify common infections of the external ear. 5. Describe the treatment of each category of ear problem based on criteria of IMCI guidelines. 6. Discuss health education measures to reduce the incidence of deafness and ear infections among children.	2. IMCI guidelines for assessment and management of ear problems.
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting

Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics	Hrs. theory Hrs. lab
Sub-unit: 14 Central nervous system disorders	Hrs. theory 5 Hrs. lab 2
1. Define the terms: unconsciousness, coma and convulsions. 2. Describe the procedure for assessing the condition of unconsciousness. 3. Identify the most common causes for unconsciousness or coma in the child. 4. Describe the emergency management of a child with unconsciousness or coma, before referring to a higher level facility. 5. Describe the common causes and most prevalent types of convulsions among children. 6. Describe the management and referral of a child who has repeated episodes of convulsions. 7. Discuss the clinical features, incidence and etiologies of mental retardation. 8. Describe the management and family counseling for mental retardation. 9. Identify health education measures to reduce the incidence and mismanagement of mental retardation. 10. Describe the incidence, clinical features, and etiologies of common childhood mental disorders: attention deficit/hyperactivity, depression, psychosis. 11. Discuss how to manage and counsel families for these disorders.	1. Incidence, assessment, and management of convulsions, coma or unconsciousness. 2. Incidence, assessment, and management of mental retardation. 3. Incidence, assessment and management of mental disorders of children.
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the clinical setting
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics	Hrs. theory Hrs. lab
Sub-unit: 15 Accidental injuries, poisoning, choking, & abuse	Hrs. theory 4 Hrs. lab 2
1. Identify the most prevalent types of accidental injuries to children. 2. Discuss health education programs to reduce the incidence of accidental injuries, from falls, burns, vehicular accidents, exposure, animal bites, choking and poisoning. 3. Identify clinical features which indicate a child may be experiencing neglect or abuse (physical, sexual or psychological) at home or school. 4. Discuss the incidence, causes and health outcomes of child labor and child trafficking. 5. Discuss the role of the Health Post Manager in prevention of socio-economic abuse of children.	1. Incidence, contributing factors, and prevention of accidental harm to children. 2. Incidence and clinical features of neglect or abuse of a child 3. Laws, incidence, and outcomes of child labor.
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, observation and supervised practice in the

	clinical setting
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics	Hrs. theory Hrs. lab
Sub-unit: 16 Integrated Management of Childhood Illness (IMCI)	Hrs. theory 3 Hrs. lab 2
1. Describe the purpose and process of Integrated Management of Childhood Illness (IMCI). 2. Discuss how to use the IMCI guidelines to assess, classify and manage the case of a child who presents with danger signs. 3. Describe how to use the IMCI guidelines to assess and classify illness, treat and counsel for the child age 2 months to 5 years presenting with: a. general danger signs b. cough or difficult breathing c. diarrhoea d. fever e. ear problems f. malnutrition and anaemia 4. 4. Describe how to use the IMCI guidelines to assess and classify, treat and counsel for the child age 1 week to 2 months presenting with: a. possible bacterial infection b. diarrhea c. feeding problems or low weight	1. Principles produce & philosophy of integrated management of childhood illness. 2. General danger signs and other symptoms. 3. Assessment, classification and management of childhood illness as per IMCI guidelines.
Evaluation methods: written examination, viva, performance observation in practice setting	Teaching / Learning Activities: classroom instruction, charts, solve related problems in IMCI manual, observation and supervised practice in the clinical setting
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics/Neonatology	Hrs. theory Hrs. lab
Sub-unit:1. Neonatology	Hrs. theory 4 Hrs. lab
1. Introduction to Neonatal Health	1. Overview of Neonatal Health at National, global and regional level and its other related national programs 2. Neonatal and Safe motherhood Health strategy and policy, 3. Roles of health care providers in caring neonates at different levels.
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics/Neonatology	Hrs. theory Hrs. lab
Sub-unit: 2. Neonatology	Hrs. theory 1 Hrs. lab
1. Infection Prevention	1. Infection prevention process including Universal precaution. 2. Hand washing
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics/Neonatology	Hrs. theory Hrs. lab
Sub-unit: 3. Neonatology	Hrs. theory 3 Hrs. lab
1. Essential Care for Every Newborn (within 7 hours)	1. Essential care of newborn at birth. 2. Introduction to postnatal care assessment/Examination of newborn within 24 hours and before discharge from the health institution. 3. Assessment /examination of new born at follow up visit. (3 days to 7 days),

	4. Teach and counsel the mother and family on Newborn.
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics/Neonatology	Hrs. theory Hrs. lab
Sub-unit: 4. Neonatology	Hrs. theory 4 Hrs. lab
1. Breastfeeding (within 7 hours)	1. Physiology of breastfeeding 2. Successful breastfeeding including exclusive breast feeding 3. Breastfeeding problems and its management including exclusive breast feeding 4. The HIV Positive Mother and Breastfeeding 5. Breastfeeding problems and its management including expressing breast milk, cup/ Palladai feeding.
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics/Neonatology	Hrs. theory Hrs. lab
Sub-unit: 5. Neonatology	Hrs. theory 3 Hrs. lab
1. Birth Asphyxia and its management (within 8 hours)	1. Introduction to Fetal Hypoxia and Asphyxia 2. Preparation for and steps of Newborn Resuscitation. 3. Newborn Resuscitation using different methods. 4. Care after Resuscitation.
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics/Neonatology	Hrs. theory Hrs. lab
Sub-unit: 6. Neonatology	Hrs. theory 7 Hrs. lab
1. Special care of Newborn	1. Danger signs and referral 2. Local infection. (Cord, eye, skin and oral thrush) 3. Possible severe bacterial infection and its management. (PBSI), 4. Prevention of hypothermia 5. Identification of Low birth weight Neonate. 6. Management of low birth weight using kangaroo Mother care. 7. Jaundice.
Course: Medicine II	Hrs. theory Hrs. lab
Unit: Pediatrics/Neonatology	Hrs. theory Hrs. lab
Sub-unit: 7. Neonatology	Hrs. theory 1 Hrs. lab
1. Approaches to clinical skills competency based and humanistic approached to skill proficiency	1. Introduction to competency based and humanistic approaches.

Course: **Medicine II - Psychiatry**

Hours theory: **40**
Hours Practical: **35**
Assessment Marks: **30**

Course Description:

This course prepares the student to understand the multifactorial etiologies of mental health conditions (neurobiochemical, environmental stresses, learned psycho-social behaviors and beliefs) and to prescribe, counsel or refer cases as necessary. Special attention is given to the assessment, management and prevention of psychosis, anxiety and depression, including care of the person who is suicidal, postpartum, violent, or victimized. Topics also included: childhood conditions, mental retardation, epilepsy, alcohol and drug abuse, and rehabilitation of the chronically mentally disabled.

Course Objectives:

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

1. Describe the current statistics and resources for mental health in Nepal.

2. Describe the multifactor causes of mental health conditions.

3. Identify and manage common mental health conditions of adults and children.

4. Maintain the safety of patients and others when persons become actively suicidal or violent towards others.

5. Identify, manage and counsel the families in cases of epilepsy, mental retardation, alcohol or drug abuse.

6. Identify indications for referral of severe cases and cases resistant to treatment.

Minimum Standards:

Students must achieve at a minimum of 40% accuracy in theory, 50% accuracy in Practical.

Recommended Text:

13. Mental Health for the Primary Health Care Worker, distributed by Health Learning Materials Center.

Reference Texts:

1. Joshi, M.P. and Adhikari, R.K., Manual of Drugs and Therapeutics. Distributed by Health Learning Materials Center, Kathmandu, Nepal. 1996.

2. Tierney, L.M. et al., Current Medical Diagnosis. AppletonLange, Stamford. Current edition.

3. American Psychiatric Association: Diagnositic and Statistical Manual of Mental Disorders, 4th ed. Washingtonn, D.C. 1994.

4. Fortinash, K.M. & Holoday Worret, P.A., Psychiatric Mental Health Nursing, 2nd ed. Moseby, St. Louis. 2000.

Course : Medicine II	Hrs. theory 120 Hrs. lab 130
Unit: Psychiatry	Hrs. theory 40 Hrs. lab 35
Sub-unit: 1. Introduction	Hrs. theory 2 Hrs. lab
Objectives:	
1. Describe the criteria for diagnosis of mental illness. 2. Discuss ways to classify mental illness. 3. Describe the ways mental illness may affect mental or emotional functions, behavior, and physical health. 4. Discuss the theory of multiple causality of mental disorders (part neurobiological, part experienced stress). 5. Give examples of stressful psycho-social conditions which contribute to mental illness. 6. Discuss mental wellness-illness as a continuum; describe an occasion when you suffered from some feelings of anxiety or despair.	1. Criteria for diagnosis of mental illness: emotional, behavioral, physical health maintenance. 2. Classification of disorders: psychosis & neurosis; International Diagnostic Criteria (ICD) using the Diagnostic & Statistical Manual of Mental Disorders. 3. Mutifactorial causation theories of mental illness. 4. Psychological function and responses to stress.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.
Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab
Sub-unit: 2 Mental Health Services in Nepal	Hrs. theory 2 Hrs. lab
Objectives:	
1. Discuss the incidence of mental illness in Nepal. 2. Describe the resources for diagnosis and treatment of psychiatric disorders in Nepal. 3. Discuss how mental health services (i.e., diagnosis, counseling, medicine prescriptions) are provided at the health post level as part of integrated health care service. 4. State the aims of mental health treatment. 5. Explain why people with mental illness are often held in jails, rather than in a treatment facility. 6. Discuss the role of the traditional healer in diagnosis and treatment of mental illness, both the positive and negative aspects. 7. Describe how the health post manager could enlist the support of traditional healers by giving workshops to these persons.	1. Incidence of mental illness, reported and unreported. 2. Services for mental illness: district level resources, zonal and national; United Missions Nepal Mental Health Program. 3. Role of the Health Post Incharge in diagnosis and management. 4. Aims of mental health services: to restore a feeling of calm and ability to reason, and to resume a purposeful and meaningful role in the community. 5. Effects of ignorance, fear, misunderstanding and apathy upon the treatment of this vulnerable population. 6. Positive and negative applications of traditional healers in diagnosis and treatment of mental illness. 7. Utilization of traditional healers as part of the health care team.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.
Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab

Sub-unit: 3 Causes of Mental Illness	Hrs. theory 3 Hrs. lab
Objectives:	
1. Describe the normal neurochemistry of the brain, as it affects reason, judgment, emotions, perceptions, impulse control. 2. Discuss the brain chemistry changes related to the following conditions: paranoid thinking, hallucinations, depression, suicidal thinking, addiction, poor impulse control, compulsive behavior. 3. Describe the kinds of childhood or adult experiences that contribute to poor mental health. 4. Explain how genetics or poor congenital development can cause increased susceptibility to mental illness. 5. give examples of chronic stress and explain how chronic stress results in alteration of brain chemistry. 6. List "vulnerable populations" which are more likely to experience the stresses listed above. 7. Discuss this statement: All behavior is meaningful. Do you agree or disagree? Support your view with examples.	1. Anatomy and physiology of brain function. 2. Pathophysiology of mental illness symptoms. 3. Emotional consequences of childhood experiences: malnourishment, parental/societal violence, punitive, unpredictable or inconsistent caregiving to children, abandonment. 4. Genetic or congenital causes, i.e. fetal alcohol syndrome. 5. Causes of chronic stress: shortages of food/shelter, guilt, rejection by family/community, fear, powerlessness. 6. Vulnerable populations: women and children, low socio-economic groups, selected ethnic/cast groups, refugees. 7. Maslow's hierarchy of needs: physiological needs, safety needs, love & belonging needs, self esteem needs, self actualization needs.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.
Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab
Lesson: 4 Assessment	Hrs. theory 3 Hrs. lab 4
Objectives:	Content:
1. Explain why a trusting, respectful relationship is especially important when interviewing/examining the person with mental illness. 2. Describe ways to create trust and gather information when interviewing the mentally disturbed person and their family. 3. Identify the components of a mental history and mental status exam. 4. Demonstrate taking a mental history and mental status exam using a standardized assessment form, in a simulated setting. 5. Discuss the importance of assessing for thoughts about self harm or harm to others, and assessing for auditory hallucinations. 6. Apply the diagnostic criteria of different classifications systems when making a mental health diagnosis. 7. Explain why it is difficult to differentiate between mental or physical symptoms which have organic cause, and symptoms which may be caused by	1. Principles of counseling 2. Components of a mental status exam and mental history. 3. Strategies for assessing dangerousness to self or others. 4. Diagnostic criteria 5. Differentiation of conversion disorder symptoms from organically based symptoms. 6. Process of selecting a diagnosis of mental illness: a. Does the person have physical illness, mental illness, or both? b. What kind of mental illness is present? c. Is the condition mild, moderate or severe? d. Is the condition acute, recurrent or chronic? e. What conditions are causing the illness to become worse?

