

## Course description form

### Course description

Provide the fundamental concepts for elementary mathematics. .2Use mathematical functions like trigonometric functions and application of derivatives to solve some Engineering problems.

Teaching Institution	Northern Technical University
Scientific Department / Center	Technical College of Kirkuk
Course name/code	Principle of calculus
Forms of attendance available	Weekly
Semester/year	
Number of hours of study (total)	weeks (4 theoretical hour/week)
Date of preparation of this description	2024-2-18
Course Aims	



أ.م.د. كميلان محمد صفاء الدين  
رئيس قسم تقنيات هندسة العمارة والبناء

## learning outcomes teaching, Learning and Assessment Methods

### أ- الأهداف المعرفية

At the end of this course, students will have gained knowledge of the Basic 2D Curves drawing using shifting properties

Understanding the concepts of limits and continuity.

Being able to apply the differentiation to solve Engineering problems.

### B- Subject- specific skills

- Learning how to use the power, product, quotient and chain rule to differentiate algebraic trigonometric

-Recognizing different types of matrices and their properties. .

Applying matrix operations to solve system of linear equations.

### Teaching and learning methods

Giving theoretical and practical lectures, workshops.

### Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

### C- Thinking Skills

Indicative content includes the following.

**Prerequisites for calculus, coordinates and graphs in the plane. Slope and Equations for lines, functions and their graphs. Shifts, circles and parabolas. A review of trigonometric functions.**

### Teaching and learning methods

Giving theoretical and practical lectures, workshops.

### Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

D- General and transferred skills (other skills related to employability and personal development).

The first years of all mathematics programs are designed to give students a thorough grounding in a wide spectrum of mathematical ideas, techniques and tools in order to equip them for the later stages of their course. During first year, as well as consolidating, broadening and extending core material from pre-University study, we initiate a cultural transition to the rigorous development of mathematics which is characteristic at University. Students will develop both their knowledge of mathematics as a subject and their reasoning and communication skills, through lectures, tutorials, seminars, guided self-study, independent learning and project work. This development is addressed in all of our first year modules, although different modules have a different emphasis.

Program structure

Week	Hours	Required Learning Outcomes	Unit Name/Subject	Teaching Method	Method of Assessment
1		Types of matrices, operations, sum, multiplication by scalar and multiplication between two matrices.		Theoretical presentation	Sudden and quarterly exams
2		Determinants, the adjoint and the inverse of matrix.		Theoretical presentation	Sudden and quarterly exams
3		Solving systems of linear equations using matrices.		Theoretical presentation	Sudden and quarterly exams
4		Prerequisites for calculus, coordinates and Graphs in the plane.		Theoretical presentation	Sudden and quarterly exams
5		Slope and equations for lines, functions and their graphs.		Theoretical presentation	Sudden and quarterly exams
6		Shifts, circles, parabolas and a review of trigonometric functions.		Theoretical presentation	Sudden and quarterly exams
7		Introduction to limits.		Theoretical and practical presentation	Sudden and quarterly exams
8		The sandwich theorem and $\sin \theta$ .		Theoretical and practical presentation	Sudden and quarterly exams
9		$\theta$		Theoretical and practical presentation	Sudden and quarterly exams
10		Limits involving infinity and continuous functions.		Theoretical and practical presentation	Sudden and quarterly exams
11		Derivatives, slopes and tangent lines.		Theoretical and practical presentation	Sudden and quarterly exams
12		Differentiation rules and derivatives of trigonometric functions.		Theoretical and practical presentation	Sudden and quarterly exams
13		The chain rule, implicit differentiation and fractional powers.		Theoretical and practical presentation	Sudden and quarterly exams
14		Applications of derivatives and related rates of change.		Theoretical and practical presentation	Sudden and quarterly exams
15		Maxima, minima and curve sketching with $y'$ and $y''$ .		Theoretical presentation	Sudden and quarterly exams
16		Graphing rational functions, asymptotes and optimization.		Theoretical presentation	Sudden and quarterly exams

<i>Infrastructure</i>	
<i>Required Course Books</i>	Course Books
Main references (sources)	reference books
Recommended books and references (scientific journals, reports,....)	Research, internet, scientific journals
B - Electronic references, Internet sites ...	Research, internet, scientific journals

Course Development Plan
field studies



Ministry of Higher Education and  
Scientific Research - Iraq  
Northern Technical University  
Technical Engineering College  
Architecture and Construction  
Engineering Dep.



