

**Ministry of Higher Education and Scientific Research
Scientific Supervision and Scientific Evaluation Apparatus
Directorate of Quality Assurance and Academic Accreditation
Accreditation Department**



Academic Program and Course Description Guide

2025

Republic of Iraq

Ministry of Higher Education & Scientific
Research Supervision and Scientific
Evaluation Directorate Quality Assurance
and Academic Accreditation

Academic Program Specification Form For Colleges and Institutions

University : Northern Technical University

College: Technical Institute / Mosul

Department: Civil technologies

Date of form completion:


A. No

Dean's Name

Date: / /

Signature


A. H

Vis Dean for
Scientific Affairs

Date: / /

Signature

2025/3/9



Head of Department

Date: / /

Signature

Quality Assurance performance manager

Date: 11/3/2025

Signature 

TEMPLATE FOR PROGRAMME SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

PROGRAMME SPECIFICATION

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It is supported by a specification for each course that contributes to the programme.

1. Teaching Institution	Northern Technical University
2. University Department/Centre	Mosul Technical Institute
3. Programme Title	Civil Technical Department
4. Title of Final Award	Civil Technical Diploma
5. Modes of Attendance offered	COURSE SYS.
6. Accreditation	
7. Other external influences	* Scientific updates There is a close relationship with the labor market that receives our graduates, as the opinion of the labor market is
8. Date of production/revision of this specification	2025/3/9
9. Aims of the Programmer	
a. Conducting field and laboratory examinations of construction materials b. reading and preparing maps of civil engineering projects c. implementation of engineering surveys for civil works projects d. implementation of paragraphs of civil works projects e. calculating the quantities and arms of civil business projects	

10. Learning Outcomes, Teaching, Learning and Assessment Methods

A1. Knowledge and Understanding:

- A1. Knowledge and understanding of the principles of engineering drawings
- A2. Knowledge and understanding of the principles of mechanics and analysis of forces
- A3. Knowledge and understanding how to use computers programming
- A4. Knowledge and understanding construction materials.

B. Subject-specific skills:

- B1. How to conduct field and laboratory engineering tests
- B2. How to draw and read maps of engineering projects
- B3. How to know the construction machines and related calculations
- B4 - How to implement and follow up engineering projects

Teaching and Learning Methods

Theoretical lectures, seminars, panel discussions, scientific developments, laboratory hands-on training, summer training, graduation research

Assessment methods

Daily editorial tests, classroom entries, quarterly and final examinations (theoretical + practical), weekly reports on laboratory experiments, seminars, panel discussions, as well as daily attendance, and discussion of graduation research projects.

C. Thinking Skills:

- C1- Being able to do sports calculations
- C2 - learning on programming software
- C3 - Being able to find solutions of soil mechanics problems
- C4 - Being able to complete engineering project from beginning to end

Teaching and Learning Methods

(lecture, workshop, laboratory, systematic training, summer training, graduation projects)

Assessment methods

(oral tests, written tests, quarterly examinations, final examinations, daily assessment, practical tests, reports, daily duties)

D. General and Transferable Skills (other skills relevant to employability and personal development)

- D1- The skill of using surveying devices
D2 - the skill of doing manual work for construction
D3 - the skill of learning the vocabulary of the English technical language and identifying the most important human rights
D4- The skill of calculating quantities for engineering projects.

Teaching and Learning Methods

Traditional lectures, laboratory training, reporting, screening of scientific films and special videos, scientific visits, summer training, and graduation projects.

Assessment Methods

(Oral tests, written tests, quarterly examinations, final examinations, daily assessment, practical tests, reports, daily duties)

11. Programmer Structure

Level/Year	Course or Module Title	Credit rating	
		Theor.	Pract.
First Year	Building and Construction Branch	15	18
	Computer Drawing Branch	13	18
Second Year	Building and Construction Branch	12	28
	Computer Drawing Branch	12	21

12. Personal Development Planning

- . * Learn about scientific developments which related to specialization
 - * Participation in relevant scientific conferences
 - * Participation in courses within the Institute
- . * Participating in courses in institutions of higher education and scientific research
- . * Conduct individual or joint scientific research (applied or theoretical)
- . * Participating in panel discussions and scientific seminars

13. Admission criteria .

- . * Scientific and professional b
- . * De

14. Key sources of information about the programmer

- . * Academic
- . * Assistance
- . * The Internet and social

Curriculum Skills Map

please tick in the relevant boxes where individual Programme Learning Outcomes are being assessed

	Programme Learning Outcomes
--	------------------------------------

[illegible]

[illegible]

[illegible]

TEMPLATE FOR COURSE SPECIFICATION

HIGHER EDUCATION PERFORMANCE REVIEW: PROGRAMME REVIEW

COURSE SPECIFICATION

This Course Specification provides a concise summary of the main features of the course and the learning outcomes that typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. It should be cross-referenced with the programme specification.

1. Teaching Institution	Northern Technical University
2. University Department/Centre	Mosul Technical Institute/ civil techniques department
3. Course title/code	
4. Programme (s) to which it contributes	Civil drawing
5. Modes of Attendance offered	* Weekly lesson schedule (theoretical and practical) * Scientific discussions, seminars, other activities
6. Semester/Year	COURSE
7. Number of hours tuition (total)	90 h.
8. Date of production/revision of this specification	2025/3/9
9. Aims of the Course	
a . Teaching students to draw engineering maps of buildings	
Student details of all construction work for engineering buildings b. Teaching	
c. Teaching the student the details of engineering maps at all stages	
d. Teaching the student to transfer the information of the engineering map to the work site	
e. Teaching students the foundations used in the preparation of executive map sets	
f. Teach the student to read the engineering map correctly	
g. Teaching the student to draw the electrical parts in the map	
h. Teaching the student to draw the health parts of the map	
i. Teach the student to discover errors in engineering maps	

10· Learning Outcomes, Teaching ,Learning and Assessment Methods

A- Knowledge and Understanding

A1- The student's knowledge of the construction plan

A2 - the student's understanding of how to read plan information

A3 - the student's knowledge of how to implement the paragraphs of planp

A4 - the student's understanding of how to draw a structural plan

B. Subject-specific skills

B1 - The skill of drawing accurately and without mistakes

B2 - the skill of accomplishing the works as required by plan

B3 - the skill of drawing the map with the computer

B 4 - the skill of dealing between the theoretical and practical reality in the project site

Teaching and Learning Methods

Theoretical lectures using modern methods, practical lectures at drawing sites, computer laboratories and summer training

Assessment methods

Daily tests, homework in the drawing sites , homework, surprise exams, quarterly exams, final exams

C. Thinking Skills

C1- Identify problem

C2 - collect the required data

C3 - find solutions

C4 - choose the ideal solution

Teaching and Learning Methods

Theoretical lectures using modern methods, practical lectures at drawing sites, computer laboratories and summer training

Assessment methods

Daily tests, homework in the drawing sites , homework, surprise exams, quarterly exams, final exams