the anxious state known as conversion disorders or functional neurosis.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.
Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab
Sub-unit: 5 Psychosis	Hrs. theory 3 Hrs. lab 2
Objectives:	
1. List the signs and symptoms of psychosis. 2. Describe the neurochemical cause of psychotic symptoms. 3. Explain the autoimmune theory of causation of schizophrenia. 4. Explain the causes for post-partum psychosis. 5. Identify medication management of psychotic symptoms; tell the desired and undesired effects of the medications used. 6. Describe social interventions for assisting the psychotic person to become in touch with reality. 7. Describe reasons when therapeutic restraint may be necessary. 8. Demonstrate the proper procedure for safe and humane restraint of a person who is at risk to harm self or others. 9. Discuss why follow up care is especially important with psychotic disorders. 10. Identify indications for referral to a specialty care center for diagnosis and treatment.	1. Definition of psychosis, symptoms and signs of psychosis: hallucinations (auditory, visual, tactile, olfactory, taste) paranoid thinking (persecutory, grandiose), thought broadcasting, thought insertion, disorganized thinking, poor reasoning, poor impulse control, social inappropriateness, agitation, catatonia) 2. Neurotransmitter failures in brain centers causes of neurotransmitter pathology. 3. Management of pharmacological antipsychotic therapy, control of side effects, patient education, family support for following medication schedule. 4. Social support for the psychotic person: calm environment, kind and firm approach to behavior control, purposeful occupation of time for the person, reassurance. 5. Principles of safe use of physical restraint. 6. How the patient's poor understanding of the illness causes failure to follow through with prescribed treatment.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.
Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab
Sub-unit: 6 Neurosis – anxiety disorders	Hrs. theory 6 Hrs. lab 4
Objectives:	
1. Discuss the continuum of anxiety, from mild/useful to severe/disabling. 2. Describe the neuropathology which causes the symptoms of anxiety. 3. Describe the various classifications/manifestations of anxiety disorders. 4. Discuss the relationship between the genetic predisposition for anxiety, stressful events, and the development of anxiety disorders. 5. Define functional neurosis (somatoform disorder) and give examples. 6. Discuss the importance of making certain that a real physical illness is not present before making a diagnosis of	1. Function of normal anxiety, effects of severe anxiety, neuropathology of anxiety symptoms. 2. Classifications/manifestations of anxiety disorders: a. General Anxiety disorder b. Panic disorder c. Obsessive Compulsive disorder d. Post Traumatic Stress disorder (PTSD) (see sub-unit 12) e. Phobias 3. Classifications of somatoform disorders (functional disorders): a. conversion disorder (hysteria) b. somatization disorder c. psychogenic pain d. hypchondriasis

functional neurosis/somataform disorder. 7. Explain why the person suffering from an anxiety disorder is at greater risk for suicide. 8. Describe the social support and counseling treatment which the Health Assistant can provide to the person with anxiety disorder. 9. Identify the desired and undesired actions of the medicines used for the treatment of anxiety disorders. 10. Discuss the risks of addiction when persons use benzodiazapine medications for anxiety, and ways to prevent misuse of these medicines. 11. Identify indications that a person with anxiety disorder requires referral for expert management.	4. Characteristics of functional neurosis/somataform disorders: a. physical symptoms with no physical cause b. strong emotional needs c. no awareness of their strong emotional needs d. "secondary gain" is desired, i.e., attention from others. 5. Risks of misdiagnosis with functional neurosis/somatoform. 6. Counseling and social support treatments to meet strong emotional needs, raise the persons's awareness of their emotional needs. 7. Appropriate use of benzodiazapines; alternative medications (antidepressants). 8. Risks of untreated or resistive anxiety disorder.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.
Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab
Sub-unit: 7 Neurosis – depressive disorders	Hrs. theory 3 Hrs. lab 2
Objectives:	
1. Discuss the neurobiological pathology of depression. 2. Identify diseases or drugs that may cause symptoms of depression. 3. Discuss life stresses that may cause depression in a susceptible person. 4. Identify the signs and symptoms of clinical depression. 5. Identify social interventions for the treatment of depression. 6. Explain how antidepressant medications help to normalize brain activity. 7. Demonstrate how to ask about suicidal thinking/plans/intent. 8. Describe ways to prevent the suicidal person from harming him/herself. 9. Describe the important components of health education/counseling for the person and family members. 10. Indications for referral to specialty center for evaluation and treatment.	1. Etiology, pathology, and clinical features of clinical depression. 2. Pharmacological and social treatments for depression: a. antidepressant medications b. kind, firm encouragement c. purposeful occupation of time 3. Neurochemical changes due to long periods in situations of powerlessness, hopelessness, malnourishment, fatigue, losses of social support, loneliness. (refugees, prisoners, dislocated poor) 4. Assessment of suicidal risk, supervision of suicidal person, removal of harmful items from the setting, assuring the suicidal person that the feelings are temporary, showing kindness and hopefulness. 5. Teaching the depressed person to report symptoms, teaching the family to accept the person's feelings, importance of continuing on medications after symptoms are gone.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.
Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab
Sub-unit: 8 Bipolar disorder (manic-depression)	Hrs. theory 3 Hrs. lab 2
Objectives:	

1. Discuss the genetic, biochemical and stress related causes for the development of symptoms of bipolar disorder. 2. Describe the clinical features of bipolar disorder. 3. Identify the medications which stabilize the mood swings of bipolar disorder, and tell the desired and undesired effects of each. 4. Explain why persons with bipolar disorder often stop taking their medications, causing a relapse of symptoms. 5. Discuss the social, financial and physical harm that a person with uncontrolled manic symptoms can cause to self or family or community. 6. Discuss the important components of education for the person and family members. 7. Identify indications for referral to a specialty center.	1. Etiology and neuropathology of bipolar disorder. 2. Clinical features of bipolar disorder (alternating periods of elevated mood and depressed mood): a. abnormally elevated or irritable mood b. fluctuations between euphoria and anger c. inflated self esteem, grandiosity d. racing thoughts, flight of ideas e. increased talkativeness f. excessive involvement in pleasurable activities g. increased goal directed behavior h. agitation i. distractibility j. hallucinations 3. Classifications of medicines for bipolar disorder: a. Lithium b. anticonvulsants c. antidepressants 4. Education regarding the chronic nature of bipolar disorder.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.
Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab
Sub-unit: 9 Alcohol and drug abuse	Hrs. theory 3 Hrs. lab 2
Objectives:	
1. State the incidence of alcoholism and drug abuse in Nepal. 2. Describe the effects of alcoholism and drug abuse on the individual, the family, the community and the nation. 3. Discuss the incidence and clinical features of abuse of: a. alcohol b. benzodiazapines c. psychostimulants d. cocaine e. opiates f. hallucinogens g. inhalents h. marijuana/cannibus 4. Describe the neurochemical changes which are the result of chronic alcohol/drug intake. 5. Tell the criteria for determining a diagnosis of alcoholism or drug addiction/abuse. 6. List the long term effects of alcoholism and drug abuse on the body organs. 7. Describe the clinical features and management of alcohol withdrawal and withdrawal from the drugs of abuse. 8. List reasons to stop using alcohol or drugs, which may be used to motivate	1. Current statistics for alcohol and drug abuse. 2. Wide spread negative effects of alcohol and drug abuse. 3. Neurobiology of addiction. 4. Criteria for diagnosis: a. unable to control use of alcohol and drugs of abuse b. craving of alcohol and drugs of abuse c. harmful effects to self or others due to use or craving of alcohol and drugs of abuse 5. Long term health effects: a. gastritis b. malnutrition c. frequent infections d. liver disease e. others 6. Motivating factors: a. financial b. respect from family, community c. able to keep employment d. improved health e. able to provide guidance to children f. others 7. Signs and symptoms and risks of withdrawal from chronic alcohol use, benzodiazapine use, opiate abuse, cocaine abuse, stimulant abuse. 8. Management of withdrawal from alcohol and

the person to give up the addiction. 9. Analyze the solutions for alcoholism and drug abuse that have been used by other countries. 10. Discuss solutions that could be effective in Nepal. 11. Discuss appropriate responses if a Health Post Incharge student observed that a classmate is regularly abusing alcohol or other drugs.	drug abuse. 9. Drug & alcohol solutions a. prohibition of alcohol and drugs b. required drug/alcohol treatment c. early health education in schools d. poverty reduction e. strong penalties, jail sentences for use f. legalization and medical supervision of drug use
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.

Course : Medicine II	Hrs. theory	Hrs. lab	
Unit: Psychiatry	Hrs. theory	Hrs. lab	
Sub-unit: 10 Childhood disorders	Hrs. theory 2	Hrs. lab 1	
Objectives:	Content:		
1. Identify the signs and symptoms of depression, anxiety, and psychosis in a child. 2. Describe the behavior that is characteristic of attention deficit/hyperactivity disorder. 3. Describe how the Health Post Incharge counsels the parents of a child with a mental disorder. 4. Identify indications for referral to specialty facility for diagnosis and treatment.	1. Clinical features of childhood mental disorders. 2. Identifying symptoms of attention deficit/hyperactivity disorder. 3. Promoting understanding by parents, and teaching parents to use a calm, consistent, and firm but kind approach. 4. Recognizing the resistant to treatment child, psychotic child, or suicidal child.		
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.		
Course : Medicine II	Hrs. theory	Hrs. lab	
Unit: Psychiatry	Hrs. theory	Hrs. lab	
Sub-unit: 11 Psychosexual Disorders	Hrs. theory 3	Hrs. lab 2	
Objectives:	Content:		
1. Define the terms that are related to the diagnosis and treatment of psychosexual disorders and sexual dysfunction. 2. Discuss the theory that compulsive psychosexual disorders such as pedophilia or exhibitionism may have neurobiological origin, or may be related to a childhood history of sexual trauma. 3. Identify the most common physical and non-physical reasons for a man or a woman to experience inability to become sexually aroused. 4. Discuss the management of sexual impotence or anorgasmia among men and women.	1. Meanings of related terminology: paraphilias, voyeurism, pedophilia, exhibitionism, sexual sadism, sexual abuse, sexual assault, orgasm, vaginismus, anorgasmia, masturbation, premature ejaculation. 2. Etiologies of psychosexual disorders. 3. Etiologies of sexual dysfunction. 4. Management of male and female sexual dysfunction. 5. Theories, legal issues, and principles of treatment for rapist and their victims.		

5. Discuss the legal definition of rape, and the rules governing the punishment or treatment of rapists and their victims. 6. Discuss the following statement and tell whether you agree or disagree; support your view with facts: "Rape is an act of violence, performed in anger, not an act of lust."	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.
Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab
Sub-unit: 12 Psychological trauma related to human rights abuses	Hrs. theory 3 Hrs. lab 2
Objectives:	
1. Summarize the WHO statement on Human Rights. 2. State the types of abuse that may occur within a family situation. 3. Discuss the incidence of family violence, family abuse, and human trafficking in Nepal. 4. Discuss the socio-cultural factors that contribute to family abuse and trafficking. 5. Describe the signs and symptoms that indicate a person has been victimized physically, sexually, or emotionally. 6. Demonstrate through role play ways to carefully question the person who shows signs of abuse. 7. Identify the defining characteristics of Post Traumatic Stress Disorder (PTSD). 8. Describe the management strategies for treatment of PTSD (therapeutic counseling, medications, group therapy). 9. Identify situations when a victim should be assisted to leave an abusive situation. 10. Describe community education activities to reduce the occurrence of human rights abuses and trafficking.	1. Components of the Statement on Human Rights, signed by Nepal. 2. Components of family abuse: physical (beating, denial of food or shelter, burning, cutting), sexual (forced sexual intercourse, forced oral or anal sex), psychological (threats, name-calling, social isolation), neglect (abandonment, failure to give medical care, failure to provide food or shelter, failure to provide for education, failure to keep a safe environment). 3. Current statistics for family abuse, child abandonment and trafficking. 4. Historical and current contributing factors of human rights violations. 5. Clinical signs of abuse: bruises, injuries, burns, malnutrition, poor hygiene, emotionally withdrawn/very shy or quiet, fearfulness, injuries to genitalia. 6. Counseling techniques for assessing and assisting the victim: remain non-judgmental, avoid leading questions, assure confidentiality, maintain a kind and respectful approach. 7. Principles for ensuring protection of the victim. 8. Important components of community education efforts.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.

Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab
Sub-unit: 13 Epilepsy	Hrs. theory 1 Hrs. lab 2
Objectives:	
1. Identify the causes and diagnosis of epilepsy. 8. Identify the clinical features of common forms of epileptic seizures (fits or convulsions). 9. Describe various forms of seizures. 10. Describe how to differentiate between a true epileptic seizure and an hysterical fit (pseudo seizure). 11. Identify the commonly used anticonvulsants and discuss their desired and undesired effects. 12. Discuss the counseling necessary to ensure that the patient takes the medication regularly. 13. Describe the appropriate management of a seizure for adults and children. 14. Tell when an emergency medication should be administered to the person experiencing unrelenting seizure, and discuss the type, dosage and route of administration. 15. Describe indications for immediate transport of the person with unrelenting seizures, for specialty care. 16. Discuss measures to educate the community about the causes, prevention and treatment for seizures.	1. Etiologies and neuropathology of epilepsy. 2. Clinical features of grand mal seizures, petit mal seizures, partial seizures. 3. Positioning for airway maintenance, prevention of injury. 4. Management of epilepsy with anticonvulsants. 5. Recommended emergency medications for status epilepticus. 6. Individual, family, and community education related to prevention, early diagnosis, and treatment of epilepsy.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction, text book self study, videos, role play.
Course : Medicine II	Hrs. theory Hrs. lab
Unit: Psychiatry	Hrs. theory Hrs. lab
Sub-unit: 14 Mental Retardation	Hrs. theory 1 Hrs. lab 2
Objectives:	
1. Identify the causes of mental retardation. 2. Describe the clinical features of mild, moderate and severe mental retardation. 3. Discuss the clinical features of Downs Syndrome. 4. Explain the increased risks which persons with mental retardation experience. 5. Describe the important components of family education when one member is mentally retarded. 6. Tell how mental retardation can be better managed or prevented through community education.	1. Etiologies, clinical features of mental retardation. 2. Risk factors associated with mental retardation. 3. Family and community education for the management and prevention of mental retardation.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities / Resources: classroom instruction, text book self study, videos, role play.

Course: Medicine II – Dermatology/Sexually Transmitted Infections (STI)

Hours Theory: 40
Hours Practical: 45
Assessment Marks: 35

Course Description

This course provides a basic overview of common skin diseases and conditions, their diagnostic features, etiologies, management and prevention measures. Emphasis is given to communicable skin diseases common to Nepal, including fungal infections, parasites, and leprosy and sexually transmitted infection.

Objectives

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

1. Identify the clinical features of common skin diseases and conditions.
2. Perform a smear for laboratory investigation in the diagnosis of leprosy.
3. Describe the role of the health worker in contact tracing and follow up for leprosy cases.
4. Select appropriate treatment and medication for skin and sexually transmitted infections and conditions.
5. Describe the role of the health worker in preventing skin and sexually transmitted infections conditions.
6. Identify indications for referral to specialty services.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended Textbooks:

Kafle, K.K., & Pinniger, R.G., Diagnositic and Treatment Manual for Primary Health Care. Health Learning Materials Center, Kathmandu. 1999.

References:

Tierney, L.M., et al., Current Medical Diagnosis and Treatment. Appleton Lange, Stamford CT, USA. Current edition.

Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Dermatology	Hrs. theory	Hrs. lab
Sub-unit: Introduction to Dermatology	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. Review the anatomy and physiology of the skin. 2. List the causes of skin diseases prevalent in the community. 3. Describe the clinical features of each of these disorders. 4. Describe the causes and clinical features of cellulitis. 5. Discuss the management of cellulitis. 6. Describe different types of primary and secondary skin lesions. 7. Describe symptomatic and curative treatments for common skin conditions. 8. State the important points for teaching persons how to prevent the occurrence or spread of skin disorders.	1. Anatomy and physiology of the skin. 2. Identification of common skin diseases: bacterial, fungal, viral, parasitic. 3. Causes and clinical features of cellulites. 4. Characteristics of primary lesions- macules, papules, vesicles wheals. 5. Characteristics of secondary lesions: pustules, scales, crusting, excoriation, ulcers, lichenification. 6. Common symptoms: itching, pain, discoloration, hypo/hypereasthesia. 7. Preventive education.	
Evaluation methods:	Teaching / Learning Activities:	

Written exam, identification of illustrated disorders	Classroom instruction, dermatology atlas, text book self-study, supervised observation in clinical settings	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Dermatology	Hrs. theory	Hrs. lab
Sub-unit: Bacterial Infections of the skin	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. Define impetigo, furunculosis and boils. 2. Identify the causative agents for these. 3. Identify the clinical features of impetigo, furunculosis. 4. Describe the indications for making provisional diagnoses for these conditions. 5. Describe appropriate treatment for uncomplicated cases of impetigo, furunculosis and. 6. Identify indications for referral to a higher level facility. 7. Discuss the measures for preventing spread of these causative agents within the health post. 8. Illustrate the health teaching which can decrease the incidence of these infections.	1. Definition and causative organisms of impetigo, furunculosis. 2. Common clinical features. 3. health post management using antiseptic & antibacterial treatment. 4. Indications for surgical treatment. 5. Containment of pathogens in the health post setting. 6. Health education: hygiene, nutrition, medication use.	
Evaluation methods:	Teaching / Learning Activities:	
Written exam, viva, demonstration in models	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Dermatology	Hrs. theory	Hrs. lab
Sub-unit: Fungal infection of the skin	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. List the commonly prevailing superficial fungal infections. 2. Identify the signs and symptoms of each. 3. Identify the classifications of infection. 4. Demonstrate how to make a provisional diagnosis of a fungal infection at the health post by using the KOH smear test. 5. Describe how to manage simple fungal infections using health post resources. 6. Discuss health teaching to reduce the incidence of fungal skin infections. 7. Identify indications for referral to a higher level facility.	1. Superficial fungal infections: tinea infection, pyrirgasis versiculor candide. 2. Tinea corcoris, tinea capitis, tinea crusis tinea pedis. 3. Clinical features and presentations. 4. Antifungals: topical, oral. 5. Preventive measures	
Evaluation methods:	Teaching / Learning Activities:	
Written exam, viva	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings. Lab: Preparation of KOH smear according to written guidelines.	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Dermatology	Hrs. theory	Hrs. lab
Sub-unit: Viral infection of skin	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. Describe commonly prevalent dermatological viral infections. 2. Identify the signs and presentations of warts (molluscum contagiosum). 3. Identify the clinical features of herpes zoster	1. Common viral infections of the skin. 2. Signs and presentation of warts (molluscum contagiosum) & herpes zoster infection. 3. Treatment of uncomplicated warts and herpes zoster Infection.	

infection. 4. Discuss how to manage common viral infections of skin using health post resources. 5. Discuss the importance of early identification and referral of herpetic infection of eye. 6. Describe ways to prevent viral infection of the skin.	4. Preventive measures, early diagnosis and treatment.	
Evaluation methods:	Teaching / Learning Activities:	
Written test, viva	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings, case discussion in clinic.	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Dermatology	Hrs. theory	Hrs. lab
Sub-unit: Parasitic infections of the skin	Hrs. theory 2	Hrs. lab 2
Objectives:	Content:	
1. Define scabies and pediculosis and tell he causative agents. 2. Describe the characteristics of these parasites. 3. Identify the clinical features and presentations of scabies and pediculosis. 4. Describe how to manage simple scabies and pediculosis using health post resources. 5. State the important components of health education to the patients family.	1. Definition and causative agents of lice and scabies. 2. Characteristics of barcoptes scabei and lice. 3. Types of lice infestation, body lice, head lice, pubic lice. 4. Signs and symptoms of scabies. 5. Treatment of scabies pediculosis. 6. Management of infected scabies. 7. Prevention and health education.	
Evaluation methods:	Teaching / Learning Activities:	
Written test, viva	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Dermatology	Hrs. theory	Hrs. lab
Sub-unit: Leprosy	Hrs. theory 2	Hrs. lab 4
Objectives:	Content:	
1. Discuss the incidence and costs of leprosy in Nepal. 2. Describe the etiology and transmission of leprabacillus. 3. Describe the early and late clinical features and differential dignosis of leprosy. 4. Describe the procedure for prepartion of skin smear for leprosy. 5. Explain the classification of leprosy by clinical features. 6. Describe the WHO recommendations for multi-drug therapy. 7. Identify antileprotic medicines and their undesired effects. 8. State the procedure for reporting leprosy cases. 9. State the role of health education in changing the fearful attitudes and unkind behaviors of people in regard to leprosy patients (consider attitudes of patients, patient's family, and society).	1. National policy of Nepal or the prevention and control of leprosy. 2. Classification of leprosy paucibacillery and multibacillery. 3. Clinical prevention of PB and MB. 4. Steps in the process of preparing slides for AFB. 5. Concept of multi drug therapy (MDT), drugs used in MDT and their common side effects. 6. Type I and Type II reactions detection and management. 7. Health education for the patient, family and community.	
Evaluation methods:	Teaching / Learning Activities:	
Written, viva exam; performance observation of slide preparation	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings, lab practice of slide preparation using skill guidelines, discussion, video film, field visit to leprosy hospital	

Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Dermatology	Hrs. theory	Hrs. lab
Sub-unit: Allergic conditions of the skin	Hrs. theory 2	Hrs. lab 3
Objectives:	Content:	
1. Define eczema and dermatitis. 2. Identify the clinical features and presentation of common types of eczema and dermatitis. 3. Describe how to manage common types of eczema at the health post. 4. Discuss the components of health teaching to individuals and community groups to reduce the occurrence of eczema and dermatitis.	1. Definition of eczema and dermatitis. 2. Common types: contact and irritant dermatitis, contact allergic dermatitis, atopic eczema, infective eczema. 3. Signs, symptoms and presentation of eczema. 4. Treatment with topical steroids. 5. Treatment of infected eczema. 6. Principles of counseling and health education.	
Evaluation methods:	Teaching / Learning Activities:	
Written, viva exam; use of atlas.	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings, case demonstration	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Dermatology	Hrs. theory	Hrs. lab
Sub-unit: Urticaria and drug eruptions	Hrs. theory 2	Hrs. lab 4
Objectives: "Students will be able to"	Content:	
1. Define uticaria. 2. Describe the etiologies, clinical features and treatments for uticaria. 3. Differentiate between acute drug eruptions and uticaria. 4. Describe the clinical features of drug eruptions. 5. Describe the management of uticaria at the health post level. 6. Identify indications for referral to a higher level facility. 7. Discuss ways to prevent the occurrence of uticaria and drug eruptions.	1. Definition of acute eruption and drug reaction. 2. Various causes of uticaria 3. Signs and symptoms of uticaria 4. Fixed drug eruptions, 5. Acute drug eruptions following sulphonomide antibiotics. 6. Treatment of drug eruptions: topical and systemic. 7. Identification of cases for referral.	
Evaluation methods:	Teaching / Learning Activities:	
Written, oral exam	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings, case demonstration	
Course: Medicine II	Hrs. theory	Hrs. lab
Unit: Dermatology	Hrs. theory	Hrs. lab
Sub-unit: Minor disorders in dermatology	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. Describe the etiologies and clinical features of: Acne vulgaris Psoriasis Vitiligo Miliaria 2. Discuss how to manage uncomplicated cases in the health post. 3. Identify indications for referral to a higher level facility.	1. Etiologies and clinical features of acne vulagaris, psoriasis, vitiligo and miliaria. 2. Using topical ointments in the management of these disorders. 3. Indications for referral.	
Evaluation methods:	Teaching / Learning Activities:	
Written, oral exam	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings,	
Course: Medicine II	Hrs. theory	Hrs. lab/practical

Unit: Sexually Transmitted Infectious Diseases (STID)	Hrs. theory	Hrs. lab/practical
Sub-unit: Gonorrhea and Chlamydia	Hrs. theory 3	Hrs. lab/practical 2
Objectives:	Content:	
1. Describe the aetiologies of gonorrhea and chlamydia infections. 2. State the modes of transmissions of these infections. 3. Identify the cardinal signs and clinical features of these infections. 4. Demonstrate preparation of urethral smear for gonococci according to guidelines. 5. Identify the signs and symptoms of gonoccocal urethritis. 6. List the complications of gonorrhea and chlamydia. 7. Describe the treatment of gonorrhea and chlamydia in the health post. 8. Discuss the important points of counseling the patient regarding prevention, reporting, and medical treatment. 9. Discuss community health education measures as a means of preventing these disorders.	1. Etiologies, transmission, clinical features of nisseria gonorrohea and chlamydia. 2. Signs and symptoms of gonorrhea in male and female patients. 3. Steps in the process of smear preparation and interpretation. 4. Treatment of gonococcal urethritis, chlamydia and post gonococcal urethritis. 5. Counseling and preventive education for these infections.	
Evaluation methods:	Teaching / Learning Activities:	
Written , viva, performance observation	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings, case discussion, lab preparation and interpretation of smear, review of national guidelines on the treatment of STD.	

Course: Medicine II	Hrs. theory	Hrs. lab/practical
Unit: Sexually Transmitted Infectious Diseases (STID)	Hrs. theory	Hrs. lab/practical
Sub-unit: Syphilis and chancroid	Hrs. theory 3	Hrs. lab/practical 2
Objectives:	Content:	
1. Describe the aetiology of syphilis and chancroid. 2. Describe the modes of transmissions. 3. Identify the pathology, cardinal signs and clinical features of syphilis and chancroid. 4. Demonstrate the procedure and interpretation of the laboratory investigations in differential diagnosis of syphilis and chancroid. 5. List the complications of syphilis and chancroid. 6. Describe the treatment for chancroid and syphilis in health post, according to national guidelines. 7. Describe the important points of counseling to the patient regarding treatment, reporting, and prevention of communicable diseases of the reproductive tract.	1. The etiologies and transmission modes of syphilis and chancroid. 2. Clinical features and pathology of these diseases. 3. Signs and symptoms of primary, secondary and tertiary syphilis. 4. Differential diagnosis of ulcerative lesions. 5. Lab investigations in syphilis. 6. Complications of syphilis and chancroid. 7. National guidelines for treatment of syphilis chancroid. 8. Principles and content of preventive counseling.	
Evaluation methods:	Teaching / Learning Activities:	
Written , viva, performance observation	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings, case discussion, reiew of national guidelines on the treatment of STDs	

	Role play for counseling.

Course: Medicine II	Hrs. theory	Hrs. lab/practical
Unit: Sexually Transmitted Infectious Diseases (STID)	Hrs. theory	Hrs. lab/practical
Sub-unit: HIV / AIDS	Hrs. theory 3	Hrs. lab/practical 2
Objectives:	Content:	
1. Discuss the incidence and epidemiology of HIV/AIDS in Nepal. 2. Describe the aetiology and pathogenesis of HIV/AIDS. 3. State the modes of transmissions of HIV. 4. Describe the meaning and importance of "window period". 5. Describe the clinical presentations at different stages of HIV infection and AIDS. 6. Describe the investigations and interpretations necessary for differential diagnosis. 7. Explain the current recommendations for the use of antiretroviral drugs. 8. Describe the role of health education in the prevention, management, and de-stigmatization of HIV/AIDS. 9. Describe the national policy for the control of HIV/AIDS.	1. Incidence and epidemiology of HIV/AIDS in Nepal 2. Aetiology and pathogenesis of HIV and AIDS. 3. Modes of transmission 4. Window period. 5. Clinical features and presentation. 6. Stages of the infection. 7. Laboratory investigations and interpretation. 8. Current concepts in the use of antiretroviral therapy. 9. Health education in the prevention, management and de-stigmatization of HIV/AIDS. 10. National policy in the control of HIV/AIDS.	
Evaluation methods:	Teaching / Learning Activities:	
Written, viva	Classroom instruction, dermatology atlas, textbook self-study, supervised observation in clinical settings, case discussion, role play for counseling, viewing of video films.	
Course: Medicine II	Hrs. theory Hrs. lab/practical	
Unit: Sexually Transmitted Infectious Diseases (STID)	Hrs. theory Hrs. lab/practical	
Sub-unit: Venereal warts, herpes	Hrs. theory 3 Hrs. lab/practical 2	
Objectives:	Content:	
1. Describe the etiology, transmission and clinical features for venereal warts and venereal herpes. 2. State the complications of venereal warts and venereal herpes. 3. Describe the treatment of these conditions according to national guidelines. 4. Describe how to counsel patients about the management of symptoms and prevention of spread of these infections.	1. Etiologies, transmission, clinical features, complications, treatments of venereal warts and herpes. 2. Principles and content of health education for these infections.	
Evaluation methods:	Teaching / Learning Activities:	
Written examinations, viva	Classroom instruction, supervised field practice/clinical practice, textbook self study, national guidelines on treatment of STDs.	

Course: **Surgery II – Otorhinolaryngology (ENT)**

Hours Theory: 40
Hours Practical: 45
Assessment Marks: **30 (ear=10 marks, nose=10 marks, throat=10 marks)**

Course Description
This course provides a basic foundation in the assessment and management of common conditions of the ear, nose and throat. The student learns to examine these structures and to identify abnormal findings. In addition, this course prepares the student to manage the uncomplicated condition with health post resources or refer cases which require expert attention.

Course Objectives
On completion of the curse the student will be able to:

1. Perform a complete history taking regarding the functions, clinical features and symptoms of the ear, nose and throat.
2. Conduct a basic physical exam of the ear, nose and throat and identify abnormalities.
3. Detect hearing impairment in children and adults.
4. Manage common and uncomplicated conditions of the ear, nose and throat including:
    a. epistaxis
    b. foreign body removal
    c. cerumen removal
    d. middle or external ear infections
    e. adenitis and tonsillitis
5. Identify indications for referral of cases requiring expert management.
6. Provide community education to promote ear, nose and throat safety, early diagnosis and treatment of ear, nose and throat conditions.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended Texts:

Dhingra, P.L., Diseases of the Ear, Nose and Throat. B.I. Churchill Livingston, New Delhi, India. Current edition.