## MODULE DESCRIPTOR FORM نموذج وصف المادة الدراسية

Module Information معلومات المادة الدراسية				
Module Title	HUMAN RIGHTS AND DEMOCRACY		Module Delivery	
Module Type	SUPPLEMENT		Lecture Seminar	
Module Code	NTU100			
ECTS Credits	2			
SWL (hr/sem)	50			
Module Level	1	Semester of Delivery		2
Administering Department	Type Dept. Code	College	Type College Code	
Module Leader	Dr. Saddam		e-mail	
Module Leader's Acad. Title	Lecturer	Module Leader's Qualification	Ph.D.	
Module Tutor	None		e-mail	None
Peer Reviewer Name			e-mail	
Review Committee Approval	01/06/2023	Version Number	1.0	

### Relation With Other Modules

العلاقة مع المواد الدراسية الأخرى

<b>Prerequisite module</b>	None	<b>Semester</b>	
<b>Co-requisites module</b>	None	<b>Semester</b>	
<b>Module Aims, Learning Outcomes and Indicative Contents</b> أهداف المادة الدراسية ونتائج التعلم والمحتويات الإرشادية			
<b>Module Aims</b> أهداف المادة الدراسية	<ol style="list-style-type: none"> <li>1. Increase the student's knowledge of the theoretical and historical development of human rights and democracy.</li> <li>2. Develop the student's analytical and critical skills regarding the current and future aspects of human rights and democracy.</li> <li>3. Train the student on the importance of active participation in public life as a means to promote respect for human rights and engage in political and cultural activities.</li> <li>4. Empower students to understand the significance of education and its role in promoting a culture of human rights and democracy, contributing to the building of a civilized society based on good governance, faith in human rights, education about them, and active participation in governance through free and fair elections</li> </ol>		
<b>Module Learning Outcomes</b> مخرجات التعلم للمادة الدراسية	<ol style="list-style-type: none"> <li>1. Understand the historical development of human rights in ancient civilizations and their relevance to contemporary societies.</li> <li>2. Analyze the positions of divine laws and religious texts on human rights and evaluate their impact on different societies.</li> <li>3. Critically examine international constitutions and treaties related to human rights and assess their effectiveness in promoting and protecting human rights.</li> <li>4. Evaluate the role and significance of the United Nations Charter in establishing a framework for the protection of human rights at the international level.</li> <li>5. Assess the functions and contributions of international organizations in promoting and safeguarding human rights globally.</li> <li>6. Explore the role of non-governmental organizations (NGOs) in advocating for and protecting human rights in different contexts.</li> <li>7. Identify and explain the key safeguards and mechanisms in place to ensure the protection of human rights at the national and international levels.</li> <li>8. Understand the concept of international humanitarian law and its</li> </ol>		