D. General and Transferable Skills (other skills relevant to employability and personal development)

D1- Practice in engineering projects

D2 - training in engineering offices for projects plan

D3 - access to courses on ready-made software for engineering plans

11. Course Structure

Week	Hours	ILOs	Unit/Module or Topic Title	Teaching Method	Assessment Method
1	6		Introduction in construction and architectural drawing.	Practical and theoretical discussion	working drawing
2	6		The plan and the first floor of a residential house or a small building.	Practical and theoretical discussion	working drawing
3	6		Longitudinal and cross sections of a residential house or a small building.	Practical and theoretical discussion	working drawing
4	6		Introduction to the sanitary drawing and the fittings of water and sanitary institutions.	Practical and theoretical discussion	working drawing
5	6		The structural details of the inspection basins and attached it with sanitary institutions network.	Practical and theoretical discussion	working drawing
6	6		The structural details of the Septic tanks and storage for house plan.	Practical and theoretical discussion	working drawing
7	6		Introduction to concrete and construction principles, strength of concrete and types of stresses, the suitable reinforcing steel and types.	Practical and theoretical discussion	working drawing
8	6		Concrete slabs, types, load transitions thereof and the necessary reinforcing, with detailing for the	Practical and theoretical discussion	working drawing
9	6		The structural details for the two-way solid slabs.	Practical and theoretical discussion	working drawing
10	6		The structural details for the ribbed one-way and two-way slabs.	Practical and theoretical discussion	working drawing
11	6		Introduction to the types of concrete tributaries and the structural details of simple supported	Practical and theoretical discussion	working drawing
12	6		The structural details of continuous tributaries.	Practical and theoretical discussion	working drawing
13	6		The structural details of the monotonous tributaries.	Practical and theoretical discussion	working drawing
14	6		Introduction to the the structural details of the pre-cast and pre-stressed tributaries.	Practical and theoretical discussion	working drawing
15	6		The plan of tributaries of building structure and set-up tables and details of tributaries.	Practical and theoretical discussion	working drawing

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
2	2	-	2	1st	MTU101	English language (1)

Course Structure	Week
Unit one : hello Am/are/is,my/your This is with practice in work	1
Unit two : your world He/she/they, his/her Questions	2
Unit three : all about	3
Unit four : family and friends Possessive adjectives Possessive's Has/have Adjective + noun	4
Unit Five : the way I live Present simple I/you/we/they A and an Adjective + noun	5
Unit six : every day Present simple he/she Questions and negatives Adverbs of frequency	6
Unit seven : my favorites Question words Pronouns This and that	7
Unit eight : where I live There is / are ... Prepositions	8
Unit nine : times past Was/were born Past simple - irregular verbs	9
Unit ten : we had a great time ! Past simple - regular & irregular Question Negatives Ago	10
Unit eleven : I can do that Can / can't Adverbs	11

Requests	
Unit twelve : please and thank you I'd like ... Some and any Like and would like	12
Unit thirteen : here and now Present continuous Present simple & present continuous	13
Unit fourteen : it's time to go ! Future plans Revision writing email and informant letter	14&15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
2	3	2	1	1st	MTU102	Computer

Course Structure	week
<p>Operating systems OS's : (What is an OS's and what it can do , types of OS's , their features importance) ;Windows OS's (95 , 97 , 2000 , Me , XP , Vista , 7 , 8 , 8.1 and 10) and their characteristics ; Explain the differences between OS's and software application ; Computer power On / Off ; Using Mouse and their buttons .</p> <p>Looking at the Desktop ; Navigation around desktop ; Using Start Button ; Working with Application ; Using Taskbar ; Understanding Software and Hardware (their differences , importance and relationships) ; Explain how hardware can influence the OS and software and Vice Versa ; Software updates, security and bugs ; Software Ethics .</p>	1 &2
<p>Files & Folders : Looking at typical Window ; Moving and Sizing Window ; Using scroll Bars ; Understanding and Using My Computer and Recycle Bin ; Concepts of Drive, Folders and files (differences and importance) ; Directory and folder hierarchy and structure ; Understanding File Name and common Extensions .</p> <p>Folder And Files Managements (Create , Copy ,Cut , Delete , Rename , Find , and Move) ; Common Keyboard Shortcuts ; Undelete folder and files using Recycle Bin ; Display the differences between Uninstall and Undelete or Delete .</p>	3
<p>Computer Hardware ; Identifying Computers (Main Frame ; Super Computers ; Mini computers ; Desktop ; Notebooks ; Laptop ; Tablet PCs ; Servers ; Hand-held or Mobile computers ; Music or Media players and Electronic Book readers) .</p> <p>Looking Inside a Computer (Microprocessor , System memory , Storage Systems) ; Recognizing Input / Output Devices (using Keyboard ; Pointing devices ; Microphones ; Monitor ; Printers ; Projector and Speakers) ; Understanding How it works together .</p>	4 &5
<p>Using Control Panel : Customizing Desktop and Display ; Changing Data and Time ; Changing Language ; Accessibility Settings .</p> <p>Understanding Power Options (Shut Down , Sleep ,</p>	6

Hibernate) ; Working With Power Settings ; Identifying Mode Of Operation (Safe Mode and Normal Mode) ; Understanding User Accounts and Rights (Create New User Account ; Changing Controls ; Rights and Access)	
<p>What is a Software (Checking System Requirements & Hardware Implications) ; Application Software (Integrated Suites, Desktop Publishing , Spreadsheets , Database , Management , Presentations , Art , Engineering , Mathematic , Statistics , Medical , Management , Content Creation , Multimedia , Entertainment and System protection); Managing Software (Install New one, Uninstall , Reinstall and Updating Software .</p> <p>Disk Management Programs (Disk Clean-up , Check , Optimize and Compression); What is Troubleshooting ?; Managing Hardware / Software ; Keep Copies of data ; Dealing with Viruses , Malware and Trojans; Getting windows help and support .</p>	7
<p>Key Applications (Office 2013 Or 2010)</p> <p>What is Key Applications ? : What it can do? ; Getting started (Start & Power point) < Looking at the main screen (for Word ,Excel , Power point) , Accessing Commands and Characteristic Features , Understanding Ribbon ; Tabs ; Status Bar ; Scroll Bar ; Create files from templates , How to get Help , Manipulating Files and Data Exchange</p> <p>Microsoft Word: Entering and Editing Text (using editing keys) , Writing in Arabic and English ,Changing Orientation , Using Ruler , Move Around the Document Selecting Text (word , line , paragraph , pages & all pages) Save ;Close ; Open Document , Customizing View ,Edit Text Using (redo, undo, cut, copy & paste) , Formatting text using font command ,Paint Brush and Alignment Types Spell Check and Correction</p>	8 & 9
Understanding Tab setting , Working with Indents , Organizing List , Working with Paragraphs , Change Line Space , Set Paragraph Space , Working with Styles &Using Quick Styles , Finding and Replacing items, Document Formatting , Page Background and Watermark , Learn how write Arabic in English direction and write English word in Arabic direction	10 & 11
Page setup (change paper size , orientation , margins) ,Insert Page breaks ,Adding Page number or titles , Applying Columns and how to use it , Preview and Print document , Using Multimedia files (Insert images, objects) and	12

manipulating them , Using Tables (create new one , insert excel table , selecting items in the table) and Formatting Tables	
Understanding PowerPoint & Presentation ; What does a presentation include ; Working with presentations (Creating ; saving ; Closing ; Opening presentations); Moving around in the presentation ; Managing the Slides (Inserting ; Deleting ; Rearranging Slides , Changing Layout Changing or modifying themes	13 &14
Managing Slide Objects (Using Select Versus Edit Mode ; Manipulating Text Create Tables & Charts ; Inserting Pictures or Clip art or Multimedia); Creating Master Slide ; Animating Objects (Customizing the animation , Applying Slide Transitions) ;Running the Slide Show and set up the Presentation; Previewing and Printing Presentation	15