Magbool, M., Textbook of Ear Nose and Throat Diseases. Jaypee Bros. India. Current edition.

Hall & Coleman, Diseases of the Nose, Throat and Ear. Churchill Livingston, Current edition.

Course : Sugery II	Hrs. theory Hrs. lab
Unit: Otorhinolaryngology	Hrs. theory Hrs. lab
Sub-unit: Anatomy and assessment of the ear	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Identify the anatomical features of the external, middle and inner ear. 2. Describe the function and normal physiology of each part. 3. Demonstrate how to perform examination of the external ear using an otoscope and tuning fork. 4. List the important components of the history taking of ear conditions. 5. Discuss the symptoms and signs of common ear conditions. 6. Discuss the assessment and implications of cholesteatoma with regard to middle ear conditions.	1. Anatomy and physiology of the ear. 2. Components of history taking related to ear conditions. 3. Technique and procedure and equipment for ear examination. 4. Clinical features of common ear conditions.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models
Course : Sugery II	Hrs. theory Hrs. lab
Unit: Otorhinolaryngology	Hrs. theory Hrs. lab
Sub-unit: Infections of the ear	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Identify the causes, contributing factors and pathology of common external and internal ear infections. 2. Describe the clinical features of ear infections for adults and children: a. acute otitis media b. otitis media with effusion c. barotraumas d. chronic suppurative otitis media 3. Identify investigations for differential diagnosis of ear infections. 4. Describe the management and medical treatments for ear infections. 5. Identify the clinical features which indicate the complication of mastoiditis. 6. Discuss indications for referral to a higher level facility. 7. Describe counseling for parents of children with chronic ear infections	1. Etiologies, pathogenesis and conditions related to ear infections. 2. Signs and symptoms of ear infections among children and adults. 3. Differential diagnosis and appropriate treatment. 4. Indications of complications. 5. Education efforts for promotion of ear health.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models
Course : Sugery II	Hrs. theory Hrs. lab
Unit: Otorhinolaryngology	Hrs. theory Hrs. lab
Sub-unit: Hearing impairment	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:

1. Demonstrate how to assess the hearing acuity of an infant, child or adult. 2. Identify causes of hearing impairment. 3. Describe the procedure for removal of cerumen from the external ear. 4. Discuss how deafness contributes to communication failure, and strategies and resources for promoting communication with deaf persons. 5. Discuss the important components of a health education program for prevention, early diagnosis and treatment for hearing loss.	1. Procedures for hearing assessments. 2. Pathophysiology and etiologies of hearing loss. 3. Procedure for safe cerumen removal using aural syringe and ring probe. 4. Magnitude of disability from deafness 5. Communication methods for deaf persons. 6. Components of community education aimed toward prevention of hearing loss.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, field visit to school for deaf persons
Course : Sugery II	Hrs. theory Hrs. lab
Unit: Otorhinolaryngology	Hrs. theory Hrs. lab
Sub-unit: Ear trauma	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Identify common causes of trauma to the pina, external ear canal and middle ear. 2. Discuss management of ear trauma. 3. Describe the procedure for removal of a foreign body from the ear canal. 4. Describe procedure for transfer of a person with ear trauma for higher level care.	1. Causes and clinical features of ear trauma. 2. Management of ear trauma. 3. Removal of foreign body from the ear canal. 4. Indications for referral.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models
Course : Sugery II	Hrs. theory Hrs. lab
Unit: Otorhinolaryngology	Hrs. theory Hrs. lab
Sub-unit: Anatomy and assessment of the nose	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Identify the anatomical features of the nose. 2. Describe the function and normal physiology of each part. 3. Demonstrate how to perform examination of the nose using a nasal specula, post rhinoscopic mirror. 4. Discuss the symptoms and signs of common nasal conditions: a. deviated seprum b. rhinosporidiosis c. atrophic rhinitis d. sinusitis e. nasal polyps 5. List the important components of the history taking of nasal conditions. 6. Identify indications for referral to a specialty facility.	1. Anatomy and physiology of the nose, sinuses and related anatomical parts. 2. Technique and procedure and equipment for nasal and sinus examination. 3. Clinical features of common nose and sinus conditions. 4. Components of history taking related to nasal and sinus conditions. 5. Assessment of conditions requiring referral.
Evaluation methods: written and viva exams,	Teaching / Learning Activities/Resources: classroom

performance observation in real or simulated settings.	instruction and demonstration, return demonstration, models
Course : Sugery II	Hrs. theory Hrs. lab
Unit: Otorhinolaryngology	Hrs. theory Hrs. lab
Sub-unit: Allergic rhinitis and nasal infections	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Identify the causes, contributing factors and pathology of common nose and sinus infections. 2. Describe the investigations for differentiating between allergic rhinitis and infection. 3. Describe the clinical features of allergic rhinitis, nasal and sinus infections for adults and children: a. acute and chronic sinusitis b. atrophic rhinitis c. rhinosporidiosis d. allergic rhinitis 4. Describe the investigations for differentiating between allergic rhinitis and infection 5. Correlate sinusitis with middle ear infections. 6. Describe the management and medical treatments for allergic rhinitis, and for nasal and sinus infections. 7. Discuss indications for referral to a higher level facility. 8. Describe counseling for persons with chronic infections or allergic rhinitis for prevention or control of their conditions.	1. Etiologies, pathogenesis and conditions related to allergic rhinitis and infections of the nose and sinuses. 2. Signs and symptoms of allergies and infections among children and adults. 3. Differential diagnosis and appropriate treatment. 4. Pathology and indications of complications. 5. Education efforts for prevention of allergic reactions and chronic sinusitis.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models

Course : Sugery II	Hrs. theory Hrs. lab
Unit: Otorhinolaryngology	Hrs. theory Hrs. lab
Sub-unit: Nasal trauma	Hrs. theory 2 Hrs. lab 3
Objectives:	Content:
1. Describe the various types of commonly seen nasal injuries. a. cartilage fracture b. foreign body c. penetration would 2. Describe common causes and management of epistaxis. 3. Describe the procedure for removal of a foreign body from the nose passages. 4. Describe the clinical features and management for deviated nasal septum. 5. Identify indications for referral of a case with nasal trauma.	1. Common nasal injuries and their management. 2. Removal of foreign body. 3. Indications for referral.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models
Course : Sugery II	Hrs. theory Hrs. lab
Unit: Otorhinolaryngology	Hrs. theory Hrs. lab
Sub-unit: Anatomy and assessment of larynx & pharynx	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Identify the anatomical features of the larynx, pharynx and related anatomy. 2. Describe the function and normal physiology of each part. 3. Demonstrate how to perform examination of the larynx, pharynx and related parts using a head mirror, spatula, and mirror for indirect laryngoscopy. 4. Discuss the symptoms and signs of common throat conditions. 5. List the important components of the history taking of throat conditions	1. Anatomy and physiology of the throat. 2. Technique and procedure and equipment for throat examination. 3. Clinical features of common throat conditions. 4. Components of history taking related to ear conditions.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models

Course : Sugery II	Hrs. theory	Hrs. lab
Unit: Otorhinolaryngology	Hrs. theory	Hrs. lab
Sub-unit: Infections of the throat	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. Identify the etiologies and clinical features of acute and chronic tonsillitis, epiglottitis, pharyngitis and laryngitis. 2. Discuss investigations for differential diagnosis of these infections. 3. Describe the management of throat infections. 4. Discuss the relationship between poor general health and nutrition and recurrent throat infections. 5. Describe the complications of throat infections. 6. Identify indications for referral to a higher level facility. 7. Describe the important components of a community education program aimed at reducing the incidence and complications of throat infections.	1. Clinical features of throat infections due to bacteria, viruses, fungi. 2. Differential diagnosis and management of throat infections. 3. Complications of throat infections. 4. Preventive measures: a. early diagnosis and screening b. general health and nutrition for healthy immune response c. avoidance of irritants 5. Indications for referral.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models	

Course : Sugery II	Hrs. theory	Hrs. lab
Unit: Otorhinolaryngology	Hrs. theory	Hrs. lab
Sub-unit: Laryngeal neoplasm	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. Identify the clinical features of laryngeal neoplasm. 2. List the contributing factors and risk factors for acquiring laryngeal neoplasm. 3. Describe the complications of laryngeal neoplasm. 4. Describe the important components of community education in prevention of laryngeal neoplasm.	1. Etiology and pathology of laryngeal neoplasm. 2. Risk factors and preventive education: a. tobacco use b. hereditary c. cooking smoke d. occupational hazards e. environmental pollution 3. Complications of laryngeal neoplasm.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models	

Course: Surgery II – Dentistry

Hours Theory: 40
Hours Practical: 45
Assessment Marks: 35

Course Description

This course prepares the student to perform a basic assessment of the teeth and oral cavity and their functions, and to identify and treat common uncomplicated conditions that can be managed in Health Post resources. Students will learn to identify cases of periodontal disease, caries, infections and lesions of the mouth, and to recognize conditions requiring referral for expert management. Students will be able to perform simple extractions of loose teeth using anaesthesia. Attention is given to preventive education of the community members, and early diagnosis and treatment for dental and oral cavity conditions.

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

1. Perform a basic history taking and examination of the teeth and mouth structures.
2. Conduct simple extraction of loose teeth using ansaethesia.
3. Manage common uncomplicated mouth conditions.
4. Identify persons who exhibit signs of cancer of the mouth and advise for expert management.
5. Manage simple infections of the gums and mouth using health post resources.
6. Identify indications for referral to specialty facilities.
7. Promote dental health through community education programs.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Reference Texts

Course: Surgery II	Hrs. theory Hrs. lab
Unit: Dentistry	Hrs. theory Hrs. lab
Sub-unit: 1 Introduction	Hrs. theory 2 Hrs. lab 2
Objectives:	Content:
1. Define dentistry, it's types and branches. 2. State the fundamental principles of dental care. 3. Enumerate the chronology of eruption of deciduous and permanent teeth. 4. Describe the anatomy of teeth, including adjacent tissues, blood supply and nerve supply. 5. Describe the functions of the teeth, muscles of mastication and mandibular movement.	1. Definition and composition of dentistry. 2. Promotion of dental health, prevention of dental disease, patient rights for safe, caring and competent treatment. 3. Normal eruption of deciduous and permanent teeth. 4. Anatomical characteristics of teeth and related parts. 5. Functional descriptions of mastication.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Dentistry	Hrs. theory Hrs. lab
Sub-unit: 2 Examination of mouth	Hrs. theory 1 Hrs. lab 3
Objectives:	Content:
1. Describe the principles and procedures for maintaining asepsis during dental procedures. 2. Describe measures to prevent the spread of HIV AIDs. 3. Name and describe the basic instruments for dental care. 4. State the uses/functions and care of each dental instrument. 5. Describe the procedure for examination of the oral cavity. 6. Identify common normal and abnormal findings of the oral exam. 7. Describe procedures for documentation of the oral exam. 8. Discuss ways to modify procedures when the patient is a small child or unable to cooperate.	1. Aseptic measures for dentistry. 2. Precautions for preventing infection by blood borne diseases. 3. Dental instrument use and care. 4. Procedure of oral examination. 5. Interpretation of finding of oral examination. 6. Procedures for documentation of dental assessment and care. 7. Methods to adapt to care of patients unable to cooperate.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Dentistry	Hrs. theory Hrs. lab
Sub-unit: 3 Dental health	Hrs. theory 1 Hrs. lab 3
Objectives:	Content:
1. Discuss the importance of maintaining oral hygiene to prevent gum disease and tooth loss. 2. Discuss the health risks related to gum disease and tooth loss. 3. Discuss the relationship of nutrition and dental health. 4. Discuss the relationship between use of tobacco and mouth cancer. 5. Describe the recommended technique and frequency for tooth brushing and flossing.	1. Relationship of dental hygiene and dental health. 2. Health risks of poor dentition and gum disease. 3. Importance of nutrition for health teeth. 4. Factors contributing to oral cancer. 5. Procedure for tooth brushing and flossing. 6. Principles of teaching/learning that promote good oral hygiene behaviors.

6. Discuss ways to promote good dental hygiene through health education.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Dentistry	Hrs. theory Hrs. lab
Sub-unit: 4 Plaque, calculus and caries	Hrs. theory 3 Hrs. lab 4
Objectives:	Content:
1. Describe the causes of dental plaque and calculus. 2. Discuss the classification, composition and sequelae of dental plaque and calculus. 3. Discuss ways to prevent or control dental plaque and calculus. 4. Describe the etiologies of dental caries. 5. Describe the clinical features, complications and prevention of dental caries. 6. Describe indications for referral of patients with dental caries for expert treatment.	1. Etiologic theories of plaque and calculus formation. 2. Classification, composition and sequelae of dental plaque and calculus. 3. Prevention of plaque and calculus. 4. Acidogenic and proteolytic theories of dental caries formation. 5. Clinical features, complications and prevention of dental caries formation. 6. Indications for management by referral.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Dentistry	Hrs. theory Hrs. lab
Sub-unit: 5 Diseases of the gums	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Describe the causes, signs and symptoms of the following: a. periodonitis b. gingivitis c. peridental pockets and abscess d. pericoronitis e. pulpotos f. osteomyelitis 2. Describe the treatments that can be done for these conditions at the health post level. 3. Discuss the complications of untreated gum disease. 4. Identify indications for referral of persons with these conditions. 5. Describe health education measures to prevent these conditions.	1. Etiologies, clinical features of common gum diseases. 2. Basic treatment for the common gum diseases. 3. Complications of gum disease. 4. Indications for referral of gum diseases. 5. Health education to prevent gum diseases.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts

Course: Surgery II	Hrs. theory Hrs. lab
Unit: Dentistry	Hrs. theory Hrs. lab
Sub-unit: 6 Cancer of the mouth	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. State the theories of causation of oral cancers. 2. Describe the signs and symptoms of pre-cancerous and cancerous lesions of the	1. Etiologies and clinical features of oral cancers. 2. Specialized treatments for oral cancer. 3. Prevention and early detection of oral cancer.

mouth. 3. Discuss the importance of follow up care by a cancer specialist if suspicious lesions are present. 4. Describe health education aimed at prevention and early diagnosis of oral cancer.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Dentistry	Hrs. theory Hrs. lab
Sub-unit: 7 Tempomandibular disorders	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Describe the signs and symptoms of dislocation of the tempomandibular joint (TMJ). 2. Discuss management of TMJ dislocation, using Health Post resources. 3. Differentiate trismus due to dental causes from other causes. 4. Identify indications for referral for expert management of these disorders.	1. Etiology and management of dislocation of tempomandibular joint. 2. Etiologies and differential diagnosis of trismus. 3. Management of trismus and TMJ dislocation.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Dentistry	Hrs. theory Hrs. lab
Sub-unit: 8 Tooth extraction	Hrs. theory 2 Hrs. lab 3
Objectives:	Content:
1. Describe indications, contraindications and complications of tooth extraction. 2. Describe the process of removal of loose teeth. 3. Describe administration and management of local anaesthesia for tooth extraction. 4. State the pre-extraction patient instructions for tooth extraction. 5. Identify post operative instructions for the patient having tooth extraction. 6. Identify the indications for follow up by the health post staff or by a dental expert.	1. Indications, c0ntraindications, and complications of tooth extraction. 2. Procedure for tooth extraction. 3. Procedure for use of anaesthesia. 4. Patient instructions before and after tooth extraction. 5. Indications for follow up care, by Health Post or dental expert.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Dentistry	Hrs. theory Hrs. lab
Sub-unit: 9 Dental prosthesis	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Differentiate the common dental prosthetics. 2. Summarize the function and care of the common dental prosthetics.	1. Function and styles of common dental prosthetics. 2. Care of dental prosthetics.

