

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 Timber, Steel & Concrete Structures (CE- 31014, CE- 32014)	<p>The three complementary materials, Timber, Steel and Concrete Structure are introduced. This course intends Engineering students to understand basic principles and methods for structural analysis. It provide methods to compute forces and stress in types of Roof truss, girder, frame structure, tension member, linear and curved arch structure and to design the structure for stability, strength and serviceability.</p> <p>To understand the 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.</p>	<ol style="list-style-type: none">1. Can achieve the basic concepts of earthquakes, lateral forces, lateral shear and moving loads.2. Can distinguish whether the member force is in compression or tension.3. Can understand the equilibrium conditions of all structural elements.4. Can know tension member failure modes and calculate the net area of bolt holed, end distance and edge distance of bolt.5. Can analyze and design the tension members according to ASD.6. Can distinguish shear and bearing strength of fasteners and analyze and design the fasteners according to ASD.7. To know types of retaining wall and analyze external stability of retaining wall.8. Can calculate depth of foundation.9. Can calculate vertical and inward horizontal reactions

2.	Design of Concrete structures (CE-31024, CE-32024)	<ul style="list-style-type: none"> -To understand components, proportioning and mixing, conveying and strength of concrete -To design of tension-reinforced rectangular beams -To understand shear and diagonal tension in beams and how to design of beams -To evaluate loads and moments of short columns -To calculate required steel area of slabs and foundations 	<ul style="list-style-type: none"> - Understand components, proportioning and mixing, conveying and strength of concrete - Design of tension- reinforced rectangular beams - Understand shear and diagonal tension in beams and design of beams - Evaluate loads and moments of short columns - Calculate required steel area of slabs and foundations
3.	Building Service (CE-31018, CE-31028)	<ol style="list-style-type: none"> 1.To know the various of source of water supply and method of extraction 2.To calculate the diameter of pipe sizes 3. To calculate the diameter of soil and waste pipe 4. To design the septic tank 	<ul style="list-style-type: none"> -ကျောင်းသားများအားရေပေးဝေမှု နည်းစနစ်များအကြောင်းသိရှိစေရန် -နေအိမ်တစ်ခုရှိ သန့်ရှင်းစင်ကြယ်ရေးကိရိယာ၏ pipe size များကိုတွက်တတ်စေရန် -ရေသွယ်တန်းခြင်းစနစ်တွင်ပါဝင်သော One pipe system, two pipe system များအကြောင်းသိရှိစေရန် Septic tank ၏theoryများအကြောင်းသိရှိစေရန် -septic tank designတွက်တတ်စေရန်

			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	<ul style="list-style-type: none"> ➤ 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) Surveying	သင်တန်းသားများကို မြေတိုင်းတာရေး လုပ်ငန်းများတွင် အသုံးပြုမည့် ကိရိယာများကို ကျွမ်းကျင်စွာအသုံးပြု နိုင်စေရန်နှင့် တွက်ချက်မှုဆိုင်ရာ သီအိုရီများကို နားလည်တတ်ကျွမ်း၍ အသုံးပြုတတ်စေရန်	မြေတိုင်းတာရေးကိရိယာများ ဖြစ်သော Level, Theodolite, Total Station instruments များကို နည်းစနစ်မှန်ကန်စွာ အသုံးပြုနိုင်ခြင်းကို တတ်မြောက် ပါမည်။

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

			3. become a skillful labour in the constructions
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