Course Structure	Week
computing fundamentals Display OS's basics, ON \shutdown computer, log Off, log on, restart, sleep, using mouse (pointing , selecting, dragging and execution) Using desktop, moving around the desktop and using the main application Icons, using start button; application programs (install, open ,close and uninstall)	1 & 2
Looking at window details (Title bar, Tools bar, Address Bar , status bar and windows' s content);expand collapse close Window; moving and resizing window	3
Working with drive , folders and files using the listed operation ; using common short cuts (Ctrl + C; +V; +A; +S...etc.); restore folders or files dandify the hardware and explain the different types of computer using illustrations of what provided by internet	4 & 5
Understanding the application software; Types and their using ; How install And Uninstall Programs and display their differences from delete; Update or reinstall the software	6
Delete systematically unnecessary files, scandisk, compress, disk; Understand the most common troubleshooting of computer or software; copy files or disk, using antivirus; getting help for windows; getting online help	7
Starting each programs & identify the main screen in details as title bar , main ribbon and their tools ,formula bar in excel , windows content, status bar . . . etc.	8 & 9
Writing text with some wrong words and different formatting types to perform the task of this lesson	10 & 11
Indent text by hanging the first line or hanging the mine paragraph body , line space types, find and replace text, find and replace using formatted text, add background and watermark, add different styles for word and pages	12
Create presentations, create using temple, insert slide, change slide layout ,save work	13 & 14
Open previous work, insert image , clipart, worksheet, put transition time between slides, run slide show	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
2	3	2	1	الاول	MTU103	مبادئ الحاسوب 2 Principles of Computer 2

Course Structure	week
Microsoft Excel : Understanding Basic Terminology (Work sheet , Work file , Cell , Cell pointer , cell Content , Row & Column reference), Building formula , Mathematical Operators , Hierarchy of the main mathematical operations ; Managing Workbooks (Create new one ; Create from Template , Enter data, Moving around , Saving ;Opening ; Closing Workbooks)	1
Manipulating the contents (selecting cells ; columns ; rows ; worksheet , using undo& redo , copying & moving data , changing column width & row height) ; Auto filling technique ; Deleting & Editing content ; Delete & Insert row or column ; Formatting cells (number , font ; alignment ; border , color and shading ; protection of cells and work sheet)	2 & 3
Creating simple and complex formula using different types of writing Using absolute and relative address, Understanding common error values ; Using common built in functions (Sum , Average , Max , Min , count , count A, count Blank , If , Round , Sqrt , Today , Day360 , Left , Right , Mid , Trim) ; Copying Formulas ; Insert & Deleting Worksheets ; Formatting tables using Auto format	4
Working with charts (Create chart , select chart elements , changing chart types , positioning & resizing charts , chart & axis titles , changing background and color effects , changing data series color , adding or removing legend& data labels & data tables & grid lines) Sorting data Ascending & Descending , Sorting multiple fields , Filtering data using Auto and Customize type ; Customizing printout using options , previewing & printing worksheet	5 & 6
Living Online The Internet , Browsers and the World Wide Web (The Internet, the World Wide Web , Web Browsers);	7

Understanding Web Site Addresses (Web Site Protocols , Resource Names)	
Common Web Site /Page Elements ; Browser Features and Functions (Browser Function , Browser Features);Getting Connected Network ; Advantages of Using Networks ;Understanding Local Area Network (LAN) and wide Area network (WAN);Connected to the internet (Dial – Up Connection ,Direct Connection); Domain and Sub Domain Needs for Security & Firewalls	8
Digital communication : How Can I Communicate with Others? (Electronic Mail , Instant Messages , Text Messages , VoIP , Video Conferencing , Chat Rooms , Social Networking Sites , Blogs , Presence, and Standards for Electronic Communication	9
Working with Email (Usernames , Passwords and Credentials)	10
Using Microsoft Outlook (Creating New Messages , Receiving Messages , Working with Attachments Managing Spam , Emptying the Junk E-mail Folder , Automating Outlook)	11
Digital Citizenship : Identifying Ethical Issues (Understanding Intellectual Property , Copyrights and Licensing) ; Protecting Your Data or Computer (Identifying Software Threats , Understanding Viruses), Protecting Yourself While Online ; Buying Online ; How Much Information Should I Share ? , Protecting Your Privacy)	12 & 13
Finding Information : Searching for Information (Different types of Web Sites , Searching a Specific Web Site) ; Using Search Engine Technology (Understanding How Search Engines Work)	14
Narrowing the Search , Evaluating the Information (Reliability and Relevance ; Validity and Authenticity ; Objectivity and Bias	15

Course Structure	الاسبوع
insert page number and/ or images, clipart, excel sheet, create tables , change column size, adding row, formatting tables	1
Work with the principles of workbook and worksheet and their contents; working with mathematical operators; create worksheet, using template; show the different types of data , save works, closing workbook or closing programs, moving around the excel window	3 & 2
Changing content , auto fill data; manipulating worksheet and data, using the different option of formatting cell	4
Writing different types of formula, understand the difference between absolute and relative cell, identify error values, use common built-in functions; Customizing tables; managing sheets Build different types of chart; customizing their objects; built database table , sort data , filter data , print databases table or chart; changing print option	6 & 5
Exercise of checking connection of Your computer system to the Internet , and use a simple utility (ping request) to test whether your Internet connection is functioning or not ; Open web sites of different domains (.not .org .com .cdu)	7
Open different web browsers (Internet explorer , Firefox , Google ,Chrome their functions (Addressing , and Searching) and Features (Back , Forward and Refresh Buttons , Home page , Tabs , Favorites/ Bookmarks , Checking the History , Plug-ins / Add- ons) ;Connect to the internet ; Identifying Networks and their types	8
Exercise of creating E-mail (Google mail Yahoo mail) Soc network account (Face book and Tweeter); Blogs; and others Sending text message using Face book messenger , Skype and other . perform other activities in social network (Status , Privacy , and Security	9
Explore E-mail properties : Security (Password , password Recovery Information , and Alternative e-mail), sending e-mail (To , CC,BCC, and Subject), Attaching file to email , Building contacts list and others	10
Sending Email using Outlook (With exploring all properties above	11
Try to make strong password ; Try to remove files without recoverable ability (ex: CCleaner free application)	13 & 12
Try web search for certain Keywords using different search engine (ex: Google , Bing) ; Also search multimedia files (Picture , audio or video) in specialized	14

search engine (ex: tlickr.com , youtube.com)	
Find specific and accurate information using Google (reduce no . of keywords , use quotation marks , use Or , search within certain site , and others)	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	م	ع	ن			
5	6	2	4	الاول	CITB125	الميكانيك الهندسي Engineering Mechanics