3. Discuss complications related to the use of dental prosthetics. 4. Discuss patient education to prevent complications related to the use of dental prosthetics.	3. Complications fro use of dental prosthetics. 4. Prevention of complications from dental prosthetics.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Dentistry	Hrs. theory Hrs. lab
Sub-unit: 10 Dental occlusion	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Describe the common types of dental occlusion. 2. Explain how dental occlusion can interfere with dental function. 3. Identify indications for referral of persons with severe dental occlusion. 4. Identify sources of financial resources for assisting with dental work.	1. Clinical features of various forms of dental occlusion. 2. Effects of dental occlusion. 3. Management and referral of persons with dental occlusion.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts

Course: Surgery II – Ophthalmology

Hours Theory: 40
Hours Practical: 45
Assessment Marks: 35

Course Description

This course prepares the student to perform a basic assessment of the eye and it's function, and to identify and treat common uncomplicated conditions which can be managed with Health Post resources. Students will learn to identify cases of refractive errors, to manage cases of injury or foreign body, and to recognize conditions requiring referral for expert management. Attention is given to preventive education of the community members, and early diagnosis and treatment for eye diseases.

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

1. Perform a basic history taking and examination of the eye structures.
2. Conduct a visual acuity test for an adult or child.
3. Manage common uncomplicated eye conditions.
4. Identify persons at risk for complications of eye disease and advise for expert management.
5. Manage eye trauma using health post resources.
6. Identify indications for referral to specialty facilities.
7. Promote eye health through community education programs.

Minimum Standards:

Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Reference Texts

Hatterjee's Handbook of Ophthalmology. CBS Publishers, India. Current edition.

Kanski, J.J., Clinical Ophthalmology. B.H., International edition. Current edition.

Khurana, A.K., Ophthalmaology. New Age International, India. Current edition.

Course: Surgery II	Hrs. theory Hrs. lab
Unit: Ophthalmology	Hrs. theory Hrs. lab
Sub-unit: Anatomy of the eye	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Describe the functions of the eye. 2. Identify the anatomical features of the eye. 3. Identify diseases of the eye which are prevalent in Nepal. 4. Describe how nutrition can contribute to eye disease.	1. Anatomy and physiology of the eye and surrounding parts. 2. Common disorders of the eye. 3. Nutritional factors in eye disease.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Ophthalmology	Hrs. theory Hrs. lab
Sub-unit: eye examination	Hrs. theory 1 Hrs. lab 4
Objectives:	Content:
1. Describe the procedure for evaluating visual acuity in an adult, child or infant. 2. Discuss the appropriate precautions to take to avoid bringing contamination into the eye during the examination process. 3. Demonstrate the procedure for performing a visual examination of the external componants of the eye. 4. Describe the normal and abnormal findings of a visual inspection of the eye.	1. Procedure for safely inspecting the exterior eye and conjunctivia. 2. Procedures to follow for performing a visual acuity exam. 3. Clinical features of the normal eye and signs or symptoms of disease.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Ophthalmology	Hrs. theory Hrs. lab
Sub-unit: Lid diseases	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Identify common lid diseases: chalazian, stye, blephitis, entropion, ectropion, and trichiasis. 2. Describe the etiologies and pathology of these disorders. 3. Describe the clinical features, investigations and differential diagnosis for each of these diseases. 4. Discuss the kinds of complications which can occur from these diseases, in the absence of treatment. 5. Identify the recommended treatment for each of these diseases. 6. Discuss the prevention of these diseases through community education. 7. Identify indications for referral to a higher facility.	1. Etiologies and pathology, clinical features, investigations and differential diagnosis for common lid diseases: chalazian, stye, blephitis, entropion, ectropion, and trichiasis. 2. Recommended treatment, complications, indications for referral. 3. Prevention.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab

Unit: Ophthalmology	Hrs. theory Hrs. lab
Sub-unit: Conjunctivitis	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Define conjunctivitis. 2. Describe the signs and symptoms of conjunctivitis. 3. Identify the etiologies and pathology of conjunctivitis. 4. Identify examples of bacterial, viral, and allergic causes for conjunctivitis. 5. Tell how to differentiate between contagious and non-contagious conjunctivitis. 6. Discuss procedures to prevent the spread of infective conjunctivitis in the health post and to members in the family or community.	1. Etiologies, pathology, clinical features, treatments of conjunctivitis. 2. Infection control of contagious conjunctivitis. 3. Differential diagnosis.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts

Course: Surgery II	Hrs. theory	Hrs. lab
Unit: Ophthalmology	Hrs. theory	Hrs. lab
Sub-unit: Trachoma	Hrs. theory 1	Hrs. lab 2
Objectives:	Content:	
1. Define the condition trachoma. 2. Identify the etiology and pathology of trachoma. 3. Describe the clinical features and differential diagnosis. 4. Differentiate between early and late stage symptoms and signs of trachoma. 5. Discuss prevention and early diagnosis of trachoma. 6. Identify the recommended treatment for trachoma. 7. Identify indications for referral to a higher level facility.	1. Etiology, pathology, clinical features, treatment and prevention of trachoma.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts	

Course: Surgery II	Hrs. theory	Hrs. lab
Unit: Ophthalmology	Hrs. theory	Hrs. lab
Sub-unit: Xeropthalmia	Hrs. theory 1	Hrs. lab 2
Objectives:	Content:	
1. Define the condition of xeropthalmia. 2. DIscuss the contributing factors which cause xeropthalmia. 3. Discuss the WHO classification for this disease. 4. Identify the clinical features and differential diagnosis. 5. Explain the age related factor of xeropthalmia. 6. Discuss the management and prevention of this disease.	1. Definition, causes, classification and symptoms of xeropthalmia. 2. Treatment and prevention of xeropthalmia.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts	

Course: Surgery II	Hrs. theory	Hrs. lab
Unit: Ophthalmology	Hrs. theory	Hrs. lab
Sub-unit: Visual Acuity	Hrs. theory 1	Hrs. lab 2
Objectives:	Content:	
1. Describe the process of vision reception. 2. Discuss the importance of vision in maintaining a safe and productive life. 3. Describe the reasons for regular visual acuity examinations.	1. Physiology of vision, principles of eye care, rationale for prevention of eye disorders.	
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts	

Course: Surgery II	Hrs. theory	Hrs. lab
Unit: Ophthalmology	Hrs. theory	Hrs. lab
Sub-unit: Corneal ulceration	Hrs. theory 1	Hrs. lab 2
Objectives:	Content:	

1. Define the condition of corneal ulceration. 2. Discuss the causes of corneal ulceration. 3. Identify the clinical features of this condition. 4. Describe the treatment for simple corneal ulcers. 5. Identify indications for referral to a higher level facility. 6. Tell how community education measures can reduce the incidence of corneal ulcers.	1. Etiologies, pathology, clinical features, treatment and prevention of corneal ulcers.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Ophthalmology	Hrs. theory Hrs. lab
Sub-unit: Cataract	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Discuss the condition and incidence of cataracts. 2. Identify the etiologies and pathology of cataracts. 3. Describe the clinical features described by the patient and observed by the examiner. 4. Discuss the treatment of cataract symptoms and surgical correction. 5. Describe community education measures for prevention of cataracts among the population.	1. Etiology, pathology, clinical features, treatment and prevention of cataracts.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Ophthalmology	Hrs. theory Hrs. lab
Sub-unit: Uvities and Iridocyclitis	Hrs. theory 2 Hrs. lab 2
Objectives:	Content:
1. Define the conditions of uvities and iridocyclitis 2 Discuss the causes of uvities and iridocyclitis 3. Identify the clinical features of these conditions. 4. Describe the treatment for uvities and iridocyclitis. 5. Identify indications for referral to a higher level facility.	1 Causes and clinical feaatures, treatment and referral for uvities and iridocyclitis.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts

Course: Surgery II	Hrs. theory Hrs. lab
Unit: Ophthalmology	Hrs. theory Hrs. lab
Sub-unit: Glaucoma	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Describe the incidence, causes and pathology of glaucoma. 2. Discuss the complication of glaucoma. 3. Describe the recommended treatments for this condition. 4. Discuss ways to achieve early detection of glaucoma. 5. Tell how the Health Post Incharge can provide glaucoma screening for the community.	1. Etiology, pathology, clinical features, complications, treatment and prevention of glaucoma.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Ophthalmology	Hrs. theory Hrs. lab
Sub-unit: Pterygium	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Describre the incidence and clinical features of pterygium. 2. Identify the etiology, clinical features and treatment for this condition. 3. Discuss teaching for the management of pterygium. 4. Identify indications for referral to a higher level facility.	1. incidence and clinical features of pterygium. 2. etiology, clinical features and treatment for this condition.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts
Course: Surgery II	Hrs. theory Hrs. lab
Unit: Ophthalmology	Hrs. theory Hrs. lab
Sub-unit: Refractive errors	Hrs. theory 1 Hrs. lab 2
Objectives:	Content:
1. Define the types of refractive errors: myopia, hypermetropia, astigmatism. 2. Identify the clinical features of refractive errors. 3. Discuss the complications of non treatment of refractive errors. 4. Describe appropriate management for refractive errors. 5. Describe community screening measures for visual examinations.	1. Types of refractive errors: myopia, hypermetropia, astigmatism. 2. Clinical features, complications, management and prevention.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts

Course: Surgery II	Hrs. theory Hrs. lab
Unit: Ophthalmology	Hrs. theory Hrs. lab
Sub-unit: Removal of foreign body	Hrs. theory 1 Hrs. lab 2
Objectives: Students will be able to	Content:
1. Describe the types of foreign body which are commonly found in the conjunctiva of the eye. 2. Describe how to remove a foreign body from the conjunctiva over the sclera, beneath the lower lid or upper lid. 3. Explain why the health post incharge should refer cases of foreign body on the pupil or when the eyeball has been penetrated. 4. Describe how to rinse the eye when chemical trauma has occurred. 5. Discuss measures for protecting the eye from injury by wearing protective eyewear.	1. Principles and procedures for removal of foreign body. 2. Irrigation of the eye following chemical trauma. 3. Preventive health education. 4. Indications for referral.
Evaluation methods: written and viva exams, performance observation in real or simulated settings.	Teaching / Learning Activities/Resources: classroom instruction and demonstration, return demonstration, models, charts

Course: **Health Management**

Hours Theory: **110**
Hours Practical: **30**
Assessment Marks: **100**

Course Description:

This course introduces the student to concepts about management of health care services, as it applies to the operations of a Health Post or Primary Health Care Center. This course teaches about the health care system in Nepal, fundamental principles of management, national health policy and health programmes, health manpower in Nepal, health related organizations and agencies, logistics management, leadership and personnel management, health issues and professional practice. The student will acquire the necessary knowledge and skill to deal effectively with the diverse challenges of health service management.

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

1. Identify health care systems in Nepal.
2. Explain the theories, principles and components of health management.
3. Describe the national health policy, tell its philosophy, and identify its strengths and weaknesses.
4. Explain various health programmes of the Department of Health Services.
5. Apply the principles of logistics management and quality assurance to health post management.
6. Apply the principles of supervision and leadership to management of Health Post staff.
7. Manage a health post in the real setting.
8. Identify the different levels of health manpower in Nepal and describe the functions of the Health Manpower Development Institute.
9. Explain the goals and functions of the health related governmental organizations, non-governmental organizations (NGO's), international non-governmental organizations (INGO's) and international agencies which serve in Nepal.
10. Identify current national and international health issues.
11. Explain the code of ethics of the Health Assistant.

Minimum Standards:
Students must achieve a minimum of 40% accuracy in theory, 50% accuracy in practical.

Recommended Texts:

1. Macmohan, R. et al. On Being In Charge, A guide to Management in Primary Health Care. WHO. Current edition.

2. Dixit, H. The Quest for Health. Educational Enterprise, (P) Ltd., Kathmandu. 1999.

3. Pradhananga, Y. Health Management. Council for Technical Education and Vocational Training, Bhaktapur, Nepal. 2055B.S.

4. Kamala, T. & Bishnu, R. Leadership and Management for Nurses. Health Learning Materials Centre, Tribuvan University, Kathmandu. 1990.

Reference Texts:

1. Shrestha, B.M. Basic Principles of Management. Akshyulak Publication, Nepal. 2039B.S.

2. Modern Management Methods and the Organization of Health Services, Public Health Papers #55. WHO. 1974.

3. Inventory Control and Basic Logistics Procedure Manual on Store Management for PHC/HP and SHP Personnel. HMG/JSI. 2054B.S.