	<p>historical evolution, and its significance in times of armed conflict.</p> <ol style="list-style-type: none"> <li>9. Analyze the concept, origin, and evolution of democracy, and understand its principles and values.</li> <li>10. Examine the relationship between Islam and democracy and evaluate different perspectives on the compatibility of these concepts.</li> <li>11. Identify and describe the characteristics and features of a democratic system.</li> <li>12. Differentiate between various forms and types of democracy and assess their strengths and weaknesses.</li> <li>13. Analyze the political components of democracy, including the role of political parties and their influence on the democratic process.</li> <li>14. Understand the relationship between democracy, education, and the role of education in promoting democratic values and citizenship.</li> <li>15. Evaluate the role of media in a democratic system, including its influence on public opinion and the functioning of democratic institutions</li> </ol>
<p><b>Indicative Contents</b> المحتويات الإرشادية</p>	<ol style="list-style-type: none"> <li>1. Human Rights in Ancient Civilizations: <ul style="list-style-type: none"> <li>○ Overview of human rights in ancient Greek civilization</li> <li>○ Exploration of human rights in ancient Roman civilization</li> </ul> </li> <li>2. Divine Laws and Human Rights: <ul style="list-style-type: none"> <li>○ Examination of the positions of divine laws and religious texts on human rights</li> <li>○ Analysis of the impact of divine laws on human rights in different societies</li> </ul> </li> <li>3. Human Rights in International Constitutions: <ul style="list-style-type: none"> <li>○ Study of human rights provisions in international constitutions and charters</li> <li>○ Comparison of the approaches taken by different countries in guaranteeing human rights in their constitutions</li> </ul> </li> <li>4. The United Nations Charter and Human Rights: <ul style="list-style-type: none"> <li>○ Overview of the United Nations Charter and its significance in promoting and protecting human rights</li> <li>○ Analysis of specific articles and provisions related to human rights in the UN Charter</li> </ul> </li> <li>5. Human Rights in International Organizations: <ul style="list-style-type: none"> <li>○ Examination of the role and functions of international organizations in promoting and safeguarding human rights</li> <li>○ Case studies on the work of specific international organizations in advancing human rights agendas</li> </ul> </li> <li>6. Human Rights in Non-Governmental Organizations:</li> </ol>



	<ul style="list-style-type: none"> <li>○ Exploration of the role and contributions of non-governmental organizations (NGOs) in the field of human rights</li> <li>○ Analysis of the challenges and opportunities faced by NGOs in advocating for human rights</li> </ul> <p><b>7. Safeguards for Human Rights:</b></p> <ul style="list-style-type: none"> <li>○ Study of legal and institutional safeguards for the protection of human rights at national and international levels</li> <li>○ Examination of mechanisms such as national human rights institutions, ombudsman offices, and international human rights tribunals</li> </ul> <p><b>8. International Humanitarian Law:</b></p> <ul style="list-style-type: none"> <li>○ Introduction to the concept of international humanitarian law and its historical development</li> <li>○ Analysis of the legal framework governing the conduct of armed conflicts and the protection of civilians</li> </ul> <p><b>9. The Concept and Evolution of Democracy:</b></p> <ul style="list-style-type: none"> <li>○ Understanding the concept, origin, and historical evolution of democracy</li> <li>○ Exploration of different theoretical perspectives on democracy and its core principles</li> </ul> <p><b>10. Islam and Democracy:</b></p> <ul style="list-style-type: none"> <li>○ Examination of the relationship between Islam and democracy</li> <li>○ Analysis of different interpretations and debates surrounding the compatibility of Islamic principles and democratic values</li> </ul> <p><b>11. Characteristics of Democracy:</b></p> <ul style="list-style-type: none"> <li>○ Identification and explanation of the key characteristics and features of a democratic system</li> <li>○ Analysis of the importance of democratic principles such as popular sovereignty, rule of law, and political participation</li> </ul> <p><b>12. Forms and Types of Democracy:</b></p> <ul style="list-style-type: none"> <li>○ Exploration of different forms and types of democracy, including direct democracy, representative democracy, and hybrid systems</li> <li>○ Assessment of the strengths and weaknesses of each form of democracy</li> </ul> <p><b>13. Political Components of Democracy:</b></p> <ul style="list-style-type: none"> <li>○ Study of the role of political parties and electoral systems in a democratic system</li> <li>○ Analysis of the influence of interest groups, civil society organizations, and media on democratic processes</li> </ul> <p><b>14. Democracy, Education, and Citizenship:</b></p> <ul style="list-style-type: none"> <li>○ Examination of the relationship between democracy, education, and the role of education in promoting democratic values and active citizenship</li> </ul>
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	<ul style="list-style-type: none"> <li>○ Analysis of the importance of civic education and the development of critical thinking skills in a democratic society</li> </ul> <p>15. Media and Democracy:</p> <ul style="list-style-type: none"> <li>○ Evaluation of the role of media in a democratic system, including the freedom of the press, media ethics, and media's role in shaping public opinion</li> <li>○ Analysis of the challenges and opportunities posed by digital media in the context of democratic societies</li> </ul>
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### Learning and Teaching Strategies