المفردات النظرية	الاسبوع
تفاصيل المفردات	
Definition of mechanics – general preview of physics related with using the personal calculator – vector quantities and scalar quantities – triangle and parallel ogram forces low - Analysis of forces.	1-2
Moment of forces. Couples – Moment of couples, Transformation of couple.	3
Resultant Parallel and Concurrent forces.	4
Distributed forces. Equilibrium, equation of equilibrium in plane.	5-6
Types of Beams – of Supports. Trusses Analysis of Trusses by Joint method.	7
Analysis of Trusses by section method . Friction – Nature of friction – Friction angle .	8-9
Centroid of simple engineering shape- Centroid of Composite Engineering shape.	10
Moment of inertia of simple engineering shapes _ moment of inertia of composite engineering shapes.	11
Introduction on strength of materials - definition of stress and their types - factor of safety - Stress.	12
Htooks law – Relation Between Stress and strain – side strain. Poisson s ratio – stress and strain.	13
Drawing of shear force and bending moment. Shear force and bending moment.	14
Bending stress of beam. Shear stress of beams. Beams made of two different material .	15

Course Structure	الاسبوع
Definition of mechanics – general preview of physics related with using the personal calculator – vector quantities and scalar quantities – triangle and parallel ogram forces low with applications. Analysis of forces with applications.	1-2
Applications on Moment of forces. Couples – Moment of couples, Transformation of couple. Applications of	3
Applications of Resultant Parallel and Concurrent forces .	4
Applications of distributed forces. Applications of Equilibrium, applications on equation of equilibrium in plane.	5-6
Applications on Types of Beams – applications on Type of Supports. Trusses Analysis of Trusses by Joint method with applications.	7
Analysis of Trusses by section method with applications.	8-9
Friction – Nature of friction – Friction angle , Application of friction lows.	8-9
Centroid of simple engineering shape Centroid of Composite Engineering shape with application.	10
Applications of moment of inertia of simple engineering shapes _ applications of moment of inertia of composite engineering shapes.	11
Introduction on strength of materials - definition of stress and their types - factor of safety with applications. Application of stress.	12
Hooks law – Relation Between Stress and strain – side strain with application. Poisson s ratio – applications on stress and strain.	13
Application on Equation and drawing of shear force and bending moment. Application of shear force and bending moment.	14
Application on Bending stress of beam. Application of Shear stress of beams. Applications on beams made of two different material.	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
2	2	-	2	الثاني	MTU200	اللغة الانكليزية (2) English Language (2)

الاسبوع	Course Structure
1	Unit one : getting to know you Tenses Questions Questions words
2	Unit two : the way we live Present tenses Present simple Present continuous Have / have got
3	Unit three: it all went wrong Past tenses Past simple Past continuous
4	Unit four :let's go shopping Quantity Much and many Some and any Something ,anyone,nobody,everywhere A few,a little, a lot of Articles
5	Unit Five :what do you want to do Past tenses Verb patterns 1 Future intentions Going to and will
6	Unit six: tell me! What's it like? What's it like? Comparative and superlative Adjectives
7	Unit seven :fame Present perfect and past simple For and since Tense revision

Unit eight: do's and don'ts Have(got) to Should must	8
Unit nine: going places Time and conditional clauses what if..?	9
Unit ten: scared to death Verbs patterns Infinitives What ,etc.+infinitive Something ,etc.+infinitive	10
Unit eleven :things that changed the world Passives	11
Unit twelve :dreams and reality Second conditional might	12
Unit thirteen :earning a living Present perfect continuous Present perfect simple versus Continuous	13
Unit fourteen: family ties Present perfect and past perfect and clarification Reported statements	14
Unit fifteen : revision	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
4	6	4	2	الثاني	CITB230	الرسم المدني Civil Drawing

الاسبوع	Course Structure
1	Introduction in construction and architectural drawing and type of lines and symbols.
2	The plan and the first floor of a residential house.
3	Front & side & section of residential house.
4	Introduction to concrete and construction principles, strength of concrete and types of stresses ,types of slabs.
5	Concrete slabs load transition & necessary reinforcing in one & two way slabs.
6	The structural details for ribbed one & two way slabs.
7	Introduction to the type of concrete beams and structural details of simple supported.
8	The structural details of continuous beams.
9	The structural details of cantilever beams.
10	Introduction to the structural details of the pre-cast and pre-stressed beams.
11	The structural details of concert column type & types of ties.
12	The structural details of separated & wall footing.
13	The structural details of combined and continues footing.
14	The structural details of raft foundations .
15	The structural details of pile foundations.

Course Structure	الاسبوع
Sketching symbols, types of lines, drawing scale, building types of brick and block.	1
Sketching the horizontal outline of a residential house or a small building and plan of the first floor & draw types of windows & door.	2
Sketching front and side view of residential house and vertical cross section.	3
Sketching the structural details for one-way solid slabs.	4
Sketching the structural details for the two-way solid slabs.	5
Sketching the structural details for the ribbed slab.	6
Sketching of structural details for simply supported beams & sections.	7
Sketching of structural details of continuous beams and sections.	8
Sketching the structural details of cantilever beams.	9
Sketching the structural details of the pre-cast and pre-stressed beams.	10
Sketching of structural details for concrete column & longitudinal and cross sections.	11
Sketching the structural details for wall footing & separated footing.	12
Sketching the structural details for combined & continuous footing.	13
Sketching the structural details for raft foundation.	14
Sketching the structural details for piles & their types with cap.	15
تفاصيل المفردات	
The structural details of concrete stairs and the types of stairs.	1
The structural details of concrete cantilever stair.	2
Introduction to the structural details for the reinforced walls, elevator wall and walls of the basements.	3
Introduction to steel, construction principles and strength of steel.	4
The structural details for the bonding of the steel parts according to their carrying loads.	5
The bonding of foundations with steel bases, bonding of tributaries with each other.	6
Introduction to the steel truss.	7
The typical detail in truss joints.	8
The structural details of interconnecting walls with prefabricated ceilings.	9

The structural details of joints in buildings, expansion joints, and construction joints.	10
Introduction to the sanitary drawing and the fittings of water and sanitary institutions.	11
The structural details of the inspection basins and attached it with sanitary institutions network.	12
The structural details of the Septic tanks and storage for house plan.	13
Using computer and its applications to draw the reinforced concrete structures.	14
Using computer and its applications to draw the structural details for Concrete column types, and the longitudinal and cross sections then show the column's reinforcing.	15