5. Park, K. Textbook of Preventive and Social Medicine. Bhandrasidas Bhanot, Jabalpur, India. 2000.

6. Health Logistics Procedure Manual. NHTC/LMD/USAID JSI, Nepal 2057.

7. Health Statistics and EPI Cold Chain Management Procedure Manual. NHTC/LMD/USAID JSI, Nepal 2057.

Course: Health Management	Hrs. theory	Hrs. lab
Unit:1. Health care system in Nepal	Hrs. theory 4	Hrs. lab
Sub-unit:	Hrs. theory 4	Hrs. lab
Objectives:	Content:	
1. Define "health care system" and tell the purpose and characteristics of a health care system. 2. Describe the history of the development of health services in Nepal. 3. Describe ayurvedic, homeopathic and allopathic approaches to health care. 4. Identify situations when the most appropriate type of treatment might be ayurvedic care, homeopathic care, allopathic care, or a combination of these.	1. The definition, characteristics, and purpose of a health care system. 2. History of health system in Nepal. 3. Health care approaches: • Ayurvedic • Homeopathic • Allopathic • Naturopathy, Occupuncture 4. Philosophy, origin, strengths and weaknesses of these health care approaches.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," classroom instruction	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 2 Fundamentals of Health Management	Hrs. theory 26	Hrs. lab
Sub-unit: Introduction to Health Management	Hrs. theory 1	Hrs. lab
Objectives:	Content:	
1. Define management and health management 2. Differentiate between "set[n]" management & administration. 3. Describe the function of management.	1. The definitions of management & health management. 2. Principles of management. 3. Concepts of management versus administration. 4. Function of management in the Health Post context.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," - Instructor led discussion, reference study assignment	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 2 Fundamentals of Health Management	Hrs. theory	Hrs. lab
Sub-unit: Planning of Health service	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Describe the process and purpose of planning. 2. Describe different types of planning. 3. Explain the planning cycle. 4. Describe the steps of planning. 5. Explain the health planning system in Nepal.	1. Definition of planning. 2. Types of planning. 3. Planning cycle (PIE cycle) 4. Planning steps. 5. Current health planning system of Nepal.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," classroom instruction	
Course: Health Management	Hrs. theory	Hrs. lab
Unit:2 Fundamentals of Health Management	Hrs. theory	Hrs. lab
Sub-unit: Organizing of Health Service	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Describe the process and purpose of organization. 2. Identify different types of health service organizations. 3. Explain the different types health service in Nepal.	1. Definition of organization. 2. Types of organizations and their organograms. 3. Organograms of MoH, DoHS, PHCC, HP, SHP.	
Examination methods: written exams (short answer	Teaching / Learning Activities: textbook self	

questions)	study - "On Being in Charge," Classroom instruction, field visit	
Course: Health Management	Hrs. theory	Hrs. lab
Unit:2 Fundamentals of Health Management	Hrs. theory	Hrs. lab
Sub-unit: Principles of leadership	Hrs. theory 4	Hrs. lab
Objectives:	Content:	
1. Discuss the characteristics and advantages/disadvantages of each of the leadership styles: - autocratic - democratic - laissez faire 2. Explain why an autocratic leadership style has historically been most commonly used in Nepal. 3. Discuss ways that the Health Post Manager builds mutual respect and trust with the health post staff. 4. Describe indications that low motivation exists among a health post staff. 5. Discuss strategies to increase staff motivation by applying theories of motivation. 6. Apply the theories of change to a situation of high absenteeism among health post staff. 7. Discuss the importance of having written policy for health post staff.	1. Characteristics, benefits and disadvantages of styles of leadership, circumstances when each style is most appropriate. 2. Relationship between chosen leadership styles and cultural history (feudalism, recent development of representative government) 3. Responsibility of the leader as role model; ways to demonstrate consistency, transparency, integrity and fairness. 4. Characteristics and remedies for low motivation of workers. 5. Theories of motivation and change: Maslow, Lewin. 6. Principles of management by policy.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, discussion, field visit	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 2 Fundamentals of Health Management	Hrs. theory	Hrs. lab
Sub-unit: Staffing	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. State the purpose of using a job description. 2. Identify the elements of a job description. 3. Identify the staffing patterns of different health institutions Nepal 4. Describe the educational preparation or specialized training of each member of the health post staff. 5. Tell why you support or disagree with the statement, "experienced staff are experts in their role."	1. Definition and purpose of staffing. 2. Essential elements of a job description. 3. Process of staffing. 4. Staffing patterns of a Primary Health Care Center, Health Post, and Sub Health Post.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, field visit	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 2 Fundamentals of Health Management	Hrs. theory	Hrs. lab
Sub-unit: Directing	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Describe the meaning and purpose of delegation of authority. 2. Discuss the relationship between delegation and authority. 3. Identify the process and limits of delegation. 4. Define supervision and describe types of supervision and their components.	1. Delegation of authority and its process.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, field visit	

Course: Health Management	Hrs. theory	Hrs. lab
Unit:2. Fundamentals of Health Management	Hrs. theory	Hrs. lab
Sub-unit: Supervision	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Describe the objectives and methods of supervision. 2. Identify different types of tools use in supervision. 3. Describe the process of supervision. 4. Explain the purpose and process of monitoring by a supervisor. 5. Describe methods of monitoring. 6. Identify steps of a monitoring program. 7. Describe the purpose and processes of different types of evaluation by a manager.	1. Supervision, its component tools, methods, objectives and process. 2. Monitoring and its methods. 3. Tools of monitoring. 4. Purposes and types of evaluation. .	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge", Classroom instruction, field visit	

Course: Health Management	Hrs. theory	Hrs. lab
Unit: 2 Fundamentals of Health Management	Hrs. theory	Hrs. lab _____
Sub-unit: Coordination	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Define coordination in terms of health management. 2. Identify different types of coordination. 3. Identify the techniques and processes of coordination. 4. Explain why different types of coordination are used at the Health Post level.	1. Definition of coordination. 2. External and internal coordinating. 3. Techniques and processes of coordination. 4. Selecting styles of coordination in Health Post level.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, field visit	

Course: Health Management	Hrs. theory	Hrs. lab
Unit: 2 Fundamentals of Health Management	Hrs. theory	Hrs. lab
Sub-unit: Disaster coordination	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Discuss historical events and potential for future disasters from these causes: earthquake, flooding, nuclear explosion. 2. Identify the health risks created by each of these disasters. 3. Describe the policies and procedures developed by the earthquake preparedness committee in Kathmandu. 4. Identify the major points of the national guidelines for disaster management. 5. Identify the civil organizations of a community that would have chief responsibility for preserving community welfare in a disaster situation. 6. Describe the role of the health post manager in coordinating a disaster preparedness response.	1. Historical events and potential for future disasters from earthquakes, flooding and nuclear explosion. 2. Definition, concepts and types of disasters. 3. Risks to public health created by these disasters. 4. National activities for earthquake, landslide, wildfire storms. preparedness. 5. Disaster management cycle. 6. National guidelines for the management of major flooding or nuclear fallout. 7. Coordination of community resources and leadership responsibility for disaster management. 8. Composition, role and mobilization mechanism of Rapid response team in disastrous preparedness and response activities with special focus on role of health post incharge.	
Examination methods: written exams (short answer	Teaching / Learning Activities: textbook self	

questions)	study - “On Being in Charge,” Classroom instruction, field visit

Course: Health Management	Hrs. Theory	Hrs. Lab
Unit: 2 Fundamentals of Health Management	Hrs. Theory	Hrs. Lab
Sub-unit: Reporting	Hrs. Theory 2	Hrs. Lab
Objectives:	Content:	
1. Discuss the purpose of health post reporting. 2. Describe the qualities of an effective Health Post report. 3. Prepare a simulated health post report from a case example. 4. Describe the process of health reporting in Nepal.	1. Definition and purpose of reporting. 2. Techniques and characteristics of report writing: complete, accurate, sequential, timely, understandable. 3. Reporting process of Nepal's health delivery system.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, field visit	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 2 Fundamentals of Health Management	Hrs. theory	Hrs. lab
Sub-unit: Budgeting	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Discuss the purpose for using a budget in health management. 2. Identify and compare different types of budgets.	1. Budgeting functions 2. Types of budgets and characteristics of various budgets. 3. Features of the existing health budgeting system of Nepal.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: classroom instruction, textbook self study - "On Being in Charge,"	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 3 Health Post Management	Hrs. theory 29	Hrs. lab
Sub-unit: Training	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. State the purpose and definition of training. 2. Describe different types of training and tell the advantages and disadvantages of each. 3. Explain the process for assessing the need for training. 4. Describe how to plan, conduct & evaluate the training program of subordinate & volunteers	1. Definition of training. 2. Different types of training. 3. Training Need Assessment (TNA). 4. Training plan, training conduction & training evaluation.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, field visit	
Course: Health Management	Hrs. theory	Hrs. lab
Unit : 3 Health post Management	Hrs. theory	Hrs. lab
Sub-unit: Conduct staff meeting	Hrs. theory 3	Hrs. lab 0
Objectives:	Content:	
1. Describe how to identify the need for a meeting. 2. Tell how to decide what to include on a meeting agenda. 3. Describe how to plan for an effective meeting. 4. Describe the strategies for conducting and effective meeting. 5. Discuss the importance of minuting the decisions made by the meeting. 6. Describe how to formalize the minutes.	1. Importance of maintaining good communication through meetings. 2. Planning and organizing a meeting. - Identify the date, time, and venue for the meeting. - Identify the participants and resources. - Circulate the invitation letter to participants. 3. Writing invitation letters.	

	4. Steps for conducting meeting. - Staying on task per the agenda. - Maintaining ground rules for respectful interactions. - Elicit participation from all members. - Seek consensus on decisions. 5. minuting procedure 6. Following concerned organization rules.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Samples of meeting minutes/invitation letters, practice writing minutes from a simulated meeting Classroom instruction, Demonstration / Practicum	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 3 Health post Management	Hrs. theory	Hrs. lab
Sub-unit: Financial Management	Hrs. theory 2	Hrs. lab 0
Objectives:	Content:	
1. Discuss the purpose and procedures for financial management. 2. Prepare an annual budget from a simulated example. 3. Demonstrate how to maintain records of income and expenditure. 4. Demonstrate how to prepare monthly / quarterly and annual financial statements. 5. Describe how to maintain a bank account.	1. Principles of financial management 2. Using a voucher. 3. Using a budget sheet. 4. Procedure for maintaining cash book (Nepal Goverment rules).	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," classsroom practice, classroom instruction, field visit	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 3 Health Post Management	Hrs. theory	Hrs. lab
Sub-unit: Leave Management	Hrs. theory 1	Hrs. lab 0
Objectives:	Content:	
1. Identify different types of employee leaves. 2. Describe the procedure for making a request for leave. 3. Demonstrate how to maintain records of staff leave. 4. Discuss the reasoning used before giving approval of staff leave.	1. Existing by laws of concerned organizations regarding employee leave.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, observation in practicum, Resources - existing related laws	

Course: Health Management	Hrs. theory	Hrs. lab
Unit: 3 Health Post Management	Hrs. theory	Hrs. lab
Sub-unit: Logistic Management	Hrs. theory 3	Hrs. lab
Objectives:	Content:	
1. Explain the purpose of logistics management. 2. Describe the Logistic Management Information System (LMIS) practiced in Nepal. 3. Describe the "six rights" of logistic management. 4. Explain logistic cycle. 5. Describe the procedure for using the various records and forms of the LMIS.	1. Definition and function of logistic management. 2. Components and procedures of Nepal's LMIS. 3. Six" rights of logistic management. 4. Logistic cycle (Serving customer, product selection forecasting and procurement and inventory management). 5. Procedures for LMIS forms and records use (AGF# 45, 46, 47, 48, 49, 50, 51, 52 & 57).	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Classroom instruction, group discussion, Resources: booklets for process of filling logistics related forms, actual logistic forms.	
Course: Health Management	Hrs. theory Hrs. lab	
Unit 3 Health Post Management	Hrs. theory Hrs. lab	
Sub-unit: Inventory management	Hrs. theory 2 Hrs. lab 1	
1. Describe the purpose and process of physical inventory. 2. Differentiate between expendable and non-expendable goods. 3. Define storage and store standard. 4. Describe the procedure for Cold Chain storage of medical supplies. 5. Discuss the essential data of logistics information. 6. Describe the process of calculating and demanding items, for both regular and emergency needs. 7. Describe the process of distributing commodities. 8. Describe the process of auctioning, disposing and write off according to current Nepal's government regulations.	1. Inventory goals and procedures. 2. Classifications of materials. 3. Specialized storage treatment for vaccines, essential drugs, contraceptives, equipment/instruments. 4. Essential data concepts: a. Maximum/minimum stock levels b. Authorized stock level and emergency order point c. Lead time stocking d. Losses/adjustments 5. Emergency and regular calculation and procurement of commodities. 6. Procedures for distribution of commodities. 7. Nepal's government regulations for auctioning, disposing and writing off of goods.	
Examination methods: written exams (short answer questions	Teaching / Learning Activities: Classroom instruction, discussion, Acts and Regulations related to financial and administrative matters.	
Course: Health Management	Hrs. theory	Hrs. lab _____
Unit: 3 Health Post Management	Hrs. theory	Hrs. lab _____
Sub-unit: Quality assurance	Hrs. theory 2	Hrs. lab 2
Objectives:	Content:	
1. Compare different definitions of quality health care. 2. Identify reasons for using the quality assurance (QA) program. 3. Identify the chief characteristics of a quality assurance program. 4. Define the term "standards" and give examples of health care standards. 5. List the ways that standards help to close the gap	1. Components and concepts of quality health care. 2. Rationale for quality assurance implementation. 3. Characteristics of quality at the health post: a. technical competence b. effective service c. efficient service	

between actual performance and desired outcomes. 6. Give examples of ways to reduce the costs caused by poor quality health care. 7. Give examples of ways to improve patient satisfaction with services. 8. List the 4 "focus areas" of quality assurance principles. 9. Explain why the process of quality assurance is viewed as a cycle. 10. Use the methods and principles of QA to identify and plan a solution to a real health care problem.	d. accessible site e. good interpersonal relationships f. continuity of services g. safe environment h. pleasant environment i. team approach 4. Using standards to improve service: a. Write standards (performance rules/measurements) for quality health care. b. Communicate these standards to all workers. c. Plan ways to regularly check if standards are being met. d. Identify and solve the problems that interfere with "high standard quality." 5. The focus of quality assurance principles: a. focus on patient/staff needs b. focus on how things are done (process/systems) – do not blame the individual. c. focus on facts (don't make assumptions or guesses). d. Focus on team approach to problem solving. 6. The cycle of quality improvement.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, group discussion, practice exercises.	
Course: Health Management	Hrs. theory	Hrs. lab _____
Unit: 3 Health Post Management	Hrs. theory	Hrs. lab _____
Sub-unit: Performance Evaluation of Staff	Hrs. theory 2	Hrs. lab 2
Objectives:	Content:	
1. Discuss the purposes and benefits of regular staff performance evaluations. 2. Explain the importance of writing a clear and complete staff job description. 3. Develop staff job descriptions for a simulated example. 4. Develop a staff performance evaluation checklist based on the job description. 5. Describe how to effectively give a job assignment. 6. Identify indicators of a good job performance. 7. Role-play ways to counsel the staff who has poor job performance.	1. Importance of staff performance evaluation. 2. Performance evaluation indicators. 3. Staff, performance appraisal formats. (Designed by concerned institute / organization.).	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, practice	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 3 Health Post Management	Hrs. theory	Hrs. lab
Sub-unit: Space Management	Hrs. theory 2	Hrs. lab 2
Objectives:	Content:	
1. Discuss how to assess workspace required for various Health Post activities. 2. Demonstrate how to arrange a flow chart of each activity.	1. Strategies for management of activities of the Health Post. 2. District wide involvement in the catchment area.	