استراتيجيات التعلم والتعليم

<p><b>Strategies</b></p>	<ol style="list-style-type: none"> <li>1. <b>Lectures:</b> Traditional lectures delivered by the instructor can provide an overview of key concepts, theories, and historical developments in the field. Lectures can help students build foundational knowledge and understand the broader context of the subject matter.</li> <li>2. <b>Discussions and Debates:</b> Facilitating class discussions and debates allows students to actively engage with the course material, share their perspectives, and critically analyze different viewpoints. This can promote critical thinking, enhance communication skills, and encourage students to explore the complexities of human rights and democracy.</li> <li>3. <b>Case Studies:</b> Using real-life case studies and examples can help students apply theoretical knowledge to practical situations. Analyzing specific cases can deepen understanding, highlight challenges, and stimulate discussions on the implementation of human rights and democratic principles in different contexts.</li> <li>4. <b>Group Projects and Presentations:</b> Assigning group projects or presentations on specific topics within the course can encourage collaboration, research skills, and in-depth understanding. Working in groups allows students to explore different aspects of the subject matter and present their findings to the class.</li> <li>5. <b>Guest Speakers:</b> Inviting guest speakers who are experts in the field of human rights, democracy, or international law can provide students with practical insights, real-world experiences, and diverse perspectives. Guest speakers can also share their expertise on specific topics or case studies related to the course.</li> <li>6. <b>Interactive Workshops and Simulations:</b> Conducting interactive workshops or simulations can provide students with hands-on experiences related to human rights and democracy. This can include activities such as role-playing exercises, mock trials, or model United Nations sessions, allowing students to understand the practical application of concepts and engage in problem-solving.</li> </ol>
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7. Multimedia Resources: Incorporating multimedia resources such as videos, documentaries, and online platforms can enhance students' understanding and engagement with the course material. Multimedia resources can provide visual and audio representations of complex topics, showcase real-world examples, and stimulate discussions.
8. Independent Research and Critical Analysis: Assigning research projects or essays that require independent research and critical analysis can foster self-directed learning, research skills, and the ability to critically evaluate sources of information. This can deepen students' understanding of specific topics and encourage them to develop their own arguments and perspectives.
9. Assessments and Feedback: Providing regular assessments, such as quizzes, exams, or essays, can help students gauge their understanding of the material and receive feedback on their progress. Constructive feedback can guide students in improving their knowledge and skills throughout the course.

Student Workload (SWL)			
الحمل الدراسي للطلاب		الحمل الدراسي للطلاب	
Structured SWL (h/sem) الحمل الدراسي المنتظم للطلاب خلال الفصل	30	Structured SWL (h/w) الحمل الدراسي المنتظم للطلاب أسبوعياً	2
Unstructured SWL (h/sem) الحمل الدراسي غير المنتظم للطلاب خلال الفصل	20	Unstructured SWL (h/w) الحمل الدراسي غير المنتظم للطلاب أسبوعياً	1.5
<b>Total SWL (h/sem)</b> الحمل الدراسي الكلي للطلاب خلال الفصل	<b>50</b>		

Module Evaluation				
تقييم المادة الدراسية				
	Time/Number	Weight (Marks)	Week Due	Relevant Learning Outcome
Formative assessment	Quizzes	20% (20)	3,5, 8,10	LO #1, 2, 10 and 12
	Assignments	10% (10)	2, 12	LO # 3, 4, 6 and 7
	Projects / Lab. Report	10% (10)	13	All
Summative assessment	Midterm Exam	10% (10)	7	LO # 1-7
	Final Exam	50% (50)	16	All
<b>Total assessment</b>		<b>100% (100 Marks)</b>		