Course Structure	الاسبوع
Sketching the structural details of straight halves stair and spiral stair types.	1
Sketching the structural details of lateral @ cantilever stair.	2
Sketching the structural details for the reinforced walls of elevators and walls of the basements.	3
Sketching the typical steel sections.	4
Sketching the structural details for the bonding of the steel parts according to their carrying loads.	5
Sketching the bonding of foundations with steel bases, bonding of tributaries with each other.	6
Sketching the steel truss and bonding of ribs.	7
Sketching the typical detail in truss joints.	8
Sketching the structural details for interconnecting walls with prefabricated ceilings.	9
Sketching the structural details for joints in buildings, expansion joints, and construction joints.	10
Sketching the sanitary and the fittings of water and sanitary institutions and sanitary furniture and the network of water associations and health of the previous horizontal plans.	11
Sketching the structural details of the inspection basins and attached it with sanitary institutions network.	12
Sketching the structural details of the Septic tanks and storage for house plan.	13
Sketching reinforced concrete structure using computer and its applications.	14
Using computer and its applications to draw the structural details for concrete column types, and the longitudinal and cross sections then show the column's reinforcing.	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
2	2	-	2	الاول	MTU101	اللغة الانكليزية (1) English language (1)

الاسبوع	Course Structure
1	Unit one : hello Am/are/is, my/your This is with practice in work
2	Unit two : your world He/she/they, his/her Questions
3	Unit three : all about
4	Unit four : family and friends Possessive adjectives Possessive's Has/have Adjective + noun
5	Unit Five : the way I live Present simple I/you/we/they A and an Adjective + noun
6	Unit six : every day Present simple he/she Questions and negatives Adverbs of frequency
7	Unit seven : my favorites Question words Pronouns This and that
8	Unit eight : where I live There is / are ... Prepositions
9	Unit nine : times past Was/were born Past simple - irregular verbs
10	Unit ten : we had a great time ! Past simple - regular & irregular Question Negatives Ago
11	Unit eleven : I can do that Can / can't Adverbs

Requests	
Unit twelve : please and thank you I'd like ... Some and any Like and would like	12
Unit thirteen : here and now Present continuous Present simple & present continuous	13
Unit fourteen : it's time to go ! Future plans Revision writing email and informant letter	15 & 14

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
2	3	2	1	الاول	MTU102	مبادئ الحاسوب 1 Principles of Computer 1

الاسبوع	Course Structure
2 & 1	<p>Operating systems OS's : (What is an OS's and what it can do , types of OS's , their features importance) ;Windows OS's (95 , 97 , 2000 , Me , XP , Vista , 7 , 8 , 8.1 and 10) and their characteristics ; Explain the differences between OS's and software application ; Computer power On / Off ; Using Mouse and their buttons .</p> <p>Looking at the Desktop ; Navigation around desktop ; Using Start Button ; Working with Application ; Using Taskbar ; Understanding Software and Hardware (their differences , importance and relationships) ; Explain how hardware can influence the OS and software and Vice Versa ; Software updates, security and bugs ; Software Ethics .</p>
3	<p>Files & Folders : Looking at typical Window ; Moving and Sizing Window ; Using scroll Bars ; Understanding and Using My Computer and Recycle Bin ; Concepts of Drive, Folders and files (differences and importance) ; Directory and folder hierarchy and structure ; Understanding File Name and common Extensions .</p> <p>Folder And Files Managements (Create , Copy ,Cut , Delete , Rename , Find , and Move) ; Common Keyboard Shortcuts ; Undelete folder and files using Recycle Bin ; Display the differences between Uninstall and Undelete or Delete .</p>
5 & 4	<p>Computer Hardware ; Identifying Computers (Main Frame ; Super Computers ; Mini computers ; Desktop ; Notebooks ; Laptop ; Tablet PCs ; Servers ; Hand-held or Mobile computers ; Music or Media players and Electronic Book readers) .</p> <p>Looking Inside a Computer (Microprocessor , System memory , Storage Systems) ; Recognizing Input / Output Devices (using Keyboard ; Pointing devices ; Microphones ; Monitor ; Printers ; Projector and Speakers) ; Understanding How it works together .</p>
6	Using Control Panel : Customizing Desktop and Display ;

<p>Changing Data and Time ; Changing Language ; Accessibility Settings .</p> <p>Understanding Power Options (Shut Down , Sleep , Hibernate) ; Working With Power Settings ; Identifying Mode Of Operation (Safe Mode and Normal Mode) ; Understanding User Accounts and Rights (Create New User Account ; Changing Controls ; Rights and Access)</p>	
<p>What is a Software (Checking System Requirements & Hardware Implications) ; Application Software (Integrated Suites, Desktop Publishing , Spreadsheets , Database , Management , Presentations , Art , Engineering , Mathematic , Statistics , Medical , Management , Content Creation , Multimedia , Entertainment and System protection); Managing Software (Install New one, Uninstall , Reinstall and Updating Software .</p> <p>Disk Management Programs (Disk Clean-up , Check , Optimize and Compression); What is Troubleshooting ?; Managing Hardware / Software ; Keep Copies of data ; Dealing with Viruses , Malware and Trojans; Getting windows help and support .</p>	7
<p>Key Applications (Office 2013 Or 2010)</p> <p>What is Key Applications ? : What it can do? ; Getting started (Start & Power point) < Looking at the main screen (for Word ,Excel , Power point) , Accessing Commands and Characteristic Features , Understanding Ribbon ; Tabs ; Status Bar ; Scroll Bar ; Create files from templates , How to get Help , Manipulating Files and Data Exchange</p> <p>Microsoft Word: Entering and Editing Text (using editing keys) , Writing in Arabic and English ,Changing Orientation , Using Ruler , Move Around the Document Selecting Text (word , line , paragraph , pages & all pages) Save ;Close ; Open Document , Customizing View ,Edit Text Using (redo, undo, cut, copy & paste) , Formatting text using font command ,Paint Brush and Alignment Types Spell Check and Correction</p>	9 & 8
<p>Understanding Tab setting , Working with Indents , Organizing List , Working with Paragraphs , Change Line Space , Set Paragraph Space , Working with Styles &Using Quick Styles , Finding and Replacing items, Document Formatting , Page Background and Watermark , Learn how write Arabic in English direction and write English word in Arabic direction</p>	11 & 10
<p>Page setup (change paper size , orientation , margins) ,Insert</p>	12

Page breaks ,Adding Page number or titles , Applying Columns and how to use it , Preview and Print document , Using Multimedia files (Insert images, objects) and manipulating them , Using Tables (create new one , insert excel table , selecting items in the table) and Formatting Tables	
Understanding PowerPoint & Presentation ; What dose a presentation Include ; Working with presentations (Creating ; saving ; Closing ; Opening presentations); Moving around in the presentation ; Managing the Slides (Inserting ; Deleting ; Rearranging Slides , Changing Layout Changing or modifying themes	14 & 13
Managing Slide Objects (Using Select Versus Edit Mode ; Manipulating Text Create Tables & Charts ; Inserting Pictures or Clip art or Multimedia); Creating Master Slide ; Animating Objects (Customizing the animation , Applying Slide Transitions) ;Running the Slide Show and set up the Presentation; Previewing and Printing Presentation	15