3. Describe ways to arranging space as per activities. 4. Demonstrate how to make a map of a catchment area.	3. Procedures for mapping the geographical situation of the Health Post and catchment area together with relevant health related information.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, Practicum, field visit to institution, Classroom practice	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 3 Health Post Management	Hrs. theory	Hrs. lab
Sub-unit: Time Management	Hrs. theory 2	Hrs. lab 2
Objectives:	Content:	
1. Describe how to compute staff work load. 2. Demonstrate how to prepare a timetable of health unit activities. - Weekly - Monthly - Quarterly - Yearly 3. Demonstrate how to prepare a program chart. 4. Demonstrate how to prepare a yearly calendar of operation.	1. Concept of time management. 2. Ways to plan for various activities of the Health Post.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, Practicum, visit institution, Classroom practice.	

Course: Health Management	Hrs. theory	Hrs. lab
Unit: 3 Health Post Management	Hrs. theory	Hrs. lab
Sub-unit: Letter Writing	Hrs. theory 2	Hrs. lab 1
Objectives:	Content:	
1. Identify different types of letters and discuss the purposes of each. 2. Identify the good and poor attributes of a letter. 3. Write selected official letters based on a simulated example.	1. Definition of letters and its types. 2. Official letters that use in government sector especially in health post. 3. characteristics of effective letters: - clear meaning - respectful - complete in information - accurate - timely - grammatically correct - includes where/how to respond	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, Practicum, visit institution, Classroom practice	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 3 Health Post Management	Hrs. theory	Hrs. lab
Sub-unit: Problem solving	Hrs. theory 2	Hrs. lab 1
Objectives:	Content:	
1. Define problem and problem solving. 2. Identify steps of problem solving. 3. Apply the steps of problem solving to a real or simulated case. 4. Describe common mistakes of using the problem solving method.	1. Problem and problem solving. 2. Steps of problem solving. - Selection of problem - Define the problem - Collecting relevant data - Interpretation of data - Drawing conclusion - Application of solution - Evaluation of the application	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - "On Being in Charge," Classroom instruction, Practicum, visit institution, case study	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 3 Health Post Management	Hrs. theory	Hrs. lab
Sub-unit: Health Management Information System (HMIS)	Hrs. theory 3	Hrs. lab 2
Objectives:	Content:	
1. Explain the purpose of the HMIS. 2. Identify the important benefits of this system. 3. Describe process of HMIS 4. Explain the use of the different types of HMIS forms. 5. Describe the use of the HMIS records and reports. 6. Demonstrate how to prepare monthly, quarterly, and annual HMIS reports.	1. Function and purpose of MIS and HMIS. 2. importance of HMIS 3. The Process of HMIS with example of national system. 4. Application of the HMIS forms. 5. Differences between types of records and reports. 6. Monthly, quarterly & annual health reporting system.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Text book self study, Classroom instruction, classroom practice, field visit to relevant health institutions	

Course: Health Management	Hrs. theory	Hrs. lab
Unit: 4 Health related organization	Hrs. theory 8	Hrs. lab
Sub-unit: International Non-Governmental Organizations (INGO's)	Hrs. theory 2	Hrs. lab 2
Objectives:	Content:	
1. Identify the activities and goals of INGO are working in health sectors. 2. Identify their role in promoting the health care system.	1. Concept of INGOs. 2. INGO's: SCF (US), SCF (UK), CARE Nepal, PLAN Nepal. 3. Roles and activities of INGO's.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Classroom instruction, filed visit to concerned organization	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 4 Health related organization	Hrs. theory	Hrs. lab
Sub-unit: National Non-Governmental Organizations (NGO's)	Hrs. theory 2	Hrs. lab 2
Objectives:	Content:	
1. Identify the activities and goals of NGOS working in health & health related sector. 2. Identify their roles in promotion of the health care system.	1. Concept of NGOs. 2. National NGOS: FPAN, NRCS, Nepal Netrajyoti sangh, Leprosy relief association, NATA, others. 3. Roles and activities of non-governmental organizations.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Classroom instruction, filed visit to concerned organization	
Course: Health Management	Hrs. theory	Hrs. lab
Unit:4 Health related organization	Hrs. theory	Hrs. lab
Sub-unit: International Agencies	Hrs. theory 2	Hrs. lab 2
Objectives:	Content:	
1. Identify international bilateral & multilateral agencies. 2. Identify their roles and activities in health sectors.	1. Different bilateral & multilateral agencies like, WHO, Unicef, UNDP, World Bank, DFID UNFPA, FAO.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Classroom instruction, field visit, brochures of concerned agencies	
Course: Health Management	Hrs. theory	Hrs. lab
Unit:5 National Health Policy and Health Programs	Hrs. theory 13	Hrs. lab
Sub-unit: Various Health Programmes	Hrs. theory 10	Hrs. lab 4
Objectives:	Content:	
1. Identify the objectives and activities of national health programmes. 2. Participate in two or more of these programs. 3. Discuss ways the Health Post manager can promote the use of these national health programs.	1. National health programs including: Millenium Development Goal Current health plan Malaria program FP / MCH Tuberculosis control program Leprosy elimination program EPI IEC CBIMCI, NCP	

	Nutrition program Training Program Kala – azar Programs under Epidemiology and Disease Control Division. STIs, HIV/AIDS FCHV Primary Health Care-Outreach Clinic (PHC–ORC)
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Text book self study "On being in charge," classroom instruction, field visit to selected divisions of D.H.S., DOHS annual report, National Planning System in Health Section.
Course: Health Management	Hrs. theory Hrs. lab
Unit:6 Health Manpower in Nepal	Hrs. theory 8 Hrs. lab
Sub-unit: Development of Human Resources in Health (HRH) in Nepal	Hrs. theory 2 Hrs. lab
Objectives:	Content:
1. Describe the purposes and activities of the various institutions involved in HRH Development.	• Various institution involved in HRH development like, • Institute of Medicine, Tribuvan University • Council for Technical Education and Vocational Training (CTEVT) • Kathmandu University • B.P. Koirala Institute for Health Sciences • National Health Training Center (NHTC) • Pokhara University • Purvanchal University • NAMS University • Patan Academy Of Health Science
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Classroom instruction, relevant literature and brochures of concerned institutions, field visit to selected divisions of D.H.S.
Course: Health Management	Hrs. theory Hrs. lab
Unit:6 Health Manpower in Nepal	Hrs. theory Hrs. lab
Sub-unit: Human Resources for Health (HRH)	Hrs. theory 3 Hrs. lab 2
Objectives:	Content:
1. Identify the different existing HRH in Nepal. 2. Describe the role of each kind of staff member at a Health Post. 3. State the job descriptions of staff at the Health Post / Sub Health Post levels.	1. HRH positions in Nepal: Medical Doctor, Doctor of Philosophy, Public Health Worker, Health Assistant, Opthalmic Assiatant, Staff Nurse, Auxiliary Nurse Midwife, Auxiliary Health Worker, Lab Technologist, Radiographer, Pharmacy Assistant and Pharmacist. 2. Administrative and technical staff of the health post. 3. Responsibilities of staff of Health Post / Sub Health Post.
Examination methods: written exams (short answer	Teaching / Learning Activities: classroom

questions)	instruction, field visit.	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 6 National Health Policy Health Programs	Hrs. theory 3	Hrs. lab
Sub-unit: National Health Policy	Hrs. theory 2	Hrs. lab
Objectives:	Content:	
1. Describe components of the National Health Policy 1991. 2. Describe the current five-year plan. 3. Describe Nepal's long term health plan. 4. Discuss potential barriers to successful achievement of these goals, and ways to overcome such barriers (for example, the "barrier" of insufficient health care manpower).	1. Latest National Health Policy. 2. Latest five-year plan. 3. Second long term health plan. 4. Health indicators. 5. Barriers to the development of health care services.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Classroom instruction, field visit, annual report of DOHS	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 7. Health Issues & Professional Practice	Hrs. theory 9	Hrs. lab
Sub-unit: Global Health Issues and Situations	Hrs. theory 1	Hrs. lab
Objectives:	Content:	
1. Discuss how health problems have affected mankind in history. 2. Identify important global health issues today. 3. Describe global efforts to improve the health and nutrition of developing nations. 4. Discuss barriers to the development of global health throughout the world. 5. Analyze the global health situation. - How will the reduction of mortality from infectious diseases affect the populations of developing nations? - Has the development of genetically altered grains helped or worsened nutrition in developing nations? - What are the major health problems of the first world countries?	1. Global health issues and situations.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: Classroom instruction, case study, brochures and handouts about UNICEF, State of World Children and Women.UNICEF	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 7. Health Issues & Professional Practice	Hrs. theory	Hrs. lab
Sub-unit: National Health Issues & Situations	Hrs. theory 2	Hrs. lab 1
Objectives:	Content:	
1. Identify the most important health issues of Nepal. 2. Describe how these health issues came about, and what measures are being made to correct them. 3. Compare the health situation of Nepal, as it was 20 years ago, and as it is today. 4. Analyze the reasons for the differences in health care in Nepal from 20 years ago and today. 5. Analyze how global events have affected the health situation of Nepal, both the positive effects and negative effects.	1. The history of health in Nepal and factors which have affected the quality of health. 2. Review last and current five years plan national planning commission report on health.	

Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study, plan of national planning commission classroom instruction.	
Course: Health Management	Hrs. theory	Hrs. lab
Unit: 7. Health Issues & Professional Practice	Hrs. theory	Hrs. lab
Sub-unit: Professional Practice	Hrs. theory 1	Hrs. lab
Objectives:	Content:	
1. Define and describe the code of conduct for Health Assistants. 2. Explain the purpose of a code of conduct. 3. Describe the formation, activities and functioning of the Nepal Health Professional Council (NHPC).	1. Code of conduct. 2. Formation, activities & functions of NHPC.	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study, NHPC Act, classroom instruction.	

Course: Health Management	Hrs. theory	Hrs. lab
Unit: 7. Health Issues and Professional Practice	Hrs. theory	Hrs. lab
Sub-unit: Entrepreneurship	Hrs. theory 1	Hrs. lab
Objectives:	Content:	
1. Discuss the concept of entrepreneurship. 2. Discuss how the community and Health Post might benefit if the Health Post Manager began a private profit making business in addition to his role as Health Post manager. 3. List types of businesses a Health Post Manager might operate. 4. Identify the potential opportunities for unethical actions to occur when the Health Post Manager works simultaneously at two jobs. 5. Discuss ways to prevent unethical occurrences by the Health Post Manager/entrepreneur.	1. Goals and process of small business establishment and management. 2. Complimentary goals of small business and community welfare. 3. Business opportunities which meet community needs. 4. Ethical considerations of entrepreneurship and Health Post Manager role. 5. Principles for moral examination to avoid conflict of interest situations	
Examination methods: written exams (short answer questions)	Teaching / Learning Activities: textbook self study - “On Being in Charge”, Classroom instruction, field visit	

Second clinical and community exposure in hospital and community setting

After completion of first half of third year theory and simulation practice, student will be placed in 24 working days (24*7=168 hours) clinical practice in hospital setting.
Objective:
The students would be able to

- History taking
- Physical examination:
  - General examination
  - Systematic examination
- Provisional diagnosis
- Differential diagnosis
- Investigation:
  - Laboratory and radiological
- Final diagnosis
- Management:
  - Treatment
  - Referral

- Rehabilitation
- Prevention and control measures
- Follow up

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

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

After completion of second year theory and simulation practice, student will be placed in 6 working days (4 days program, 1 day report writing and 1 day presentation) in health management in District Health Office, Health Center and Health Post. Minimum 6*6= 36 hours.
Objective:
Student will observe following activities.
Observe the health care system
Health management
Strength and weakness of health institution
Health programs of the District Health Office, Health Center and Health Post
Logistic management and quality assurance
Supervision and leadership to management of health
Students will be able to learn by self study, group discussion and problem based learning.

Student will observe following activities and maintain a logbook and submit a report to institution:

Proficiency Certificate Level in General Medicine

Second half of third year

Working days:	135 days
Working hours per day:	8 hours per day (9 am to 5pm including 1 hour break)
Total working hours per year:	945 hours
No public and local holidays	
Holidays:	52 Saturdays, Dashain -3 days, Tihar -3 Days, Phagu Purnima -1 day, Teej (only female) -1 day, Total 60 days.

On the Job Training (OJT)

Full time on the job training.

The student performs self study/problem base learning on case studies and recording and reporting. The ratio of theory and practical and case study recording and reporting is 2:3.

Third Year - Comprehensive Clinical Practice Objectives

Sub Health Post, Health Post, Primary Health Care Centers, District Hospital, Community Hospitals, Private Hospital, Zonal Hospital, Sub-regional Hospital, Regional Hospital and Center Hospital

PCL General Medicine (104 days excluding saturdays)

S. No.	Subject	Duration (days)
1	Emergency	15
2	Medicine	25
3	Surgery – ENT, Eye, General Surgery	25 (5+5+15)
4	Clinical Pathology (Observation) Lab	2
5	Pharmacy, Pharmacology (Dispensing)	3
6	Obs/Gyane	10
7	Family Health (MCH,FP)	12 (6+6)
8	Basic Medical Procedures	12

Upon completion of the program the student will be able to:

Clinical Objectives for Surgery - I & Medicine – I

A. History & Physical

1. Take history:
    a. establish trust with the patient/family
    b. elicit complete data related to chief complaint, social/personal/demographic data, immunization/diseases history.
2. Perform physical examination:
    a. vital signs per guidelines
    b. assess JALCCO
    c. assess hydration status in all ages
    d. evaluate mental status/cognition/mood
    e. recognize normal/abnormal growth & development
    f. identify normal/abnormal conditions of the body systems through inspection, auscultation, percussion and palpation of heart and lungs, abdomen, nervous system, integumentary system, renal system, gastrointestinal system, circulatory system, lymphatic system, musculo-skeletal system
3. Use abstract reasoning to correlate the abnormal findings with provisional/differential diagnoses.
4. Identify the appropriate laboratory tests for confirming diagnoses.
5. Select appropriate response for conditions: treatment of simple conditions/ referral of complex cases.