**Delivery Plan (Weekly Syllabus)**  
المناهج الأسبوعي للفنري

<b>Material Covered</b>	
<b>Week 1</b>	Human rights in ancient civilizations (Greek and Roman civilizations)
<b>Week 2</b>	The position of divine laws on human rights.
<b>Week 3</b>	Human rights in international constitutions.
<b>Week 4</b>	The United Nations Charter and its stance on human rights.
<b>Week 5</b>	Human rights in international organizations.
<b>Week 6</b>	Human rights in non-governmental organizations.
<b>Week 7</b>	Safeguards for human rights.
<b>Week 8</b>	The concept of international humanitarian law and its historical development.
<b>Week 9</b>	The concept, origin, and evolution of democracy.
<b>Week 10</b>	The relationship between Islam and democracy.
<b>Week 11</b>	Characteristics of democracy.
<b>Week 12</b>	Forms and types of democracy.
<b>Week 13</b>	Political components of democracy.
<b>Week 14</b>	Democracy and education.
<b>Week 15</b>	<b>Preparatory Week</b>
<b>Week 16</b>	<b>Final Exam</b>

<b>Learning and Teaching Resources</b> مصادر التعلم والتدريس		
	Text	Available in the Library?
<b>Required Texts</b>		Yes
<b>Recommended Texts</b>		No
<b>Websites</b>		

**APPENDIX:**

**GRADING SCHEME**  
مخطط الدرجات

Group	Grade	التقدير	Marks (%)	Definition
Success Group (50 - 100)	A - Excellent	امتياز	90 - 100	Outstanding Performance
	B - Very Good	جيد جدا	80 - 89	Above average with some errors
	C - Good	جيد	70 - 79	Sound work with notable errors
	D - Satisfactory	متوسط	60 - 69	Fair but with major shortcomings
	E - Sufficient	مقبول	50 - 59	Work meets minimum criteria
Fail Group (0 - 49)	FX - Fail	مقبول بقرار	(45-49)	More work required but credit awarded
	F - Fail	راسب	(0-44)	Considerable amount of work required

**Note:**

NB Decimal places above or below 0.5 will be rounded to the higher or lower full mark (for example a mark of 54.5 will be rounded to 55, whereas a mark of 54.4 will be rounded to 54. The University has a policy NOT to condone "near-pass fails" so the only adjustment to marks awarded by the original marker(s) will be the automatic rounding outlined above.



ملاحظة: هذا النموذج تم وضعه وتقديمه من قبل مديرية ضمان الجودة في وزارة التعليم العالي والبحث العلمي

## Course description form

### Course description

It specializes in studying the foundations and rules of engineering drawing with content that benefits all engineering specializations and other educational institutions. It also includes learning about drawing straight and curved lines, representing geometric projections, and ending with representing perspectives, as well as representing intersections and geometric sectors.

Teaching Institution	Northern Technical University
Scientific Department / Center	Technical College of Kirkuk
Course name/code	Engineering drawing
Forms of attendance available	Weekly
Semester/year	
Number of hours of study (total)	weeks (3 practical)
Date of preparation of this description	2024-2-18
Course Aims	<ol style="list-style-type: none"><li>1.Focus on using engineering drawing tools</li><li>2. Gain practical experience in drawing manually in preparation for learning to draw using a computer</li><li>3. Helping the student how to draw engineering and find the projections of pieces, and vice versa, how to draw the perspective of objects based on the projections</li></ol>

Learning outcomes teaching, Learning and Assessment Methods

أ.م.د. هادي محمد عبد الله العبدون

1 شباط

(يتم بعد اكمال اعدادات البرنامج)

**A \ Knowledge and Understanding**

A1-After completing the chapter, the student will be able to find and analyze any geometric shape.

A2-The ability to analyze different shapes as a section or perspective.

A3- Learning how to set dimensions using lines, symbols, and notes in an organized manner and according to certain rules so that they meet the requirements of engineering drawing.