Course Structure	الاسبوع
computing fundamentals Display OS's basics, ON \shutdown computer, log Off, log on, restart, sleep, using mouse (pointing , selecting, dragging and execution) Using desktop, moving around the desktop and using the main application Icons, using start button; application programs (install, open ,close and uninstall)	2 & 1
Looking at window details (Title bar, Tools bar, Address Bar , status bar and windows' s content);expand collapse close Window; moving and resizing window	3
Working with drive , folders and files using the listed operation ; using common short cuts (Ctrl + C; +V; +A; +S...etc.); restore folders or files dandify the hardware and explain the different types of computer using illustrations of what provided by internet	5 & 4
Understanding the application software; Types and their using ; How install And Uninstall Programs and display their differences from delete; Update or reinstall the software	6
Delete systematically unnecessary files, scandisk, compress, disk; Understand the most common troubleshooting of computer or software; copy files or disk, using antivirus; getting help for windows; getting online help	7
Starting each programs & identify the main screen in details as title bar , main ribbon and theirtools ,formula bar in excel , windows content, status bar . . . etc.	9 & 8
Writing text with some wrong words and different formatting types to perform the task of this lesson	11 & 10
Indent text by hanging the first line or hanging the mine paragraph body , line space types, find and replace text, find and replace using formatted text, add background and watermark, add different styles for word and pages	12
Create presentations, create using temple, insert slide, change slide layout ,save work	14 & 13
Open previous work, insert image , clipart, worksheet, put transition time between slides, run slide show	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
2	3	2	1	الاول	MTU103	مبادئ الحاسوب 2 Principles of Computer 2

الاسبوع	المفردات النظرية
الاسبوع	تفاصيل المفردات
1	Microsoft Excel : Understanding Basic Terminology (Work sheet , Work file , Cell , Cell pointer , cell Content , Row & Column reference), Building formula , Mathematical Operators , Hierarchy of the main mathematical operations ; Managing Workbooks (Create new one ; Create from Template , Enter data, Moving around , Saving ;Opening ; Closing Workbooks)
3 & 2	Manipulating the contents (selecting cells ; columns ; rows ; worksheet , using undo& redo , copying & moving data , changing column width & row height) ; Auto filling technique ; Deleting & Editing content ; Delete & Insert row or column ; Formatting cells (number , font ; alignment ; border , color and shading ; protection of cells and work sheet)
4	Creating simple and complex formula using different types of writing Using absolute and relative address, Understanding common error values ; Using common built in functions (Sum , Average , Max , Min , count , count A, count Blank , If , Round , Sqrt , Today , Day360 , Left , Right , Mid , Trim) ; Copying Formulas ; Insert & Deleting Worksheets ; Formatting tables using Auto format
6 & 5	Working with charts (Create chart , select chart elements , changing chart types , positioning & resizing charts , chart & axis titles , changing background and color effects , changing data series color , adding or removing legend& data labels & data tables & grid lines) Sorting data Ascending & Descending , Sorting multiple fields , Filtering data using Auto and Customize type ; Customizing printout using options , previewing & printing worksheet
7	Living Online The Internet , Browsers and the World Wide Web (The

Internet, the World Wide Web , Web Browsers); Understanding Web Site Addresses (Web Site Protocols , Resource Names)	
Common Web Site /Page Elements ; Browser Features and Functions (Browser Function , Browser Features);Getting Connected Network ; Advantages of Using Networks ;Understanding Local Area Network (LAN) and wide Area network (WAN);Connected to the internet (Dial – Up Connection ,Direct Connection) ; Domain and Sub Domain Needs for Security & Firewalls	8
Digital communication : How Can I Communicate with Others? (Electronic Mail , Instant Messages , Text Messages , VoIP , Video Conferencing , Chat Rooms , Social Networking Sites , Blogs , Presence, and Standards for Electronic Communication	9
Working with Email (Usernames , Passwords and Credentials)	10
Using Microsoft Outlook (Creating New Messages , Receiving Messages , Working with Attachments Managing Spam , Emptying the Junk E-mail Folder , Automating Outlook)	11
Digital Citizenship : Identifying Ethical Issues (Understanding Intellectual Property , Copyrights and Licensing) ; Protecting Your Data or Computer (Identifying Software Threats , Understanding Viruses), Protecting Yourself While Online ; Buying Online ; How Much Information Should I Share ? , Protecting Your Privacy)	13 & 12
Finding Information : Searching for Information (Different types of Web Sites , Searching a Specific Web Site) ; Using Search Engine Technology (Understanding How Search Engines Work)	14
Narrowing the Search , Evaluating the Information (Reliability and Relevance ; Validity and Authenticity ; Objectivity and Bias	15

المفردات العملية	الاسبوع
تفاصيل المفردات	
insert page number and/ or images, clipart, excel sheet, create tables , change column size, adding row, formatting tables	1
Work with the principles of workbook and worksheet and their contents; working with mathematical operators; create worksheet, using template; show the different types of data , save works, closing workbook or closing programs, moving around the excel window	3 & 2
Changing content , auto fill data; manipulating worksheet and data, using the different option of formatting cell	الأسبوع الرابع
Writing different types of formula, understand the difference between absolute and relative cell, identify error values, use common built-in functions; Customizing tables; managing sheets	6 & 5
Build different types of chart; customizing their objects; built database table , sort data , filter data , print databases table or chart; changing print option	
Exercise of checking connection of Your computer system to the Internet , and use a simple utility (ping request) to test whether your Internet connection is functioning or not ; Open web sites of different domains (.not .org .com .cdu)	7
Open different web browsers (Internet explorer , Firefox , Google ,Chrome their functions (Addressing , and Searching) and Features (Back , Forward and Refresh Buttons , Home page , Tabs , Favorites/ Bookmarks , Checking the History , Plug-ins / Add- ons) ;Connect to the internet ; Identifying Networks and their types	8
Exercise of creating E-mail (Google mail Yahoo mail) Soc network account (Face book and Tweeter); Blogs; and others Sending text message using Face book messenger , Skype and other . perform other activities in social network (Status , Privacy , and Security	9
Explore E-mail properties : Security (Password , password Recovery Information , and Alternative e-mail), sending e-mail (To , CC,BCC, and Subject), Attaching file to email , Building contacts list and others	10
Sending Email using Outlook (With exploring all properties above	11
Try to make strong password ; Try to remove files without recoverable ability (ex: CCleaner free application)	13 & 12
Try web search for certain Keywords using different search engine (ex: Google , Bing) ; Also search multimedia files (Picture , audio or video) in specialized search engine (ex: tlickr.com , youtube.com)	14
Find specific and accurate information using Google (reduce no . of keywords , use quotation marks , use Or , search within certain site , and others)	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
5	6	2	4	الاول	CITC125	الميكانيك الهندسي Engineering Mechanics

الاسبوع	Course Structure
1-2	Definition of mechanics – general preview of physics related with using the personal calculator – vector quantities and scalar quantities – triangle and parallel ogram forces low - Analysis of forces.
3	Moment of forces. Couples – Moment of couples, Transformation of couple.
4	Resultant Parallel and Concurrent forces.
5-6	Distributed forces. Equilibrium, equation of equilibrium in plane.
7	Types of Beams – of Supports. Trusses Analysis of Trusses by Joint method.
8-9	Analysis of Trusses by section method . Friction – Nature of friction – Friction angle .
10	Centroid of simple engineering shape- Centroid of Composite Engineering shape.
11	Moment of inertia of simple engineering shapes _ moment of inertia of composite engineering shapes.
12	Introduction on strength of materials - definition of stress and their types - factor of safety - Stress.
13	Htooks law – Relation Between Stress and strain – side strain. Poisson s ratio – stress and strain.
14	Drawing of shear force and bending moment. Shear force and bending moment.
15	Bending stress of beam. Shear stress of beams. Beams made of two different material .