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

B. Asepsis/Sterile Technique

1. Identify which activities require sterile or aseptic techniques.
2. Apply principles of asepsis/sterile technique when performing procedures that require this.
3. Sterilize instruments and other materials according to protocol.
4. Implement measures for control of contagious disease.

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

C. Wound Care

1. Clean, debride, drain wounds per protocol
2. Suture wounds and remove stitches
3. Apply various types of aseptic/sterile dressings, compresses, bandages

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

D. Invasive Procedures

1. Pass a feeding tube and administer tube feedings
2. Give various types of enemas
3. Safely administer medications via IM, IV, intradermal, subcutaneous routes
4. Draw blood for specimens
5. Start IV infusions

Note: Minimum five cases in each sub-topics and maintain scientific records)

E. Emergency and First Aid

1. Identify and respond to interferences with patient=s airway, breathing, circulation
2. Identify and treat impending shock according to protocol
3. Identify and respond to epileptic seizure according to protocol
4. Control hemorrhage
5. Administer blood transfusion according to protocol
6. Immobilize the patient with potential fracture
7. Identify and respond to injestion of toxic substances
8. Identify protocol for treatment of injury/bites of snakes, mammals, insects
9. Apply the principles of triage care to a multiple-victim situation
10. Stabilize and transport complex cases to a higher care center

Note: Maintain records of each case.

Clinical Objectives for Medicine - II

Psychiatry

1. Identify the clinical features of psychosis, depression, bipolar mood disorders, anxiety disorders.
2. Assess the mental and psychological status of clients.
3. Assess the risks for suicide by a client.
4. Maintain a safe, comforting environment for the suicidal client and counsel the family to do the same.
5. Treat the client who has attempted suicide by overdose.
6. Differentiate between actual physical disease and somatoform (hysterical) symptoms.
7. Medicate the client who presents with severe symptoms of psychosis, depression or anxiety.
8. Identify indications for referral to a specialty center for treatment.
9. Existing recording and reporting system of DHO.

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

Dermatology

1. Identify common skin lesions and conditions
2. Differentiate between the common skin conditions
3. Advise for the treatment and prevention of skin disorders
4. Identify and refer complex conditions
5. Implement measures to prevent transmission of contagious conditions
6. Existing recording and reporting system of DHO.

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

Pediatrics including Neonatology

1. Assess the infant/child regarding: growth and development, congenital abnormalities, injuries.
2. Conduct complete history taking including birth history from guardian.
3. Perform a complete physical examination according to Integrated Management of Childhood. (IMCI).
4. Implement treatment according to guidelines.
5. Identify and refer cases requiring higher level care.
6. Administer immunizations according to guidelines.

7. Counsel mothers regarding: nutrition, safe drinking water, hygiene, hypo/hyperthermia, how to use oral rehydration, symptoms requiring medical attention, family planning.
8. Distribute vitamin supplements as needed.
9. Existing recording and reporting system of DHO.

Note: Minimum two cases in each sub-topics and ten cases for no six and maintain scientific records.

Neonatology

1. **Care of newborn at birth (5 babies)**
2. **Hand washing**
3. **Assessment of newborn at different period**
4. **Identification of LBW using weighing scale**
5. **Identification of hypothermia using thermometer**
6. **Observe management of Asphyxiated babies (Resuscitation)**
7. **Kangaroo mother care**
8. **Counseling family on need of referral , after care of resuscitation , discharge counseling on KMC , breast feeding**
9. **Expressed breast milk and Cup feeding**
10. **Observe management of PSBI baby including introduction of antibiotic ie gentamycine , cotrium etc**
11. **Baby bath**
12. **Postnatal visit /Home visit**
13. Existing recording and reporting system of DHO.

Note: Minimum five cases in each sub-topics and maintain neonatal records.

Clinical Objectives for Surgery - II

Ophthalmology

1. Perform a basic eye examination; visual acuity, gross appearance of upper & lower conjunctiva and cornea.
2. Identify and advise for treatment simple eye disorders of the eyelids including blepharitis, stye, chalazion, trichiasis, entropion, ectropion.
3. Identify various causes of conjunctivia, advise treatment, and take measures to prevent spread of contagious conjunctivitis.
4. Identify and advise treatment for trachoma; take actions to prevent trachoma.
5. Identify corneal ulcer, institute appropriate therapy, and refer for expert care.
6. Identify ocular manifestations of vitamin A deficiency, advise treatment and take measures to prevent this disease.
7. Identify symptoms or presence of cataract, iridocyclitis, glaucoma, refractive errors, and refer these cases for expert care.
8. Perform removal of foreign bodies from conjunctiva and cornea in simple cases.
9. Existing recording and reporting system of DHO.

Note: Minimum two cases in each sub-topics and maintain scientific records.

Otorhinolaryngology (ENT)

1. Elicit history of ear, nose, and throat conditions
2. Demonstrate basic methods of examination of the ear, nose & throat
3. Identify and treat common simple conditions of the ear, nose & throat
4. Assess for gross hearing impairment and refer as indicated
5. Intervene with foreign bodies or hemorrhage of ear, nose & throat
6. Existing recording and reporting system of DHO.

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

Dentistry

1. Demonstrate the techniques and counsel the purpose of oral health care
2. Perform loose teeth extractions
3. Identify and treat simple conditions of the mouth, teeth, and jaw
4. Identify complex cases for referral to higher level care
5. Manage simple post-extraction hemorrhage or tooth pain
6. Perform local anaesthetic procedures
7. Existing recording and reporting system of DHO.

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

Clinical Medicine Objectives for Obstetrics & Gynecology

A. Labor & Delivery:

1. Confirm labor and perform a complete antenatal assessment.
2. Identify the stages of normal L&D for primipara and multipara women.
3. Assessment the progress of labor: cervical changes, effacement, dilation, mucus show, amniotic release, crowning, duration & frequency of contraction, desire to push.
4. Implement measures to promote comfort and the progression of labor.
5. Observe the assessment of the presentation, rotation & descent of the fetal occiput, both vaginally and externally.
6. Assist with the procedures for the management of second stage labor.
7. Assist with the procedures for the active management of third stage labor.
8. Assess for the signs & symptoms of prolonged labor/fetal distress/maternal distress.
9. Assist with the process for assessment and treatment of retained placenta, cervical or vaginal tears, uterine atony.
10. Differentiate the causes of post partum hemorrhage and observe/assist with the treatment for each.
11. Conduct normal deliveries and assist with abnormal deliveries.
12. Demonstrate the procedure for removal of retained placenta.
13. Demonstrate the procedure for suturing of a simple episiotomy
14. Existing recording and reporting system of DHO.

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

B. Newborn Care/Postpartum Care

1. Assist with newborn care
2. Assess the postpartum patient for complications
3. Examine the newborn according to the assessment guidelines.
4. Evaluate the ability of the infant to breastfeed successfully.
5. Counsel the new mother/family regarding: breastfeeding, hygiene, nutrition, immunizations, family planning.
6. Teach newborn danger signs and postpartum danger signs to the new mother.
7. Assess the symptoms and assist with management of postpartum complications.
8. Existing recording and reporting system of DHO.

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

C. Complications of Pregnancy

1. Assist with management of various types of abortion.

3. Assist with the management of the various causes of vaginal bleeding.
4. Assess for the symptoms of pre-eclampsia and eclampsia.
5. Assist with the treatment for eclampsia.
6. Existing recording and reporting system of DHO.

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

D. Gynecology

1. Identify the clinical features of common gynecological conditions that require hospital treatment.
2. Administer the prescribed treatment for gynecological conditions requiring hospitalization.
3. Evaluate the effectiveness of prescribed treatments.
4. Counsel clients regarding prevention of gynecological disorders.
5. Existing recording and reporting system of DHO.

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

Clinical Objectives for OB-GYN Out Patient Services

Antenatal/Postpartum Care OPD

1. Identify signs and symptoms of normal pregnancy.
2. Assess for symptoms of complications of pregnancy that will require hospital management.
3. Identify risk factors that require treatment or special monitoring and prescribe that treatment..
4. Counsel pregnant women regarding: preparation for delivery, nutrition, healthy behaviors, warning signs to report, immunization schedule, breastfeeding, family planning.
5. Document the progress of pregnancy according to agency procedure.
6. Assess the post partum client for complications of delivery.
7. Existing recording and reporting system of DHO.

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

Immunizations/Well Baby OPD

1. Assess the infant regarding: growth and development, congenital abnormalities, injuries.
2. Identify and refer cases requiring higher level care.
3. Administer immunizations according to guidelines.
4. Counsel mothers regarding: nutrition, safe drinking water, hygiene, hypo/hyperthermia, how to use oral rehydration, symptoms requiring medical attention, family planning.
5. Distribute vitamin supplements as needed.
6. Existing recording and reporting system of DHO.

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

Gynecology OPD

1. Identify and treat simple conditions of the female reproductive tract: vaginal discharge, prolapsed uterus, pelvic inflammatory disease, sexually transmitted diseases
2. Give contraceptive teaching and refer for sterilization as needed
3. Identify and refer conditions requiring surgical treatment: intra-abdominal mass, fibroid, tumors, Bartholin abscess
4. Identify and respond to abnormal vaginal bleeding, pre & post menopause
5. Existing recording and reporting system of DHO.

Note: Minimum two cases in each sub-topics and maintain gynecological history, clinical examination, provisional diagnosis and management

Family Planning OPD

1. Identify the benefits of family planning to clients.

2. Assess the client who seeks family planning assistance: to rule out pregnancy, to determine ability to use certain methods, to determine family/individual desires.
3. Describe the advantages and disadvantages of the available methods of contraception in terms which are understandable to clients.
4. Assist the client to freely select an appropriate method of contraception.
5. In simple terms, explain how to correctly use each method of birth control.
6. Identify strategies for dealing with undesired effects of each method.
7. Identify medical conditions that indicate use of a contraceptive method to prevent pregnancy.
8. Existing recording and reporting system of DHO.

Note: Minimum two cases in each sub-topics and maintain family planning detail records.

Third Year - Comprehensive Community Field Practice Objectives

(HP, PHC, & community settings)

Community Health Diagnosis- 52 days (Saturdays are not included)

a. Environmental Health- 5 days
b. Epidemiology and Communicable disease- 8+8=16 days
c. Health Education- 5 days
d. PHC/Health post attachment- 26 days

The student performs self study/problem base learning on case studies and recording and reporting. The ratio of theory and practical and case study recording and reporting is 2:3.

On completion of this course the student will be able to:

Primary Health Care Services

1. Provide competent middle-level health care: diagnosis and treatment for uncomplicated mental & physical, acute & chronic health care problems.
2. Perform a complete history taking and physical exam on children and adults, to identify abnormal conditions.
3. Make home visits to fully assess the health care needs of the family situation.
4. Direct community outreach services.
5. Identify and respond to the needs of vulnerable populations (children, the poor persons without family, mentally disturbed, retarded, homeless, aged & infirm).
6. Intervene with the trafficking of vulnerable persons.
7. Identify the constraints, limitations and potentials of the health post situation when giving primary health care.
8. Use problem solving and adaptation to meet the health care needs of individuals or families.
9. Identify indications for referral to a higher level health care facility.

Note: Minimum 5 cases in each sub-topics and maintain appropriate records according to heading.

Community Diagnosis

1. Develop a project timetable which sets the schedule for a community diagnosis project.
2. Develop and pretest a community survey questionnaire for the Community Diagnosis project.
3. Establish good rapport with the community members of the target population.
4. Create a geographic map of the selected community.
5. Collect data using a representative sample and appropriate techniques (questionnaire, interview, observation, others).
6. Process the data and perform an interpretation and needs assessment.
7. Present the community with an analysis of the problem.
8. Design and implement solutions in partnership with the community (Micro Project).
9. Evaluate the effectiveness of the solutions.
10. Develop a written report and give an oral presentation on the project.

Environmental Health

1. Promote public responsibility for environmental sanitation through health education.
2. Identify and resolve contamination of drinking water within the community.
3. Promote the construction of pit latrines.
4. Counsel individuals and community to promote personal hygiene habits.
5. Identify and advise individuals and community about hygienic methods for maintaining domestic animals.
6. Identify occurrences of threats to the eco-system of the community and promote public support for sound environmental management.
7. Apply environmental sanitation principles in controlling communicable disease.

Note: Minimum 1 case in each sub-topics implementation and maintain records.

Health Education

1. Identify and prioritize community health needs based on data collection.
2. Plan and implement health education programs that promote wellness, prevent illness, and teach curative and rehabilitative health care.
3. Use health education methods and media appropriately, creatively and effectively.
4. Monitor the implementation of health education programs.
5. Evaluate the effectiveness of health education programs and modify them as needed.

Family Health

1. Implement motivational strategies for selection of suitable family planning methods by individuals and couples.
2. Provide family planning materials, education and follow-up care.
3. Implement national guidelines for the care of mothers and children.
4. Provide for antenatal, perinatal, postnatal care to mothers and infants.
5. Promote and provide the recommended immunizations for children and mothers.
6. Promote healthy nutrition among all family members.
7. Identify treat and resolve the problem of childhood malnutrition among community children.
8. Identify treat and prevent the common diseases of young children.

Note: Demonstrate and maintain records of

1. Family Planning methods
2. Balance and mixed diet
3. Sarbottom flour
4. Minimum two cummunity

School Health

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

Note: Visit any school and write a report of no more than 1500 words.

Health Post Management

1. Describe the functions of the national public health care agencies, public health NGO's and INGO's and tell how the health post cooperates with each.
2. Analyze and describe community dynamics as they relate to community health.
3. Promote community partnership in health post activities.
4. Take appropriate measures to prevent/control communicable disease.
5. Maintain accurate records of health post activities.
6. Submit reports accurately and promptly and maintain records.
7. Supervise and direct the health post staff.
8. Maintain communications with all coordinating agencies,
9. Maintain health post supplies, inventories and logistics according to LMIS.
10. Promote quality assurance principles in health post activities.
11. Maintain a safe and pleasant health post environment.