A4- Identifying how to represent the parts that are not visible in the projection drawing, which are called truncated projections

A5- Identify the method of perspective drawing, which represents objects in such a way that they create the same impression in the eye in terms of shape and relative dimensions that they produce when looking from a .specific point

**B- Subject- specific skills**

B1- Skills for drawing geometric lines and contrasting them to express different meanings and for the drawing to appear clearly

B2- Skills of representing objects on the level and according to the body's position on the projection level.

B3- Skills of visualizing and deducing the third projection from two known projections with a 45 angle between the two projections.

B4- Skills of clarifying hidden parts through the process of cutting with clear lines and at an angle

**Teaching and learning methods**

Explanation and clarification

Form view

Lecture method

Self-learning method

Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

**C- Thinking Skills**

C1- Developing abilities as critical thinkers, readers and writers.

Teaching and learning methods

Giving theoretical and practical lectures, workshops.

### Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

D - General and transferred skills (other skills related to employability and personal development).

D1 -



**Program structure**

Week	Hours	Required Learning Outcomes	Unit Name/Subject	Teaching Method	Method of Assessment
1		Using the engineering board and install the sheet on the board and use engineering .drawings tools	Engineering Drawing	Theoretical presentation	Sudden and quarterly exams
2		Drawing: visible lines, hidden lines, center lines, dimension lines, cutting lines	Engineering Drawing	Theoretical presentation	Sudden and quarterly exams
3		Drawing a straight line parallel to a known straight line from a point outside it Drawing a perpendicular bisector of a known straight line	Engineering Drawing	Theoretical presentation	Sudden and quarterly exams
4		Drawing tangents	Engineering Drawing	Theoretical presentation	Sudden and quarterly exams
5		Drawing three-dimensional figures	Engineering Drawing	Theoretical presentation	Sudden and quarterly exams
6		Drawing the deleted third position of the body	Engineering Drawing	Theoretical presentation	Sudden and quarterly exams
7		Draw the omitted location of objects with inclined surfaces	Engineering Drawing	Theoretical and practical presentation	Sudden and quarterly exams
8		Creating and editing text in AutoCAD	Engineering Drawing	Theoretical and practical presentation	Sudden and quarterly exams
9		Introduction to blocks and attributes	Engineering Drawing	Theoretical and practical presentation	Sudden and quarterly exams
10		Advanced 3D modeling techniques (sweeps, lofts, blends)	Engineering Drawing	Theoretical and practical presentation	Sudden and quarterly exams
11		Introduction to lighting and camera settings	Engineering Drawing	Theoretical and practical presentation	Sudden and quarterly exams
12		Customizing AutoCAD interface and settings	Engineering Drawing	Theoretical and practical presentation	Sudden and quarterly exams
13		Customizing AutoCAD interface and settings	Engineering Drawing	Theoretical and practical presentation	Sudden and quarterly exams
14		Customizing AutoCAD interface and settings	Engineering Drawing	Theoretical and practical presentation	Sudden and quarterly exams

15		Customizing AutoCAD interface and settings	Drawing Engineering Drawing	presentation	exams sudden and quarterly exams

*Infrastructure*

<i>Required Course Books</i>		<i>Course Books</i>	
Main references (sources)		reference books	
Recommended books and references (scientific journals, reports,...)		Research, internet, scientific journals	
B - Electronic references, Internet sites ...		Research, internet, scientific journals	

<i>Course Development Plan</i>	
field studies	

## Course description form

### Course description

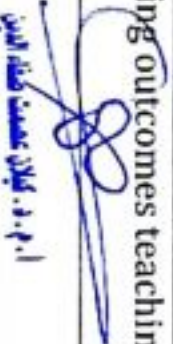
Introducing and teaching students some engineering workshops.