المصادر و المراجع :

الاسبوع	Course Structure
1-2	Definition of mechanics – general preview of physics related with using the personal calculator – vector quantities and scalar quantities – triangle and parallel ogram forces low with applications. Analysis of forces with applications.

Applications on Moment of forces. Couples – Moment of couples, Transformation of couple. Applications of	3
Applications of Resultant Parallel and Concurrent forces .	4
Applications of distributed forces. Applications of Equilibrium, applications on equation of equilibrium in plane.	5-6
Applications on Types of Beams – applications on Type of Supports. Trusses Analysis of Trusses by Joint method with applications.	7
Analysis of Trusses by section method with applications.	8-9
Friction – Nature of friction – Friction angle , Application of friction lows.	
Centroid of simple engineering shape Centroid of Composite Engineering shape with application.	10
Applications of moment of inertia of simple engineering shapes _ applications of moment of inertia of composite engineering shapes.	11
Introduction on strength of materials - definition of stress and their types - factor of safety with applications. Application of stress.	12
Hooks law – Relation Between Stress and strain – side strain with application. Poisson s ratio – applications on stress and strain.	13
Application on Equation and drawing of shear force and bending moment. Application of shear force and bending moment.	14
Application on Bending stress of beam. Application of Shear stress of beams. Applications on beams made of two different material.	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
2	2	-	2	الثاني	MTU200	اللغة الانكليزية (2) English Language (2)

الاسبوع	Course Structure
1	Unit one : getting to know you Tenses Questions Questions words
2	Unit two : the way we live Present tenses Present simple Present continuous Have / have got
3	Unit three: it all went wrong Past tenses Past simple Past continuous
4	Unit four :let's go shopping Quantity Much and many Some and any Something ,anyone,nobody,everywhere A few,a little, a lot of Articles
5	Unit Five :what do you want to do Past tenses Verb patterns 1 Future intentions Going to and will
6	Unit six: tell me! What's it like? What's it like? Comparative and superlative Adjectives
7	Unit seven :fame Present perfect and past simple For and since Tense revision

Unit eight: do's and don'ts Have(got) to Should must	8
Unit nine: going places Time and conditional clauses what if..?	9
Unit ten: scared to death Verbs patterns Infinitives What ,etc.+infinitive Something ,etc.+infinitive	10
Unit eleven :things that changed the world Passives	11
Unit twelve :dreams and reality Second conditional might	12
Unit thirteen :earning a living Present perfect continuous Present perfect simple versus Continuous	13
Unit fourteen: family ties Present perfect and past perfect and clarification Reported statements	14
Unit fifteen : revision	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
4	7	5	2	الثاني	CITC221	مبادئ الرسم المعماري Principles of Architectural Drawing

الاسبوع	Course Structure
1,2	The principles of the architectural drawing (Elevations, Plans, Sections, Perspective, Details and the architectural symbols).
3	Explain to draw the plan of the residential house (ground and first floor plan), scale (1:100).
4	Explain to draw the plan of the residential house (ground and first floor plan), Scale (1:50).
5	1- Explain to draw the ground floor plan for the multi – story building, scale (1:100). 2- Explain to draw the other plans for the multi – story building, scale (1:100).
6	1- Explain to draw the typical floor plan for the residential building consisting four flats , Scale (1:100).
7	2- Explain to draw the plan for the residential flat , scale (1:50).
8	1- Explain to draw the plans of the residential building illustrate the number of the doors and windows, scale (1:100). 2- Explain to draw the elevations of the doors and windows of the above plans , scale (1:50).
9	1- Explain to draw the foundation plan of the residential house with dimensions, scale (1:50). 2- Explain to draw the foundation plan of the residential house with dimensions, scale (1:100).
10	Explain to draw the sections for bearing walls and partitions illustrate the foundation and its relation with floor, roof and parapet, scale (1:20).
11	Explain to draw the details of the layers of floors with symbols of different structural materials, scale (1:10), (1:20).
12	Explain to draw the details of the layers of roofs with symbols of different structural materials, scale (1:10), (1:20).
13	1- Explain to draw the types of stairs in plans, sections and elevations, scale (1:20), (1:50). 2- Explain to draw the detail of the stair , handrail and landing.
14	Explain to draw the brick bond in walls (English and Flemish bond) in plans , elevations and isometric scale (1:20).

1- Explain to draw the types of the stone walls and principles of composition in elevations. 2- Explain to draw the detail of Alikopon and principles of composition in elevations	15
المفردات العملية	الاسبوع
تفاصيل المفردات	
Drawing the architectural symbols, scale (1:10) .	1,2
Drawing the plan of the residential house (ground and first floor plan), scale (1:100).	3
Drawing the plan of the residential house (ground and first floor plan), Scale (1:50).	4
1- Drawing the ground floor plan for the multi – story building, scale (1:100). 2- Drawing the other plans for the multi – story building, scale (1:100).	5
1- Drawing the typical floor plan for the residential building consisting four flats, Scale (1:100).	6
2- Drawing the plan for the residential flat, scale (1:50).	7
1- Drawing the plans of the residential building illustrate the number of the doors and windows, scale (1:100) 2- Drawing the elevations of the doors and windows of the above plans , scale (1:50).	8
1- Drawing the foundation plan of the residential house with dimensions, scale (1:50). 2- Drawing the foundation plan of the residential house with dimensions, scale (1:100).	9
Drawing the sections for bearing walls and partitions illustrate the foundation and its relation with floor, roof and parapet, scale (1:20).	10
Drawing the details of the layers of floors with symbols of different structural materials, scale (1:10), (1:20).	11
Drawing the details of the layers of roofs with symbols of different structural materials, scale (1:10), (1:20).	12
1- Drawing the types of stairs in plans, sections and elevations, scale (1:20), (1:50). 2- Drawing the detail of the stair , handrail and landing.	13
Drawing the brick bond in walls (English and Flemish bond) in plans , elevations and isometric scale (1:20).	14
1- Drawing the types of the stone walls and principles of composition in elevations. 2- Drawing the detail of Alikopon and principles of composition in elevations	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مج	ع	ن			
4	6	4	2	الثاني	CITC222	مبادئ الرسم الانشائي Principles of Structural drawing

الاسبوع	Course Structure
1	Explain in detail Stress strains in structures – types of stress strains occur in structures , Types of resistances of reinforce concrete and steel.
2	Explain in detail Structural steel and its use – Typical sections of structural steel , how to extract dimensions details in the tables of structural iron – compound sections .
3	Explain methods to connect steel sections (screws , welding) . how to draw
4	Explain how Details of connecting steel columns with their bases . to draw
5	Explain how to draw Connecting steel bridges with each other, Connecting bridges with columns
6	Explain how to draw Exercises regarding the previous subjects By computer. .
7	Explain how Drawing Structural steel building with its details . to draw
8	Explain how to draw Steel components (connection by screws), Steel components (connection by welding).
9	Explain how to draw The symbols, Kinds of ceilings , One concrete ceiling with one direction.
10	Explain how to draw Concrete ceilings with two directions (horizontal schemes with their sections).
11	Explain how to draw Scheme for ceiling of building includes concrete ceilings (slab) with one direction and two directions , and cantilever ceilings(slab) .
12	how to Preparation of executive maps for a map drawn in the last explained week
13	Explain how to draw Beams and doorsteps , their kinds , kinds of rebar used in , sites of cutting and bending the rebar , bases of using hasps .
14	Explain how to draw Beams and doorsteps , using table of iron amounts to present details , To continue recognizing beams in all their kinds .
15	Explain how to draw Typical sections of concrete columns and kinds of connections.

