Ministry of Education

Department of Technical and Vocational Education and Training (DTVET)

Civil Department (GTI, Thayet)

Third Year Course

Sr.NO	Subject Name	Objectives	Learning Outcomes
1.	Fundamental of	The three	1. Can achieve the basic concepts of
	Timber, Steel &	complementary	earthquakes, lateral forces, lateral
	Concrete	materials, Timber, Steel	shear and moving loads.
	Structures	and Concrete Structure	2. Can distinguish whether the member
	(CE- 31014,	are introduced. This	force is in compression or tension.
	CE- 32014)	course intends	3. Can understand the equilibrium
		Engineering students to	conditions of all structural elements.
		understand basic	4. Can know tension member failure
		principles and methods	modes and calculate the net area of
		for structural analysis. It	bolt holed, end distance and edge
		provide methods to	distance of bolt.
		compute forces and	5. Can analyze and design the tension
		stress in types of Roof	members according to ASD.
		truss, girder, frame	6. Can distinguish shear and bearing
		structure, tension	strength of fasteners and analyze and
		member, linear and	design the fasteners according to ASD.
		curved arch structure	7. To know types of retaining wall and
		and to design the	analyze external stability of retaining
		structure for stability,	wall.
		strength and	8. Can calculate depth of foundation.
		serviceability.	9. Can calculate vertical and inward
		To understand the	horizontal reactions
		features and strength	
		properties of fasteners,	
		rivet or bolt and to	
		know why we use	
		retaining wall, types of	
		retaining wall and basic	
		structural design.	

2.	Design of	-To understand	- Understand components,
	Concrete	components,	proportioning and mixing, conveying
	structures	proportioning and	and strength of concrete
	(CE-31024,	mixing, conveying and	- Design of tension- reinforced
	CE-32024)	strength of concrete	rectangular beams
		-To design of tension-	- Understand shear and diagonal
		reinforced rectangular	tension in beams and design of beams
		beams	- Evaluate loads and moments of short
		-To understand shear	columns
		and diagonal tension in	- Calculate required steel area of slabs
		beams and how to	and foundations
		design of beams	
		-To evaluate loads and	
		moments of short	
		columns	
		-To calculate required	
		steel area of slabs and	
		foundations	
3.	Building Service	1.To know the various of	-ကျောင်းသားများအားရေပေးဝေမှု
	(CE-31018,	source of water supply	နည်းစနစ်များအကြောင်းသိရှိစေရန်
	CE-31028)	and method of	-နေအိမ်တခုရှိ
		extraction	သန့်ရှင်းစင်ကြယ်ရေးကိရိယာ၏pipe size
		2.To calculate the	များကိုတွက်တတ်စေရန်
		diameter of pipe sizes	-ရေသွယ်တန်းခြင်းစနစ်တွင်ပါဝင်သော
		3. To calculate the	One pipe system, two pipe system
		diameter of soil and	များအကြောင်းသိရှိစေရန်
		waste pipe	Septic tank
		4. To design the septic	၏theoryများအကြောင်းသိရှိစေရန်
		tank	-septic tank designတွက်တတ်စေရန်

4.	Railway	The objective of the	Having successfully completed this
	(CE-31017)	course is to understand	course, the trainees will be able to
		the basic principles and	demonstrate knowledge and
		provide participants	understanding of;
		with the fundamental	1. The distinctive features of
		tools to know the	railway systems.
		current state of	2. Functions of railways points
		knowledge in the field of	and crossings.
		railway lines	3. Principles and practice of
		exploitation.	railway signaling systems.
			4. Railways station and
			interlocking.
			5. The role of human factures in
			railways safety.
			6. Requirements of railways
			track.
			7. About of super elevation
			Having successfully completed this
	Irrigation	-The objective of the	course, the trainees will be able to
	(CE-32026)	course is to take up the	demonstrate knowledge and
		basic concepts of	understanding of;
		irrigation and	1. Benefits and Features of
		construction of various	Irrigation System
		hydraulic structures.	2. Consumptive Use of Water
		-To introduce students	3. Objectives of a good method
		to basic concepts of	of application of water
		water, plants, their	4. Classification of Surface irrigation
		interactions, as well as	method and Sub-surface Irrigation
		irrigation and drainage	method
		systems design,	5. Causes and Effects of Water logging
		planning and	6. Design of Drainage system
		management.	

			7. Introduction to Dam, Reservoir and Spillway.
5.	Civil Engineering Drawing (CE-31012, CE-32012)	To know the basic concepts of engineering drawing To understand the drawing sheets on site	 Know how to write lettering in engineering drawing Know how to draw visible line, invisible line, center line, section line, cutting line, extension dimension line and arrow lines Know the details of beam, column, roof truss, floor, stair, footing of building Know the details of plan, cross section, elevation of two storey building and bridge
6.	Surveying (CE-31021)	သင်တန်းသားများကို မြေတိုင်းတာရေး လုပ်ငန်းများတွင် အသုံးပြုမည့် ကိရိယာ များကို ကျွမ်းကျင်စွာအသုံးပြု နိုင်စေရန်နှင့် တွက်ချက်မှုဆိုင်ရာ သီအိုရီများ ကို နားလည်တတ်ကျွမ်း၍ အသုံးချတတ်စေရန်	မြေတိုင်းတာရေးကိရိယာများ ဖြစ်သော Level, Theodolite, Total Station instruments များကို နည်းစနစ်မှန်ကန်စွာ အသုံးပြုနိုင်ခြင်းကို တတ်မြောက် ပါမည်။
	Surveying		

	(CE-32021)	သင်တန်းသားများကို	မြေတိုင်းတာရေးကိရိယာများ ဖြစ်သော
		မြေတိုင်းတာရေး	Tacheometry instrument အသုံးပြုပုံ၊
		လုပ်ငန်းများတွင်	မြေဧရိယာနှင့် ထုထည် တွက်ထုတ်ပုံ၊
		အသုံးပြုမည့် ကိရိယာ	လမ်းတည်ဆောက်
		များကို	ရေးလုပ်ငန်းတွင် အသုံးပြု
		ကျွမ်းကျင်စွာအသုံးပြု	တည်ဆောက်နိုင်သော Curves များ
		နိုင်စေရန်နှင့်	တွက်ချက်မှု စသည်တို့ တက်မြောက်ပါမည်။
		တွက်ချက်မှုဆိုင်ရာ	
		သီအိုရီများ ကို	
		နားလည်တတ်ကျွမ်း၍	
		အသုံးချတတ်စေရန်	
7.	Estimate and	-1. To get an	-1. students can be available to learn
	Specification	understanding of	more about measuring
	(CE- 31022)	Estimation	
			-2. students can assess the precision of
	Estimate and	-2. To get more job	the estimation from various sizes of
	Specification	opportunities in	different measurements
	(CE- 32022)	estimation related with	
		real tender projects	
8.	Workshop (3G)	To familiar the tools	Learning outcomes are the
		which used in the work	expected competencies of a student
		of carpentry and	after successful completion
		masonry	of the course, and hence, regarded as
			the objectives of the course. Each
		To make the jobs	learning outcome may have one
		systematically	assessment element or several
			assessment elements.
		To know the about the	The students are supposed to
		various types of joints in	get the following competencies to
		woodworking and	become a desirable technical teacher:
		various types of	1. Realize the important of workshop
		bricklaying	practices.
			2. Solve the difficulties found in
1			

	3. become a skillful labour in the
	constructions