Teaching Institution	Northern Technical University
Scientific Department / Center	Technical College of Kirkuk
Course name/code	Laboratories - workshops
Forms of attendance available	Weekly
Semester/year	
Number of hours of study (total)	weeks (3 practical hour/week)
Date of preparation of this description	2024-2-18

#### Course Aims

- 1-Learning about hand tools, learning about the correct ways to operate woodworking machines, learning about types of wood and their uses
- 2 Different plumbing methods, types of metals used in plumbing, forming a simple practical template in front of the students using prank tools.
- 3- Identifying the types of furnaces and methods of operating them, grinding them with metal, according to practice, and cleaning them outside the furnace.
- 4- Measuring tools and how to use them. Planning tools and their uses

Learning outcomes teaching, Learning and Assessment Methods



أ.م.د. هادي محمد حسين عبد الوهاب

مدرس في قسم الميكانيكا في الكلية التقنية في كركوك

<p>A-1 Give an introduction to each topic in a simple manner.</p> <p>A-2 Explain in detail all the aspects of the topic, giving vivid examples to explain their nature and benefit.</p> <p>A-3 Use Show Data as an explanation</p> <p>A-4 Presenting questions about the topic to demonstrate students' understanding through their answers</p>
<p><b>B- Subject- specific skills</b></p> <p>Conduct experiments on the theoretical topic, request weekly reports, and involve students in groups . - 1</p>
<p>Teaching and learning methods</p>
<p>Giving theoretical and practical lectures, workshops.</p>
<p>Assessment Methods</p>
<p>In-class and online quizzes, homework, peer feedback activities and practice exams.</p>
<p><b>C- Thinking Skills</b></p>
<p><b>C-1 Identify the components of engineering workshops in detail</b></p> <p><b>C-2 Helping the student to analyze and estimate the components of engineering workshops</b></p> <p><b>C-3 Expand the student's mind in the field of engineering workshops</b></p>
<p>Teaching and learning methods</p>
<p>Giving theoretical and practical lectures, workshops.</p>
<p>Assessment Methods</p>
<p>In-class and online quizzes, homework, peer feedback activities and practice exams.</p>
<p><b>D- General and transferred skills (other skills related to employability and personal development).</b></p>
<p><b>D-1 Being able to deliver and explain scientific material</b></p> <p><b>D-2 Using methodological books to explain the material or accompanying assistance</b></p> <p><b>D-3 Using the virtual library as well as the Internet and referring to scientifically sound websites.</b></p>

D-4 Referring to modern sources and enriching the scientific material with everything new that serves the student and society.

### Program structure

Week	Hours	Required Learning Outcomes	Unit Name/Subject	Teaching Method	Method of Assessment
1		Carpentry, occupational safety and security when working in a carpentry workshop, learning about hand tools, learning about the correct ways to operate carpentry machines, learning about types of wood and their uses	Carpentry	Theoretical presentation	Sudden and quarterly exams
2		Carrying out simple work using tools and various carpentry tools	Carpentry	Theoretical presentation	Sudden and quarterly exams
3		Perform a simple column template exercise	Carpentry	Theoretical presentation	Sudden and quarterly exams
4		Plumbing, occupational safety and security when working in a plumbing workshop, different plumbing methods, types of metals used in plumbing, forming a simple practical template in front of the students using prank tools	Plumbing	Theoretical presentation	Sudden and quarterly exams
5		The students carry out a one-piece exercise and learn about the types of furnaces, methods of operating them, grinding them with metal, and according to the exercise, outside the furnace and cleaning it.	Plumbing	Theoretical presentation	Sudden and quarterly exams
6		Plumbing, occupational safety inside the workshop, various hand tools, types of pallets used and how to measure thickness, implementing a simple manual exercise for simple plumbing operations.	Plumbing	Theoretical presentation	Sudden and quarterly exams
7		How to bend a pallet, calculate the individuality of crafts, and perform the cylinder exercise	Plumbing	Theoretical and practical presentation	Sudden and quarterly exams
8		Performing a simple exercise for an iron block.	Plumbing	Theoretical and practical presentation	Sudden and quarterly exams
9		Lathe, professional safety of the lathe workshop.	<b>Lathing</b>	Theoretical and practical	Sudden and quarterly

	the lathe and its specifications, how to use it, its accessories and methods of installation, operating the lathe, types of lathe pens		presentation	exams
10	Carrying out a simple lathe exercise using measuring tools	Lathing	Theoretical and practical presentation	Sudden and quarterly exams
11	How to make internal and external teeth, how to choose blanks, and carry out an integrated lathe exercise	Lathing	Theoretical and practical presentation	Sudden and quarterly exams
12	How to make maquettes	Makets	Theoretical and practical presentation	Sudden and quarterly exams
13	How to make maquettes	Makets	Theoretical and practical presentation	Sudden and quarterly exams
14	How to make maquettes	Makets	Theoretical and practical presentation	Sudden and quarterly exams
15	How to make maquettes	Makets	Theoretical presentation	Sudden and quarterly exams