Course Structure	الاسبوع
Showing scientific films to introduce students to Stress strains in structures – types of stress strains occur in structures , Types of resistances of reinforce concrete and steel	1
Showing scientific films to introduce students to Structural steel and its use – Typical sections of structural steel , Train the students how to extract dimensions details in the tables of structural iron – compound sections.	2
Draw Methods to connect steel sections (screws , welding) .	3
Draw Details of connecting steel columns with their bases .	4
Draw Connecting steel bridges with each other, Connecting bridges with columns.	5
Draw Exercises regarding the previous subjects By computer.	6
Drawing Structural steel building with its details .	7
Draw Steel components (connection by screws), Steel components (connection by welding).	8
Draw The symbols, Kinds of ceilings , One concrete ceiling with one direction.	9
Draw Concrete ceilings with two directions (horizontal schemes with their sections).	10
Draw Scheme for ceiling of building includes concrete ceilings (slab)with one direction and two directions , and cantilever ceilings(slab) .	11
Preparation of executive maps for a map drawn in the last week	12
Draw Beams and doorsteps , their kinds , kinds of rebar used in , sites of cutting and bending the rebar , bases of using hasps .	13
Draw Beams and doorsteps , using table of iron amounts to present details , To continue recognizing beams in all their kinds .	14
Draw Typical sections of concrete columns and kinds of connections.	15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	مع	ع	ن			
4	6	4	2	الثاني	CITC223	الرسم المعماري المتقدم Advanced Architectural Drawing

الاسبوع	Course Structure
1 , 2	1- Explain to draw the types of the arches in elevations. 2- Explain to draw the types of the pattern ornamentation of the bricks and stones.
3 , 4	Explain to draw the site plan of the residential buildings with scale (1:500) and illustrate the surrounding streets , farmed area and parking.
5	Explain to draw the elevation for the residential house, scale (1:100).
6	Explain to draw the elevation for the residential house, scale (1:50).
7	Explain to draw the elevation for the multi – story building, scale(1:100),(1:50).
8 , 9 , 10	Explain to draw the section for the residential house, scale (1:100),(1:50) and explain to draw the section for the multi – story building , scale (1:100) , (1:50).
11	1-Explain the Principles of the exterior perspective drawing (one, two and three vanishing points). 2- Explain the exterior perspective at the eye sight level, under the eye sight level and above the eye sight level.
12 , 13	Explain to draw the exterior perspective of the residential house at the eye sight level (from two vanishing points) and explain to draw the exterior perspective of the multi – story building at the eye sight level.
14 , 15	Explain the principles of the interior perspective and Explain to draw the interior perspective for one of the interior spaces in the residential house with furniture.

Course Structure	الاسبوع
Course Structure	
1- Drawing the types of the arches in elevations. 2- Drawing the types of the pattern ornamentation of the bricks and stones.	1 , 2
Drawing the site plan of the residential buildings with scale (1:500) and illustrate the surrounding streets , farmed area and parking.	3 , 4
Drawing the elevation for the residential house, scale (1:100).	5
Drawing the elevation for the residential house, scale (1:50).	6
Drawing the elevation for the multi – story building, scale (1:100),(1:50).	7
Drawing the section for the residential house, scale (1:100),(1:50) and drawing the section for the multi – story building , scale (1:100) , (1:50).	8 , 9 , 10
Drawing The exterior perspective of the cube at the eye sight level, under the eye sight level and above the eye sight level with suitable scale .	11
Drawing the exterior perspective of the residential house at the eye sight level (from two vanishing points) and drawing the exterior perspective of the multi – story building at the eye sight level.	12 , 13
Drawing the interior perspective for one of the interior spaces in the residential house with furniture.	14 , 15

عدد الوحدات	الساعات الاسبوعية			المستوى	رمز المقرر	اسم المقرر و اللغة
	ن	ع	مج			
4	2	4	6	الثاني	CITC224	الرسم الانشائي متقدم Advanced Structural drawing

الاسبوع	Course Structure
1-2	Explain how to draw Typical sections of concrete columns and kinds of connections. Recognizing longitudinal sections of the columns in a building of multi – storey, depending on the tables of concrete for the columns with taking cross sections in the building.
3	Explain how to draw Kinds of foundations, their concrete , Method of connecting the rebar of the column with the foundation .
4	Explain how to draw Common foundations and their indications use , Drawing details for the asymmetric common foundations (by computer) .
5	Explain how to draw Raft foundations , Sections of iron foundations.
6	Explain how to draw Kinds of piles caps (drawing by computer) .
7	Explain how to draw Kinds of stairs . Details of stairs rebar and connection of lower and higher ends
8	Explain how to draw Details of concreting stairs surrounding lifts and adjacent sections .
9	Explain how to draw structural carrier walls. Layers of thermal and wool insulation , Kinds of supporting walls . Drawing details of the rebar by computer.
10	Site visit for the building under construction (concreting).
11-12-13	Explain how to Drawing a whole concrete structural building includes (ceilings , bridges , columns and foundations),Details of drawing of connecting constructional components with each other.
14-15	Explain how to Continue draw carrying out pervious drawings.

Course Structure	الاسبوع
Draw Typical sections of concrete columns and kinds of connections. Recognizing longitudinal sections of the columns in a building of multi – storey , depending on the tables of concrete for the columns with taking cross sections in the building , Drawing the previous picture by computer (using another example) .	1-2
Draw Kinds of foundations , their concrete , Method of connecting the rebar of the column with the foundation .	3
Drawing details for the asymmetric common foundations (by computer) .	4
Draw Raft foundations , Sections of iron foundations.	5
Draw Kinds of piles caps (drawing by computer) .	6
Draw Kinds of stairs . Details of stairs rebar and connection of lower and higher ends.	7
Draw Details of concreting stairs surrounding lifts and adjacent sections.	8
Draw structural carrier walls. Layers of thermal and wool insulation, Kinds of supporting walls . Drawing details of the rebar by computer.	9
Site visit for the building under construction (concreting) .	10
Drawing a whole concrete structural building includes (ceilings , bridges , columns and foundations),Details of drawing of connecting constructional components with each other .	11-12-13
Continue draw carrying out pervious drawings.	14-15

c. Introducing modern sources in the preparation of lectures

13. Admissions	
Pre-requisites	Scientific Academic preparatory school graduate
Minimum number of students	Building and Construction Branch= 30 student Computer Drawing Branch = 30 student
Maximum number of students	Building and Construction Branch = 60 student Computer Drawing Branch = 60 student