### *Infrastructure*

### *Required Course Books*

### Main references (sources)

Recommended books and references (scientific journals, reports,....)

B - Electronic references, Internet sites ...

### Course Books

reference books

Research, internet, scientific journals

Research, internet, scientific journals

### Course Development Plan

field studies





أ- الأهداف المعرفية

A1- This course aims to understand building materials, their properties and uses.  
A2- Preparing construction drawings and details. Identify the components and types of buildings through clear structure, construction, and material

B- Subject- specific skills

B1 - This course aims to understand building materials, their properties and uses;  
B2 - Preparing construction drawings and details. Identify the components and types of buildings through clear structure, construction, and material

Teaching and learning methods

Giving theoretical and practical lectures, workshops.

Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

C- Thinking Skills

Providing students with knowledge, skills, and applied engineering sciences by focusing on the basic concepts of the subject in developing the student's mind and preparing to receive scientific and engineering information in knowledge of building materials.

Teaching and learning methods

Giving theoretical and practical lectures, workshops.

Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

D- General and transferred skills (other skills related to employability and personal development).

D1 The ability to understand the features, properties and uses of building materials

D-2 The ability to understand locally available building materials and their advantages and disadvantages

D-3 The ability to absorb new materials and compare them with traditional materials.

### Program structure

Week	Hours	Required Learning Outcomes	Unit Name/Subject	Teaching Method	Method of Assessment
1		An Introduction about building materials The Stages of the construction of ,the building		Theoretical presentation	Sudden and quarterly exams
2		Stone, Types of stones, building by stone, Gypsum		Theoretical presentation	Sudden and quarterly exams
3		aggregate types and properties		Theoretical presentation	Sudden and quarterly exams
4		Types of cement and Its properties. Concrete, Types of Concrete and Its Properties, Concrete Components		Theoretical presentation	Sudden and quarterly exams
5		Types of cement and Its properties. Concrete, Types of Concrete and Its Properties,		Theoretical presentation	Sudden and quarterly exams
6		Steel, materials		Theoretical presentation	Sudden and quarterly exams
7		Aluminum, Plastic materials		Theoretical and practical presentation	Sudden and quarterly exams
8		wood types		Theoretical and practical presentation	Sudden and quarterly exams
9		Soil properties and types		Theoretical and practical presentation	Sudden and quarterly exams
10		Brick types		Theoretical and practical presentation	Sudden and quarterly exams
11		Brick types		Theoretical and practical presentation	Sudden and quarterly exams
12		Light and hollow Concrete and Thermostone, industry, components, properties, ) -uses		Theoretical and practical presentation	Sudden and quarterly exams
13		Light and hollow Concrete and Thermostone, industry, components, properties, ) -uses		Theoretical and practical presentation	Sudden and quarterly exams

14		Finishing and Insulation Materials		Theoretical and practical presentation	Sudden and quarterly exams
15		Types of wall		Theoretical presentation	Sudden and quarterly exams

*Infrastructure*

<i>Required Course Books</i>		Course Books
Main references (sources)		reference books
Recommended books and references (scientific journals, reports,...)		Research, internet, scientific journals
B - Electronic references, Internet sites ...		Research, internet, scientific journals

Course Development Plan	
field studies	



## learning outcomes teaching, Learning and Assessment Methods

### أ- الأهداف المعرفية

1. Knowledge of Physics: Students will develop a strong understanding of physics Physics, its applications and roles.
2. Applying physics in projects: Students will be able to apply Physics knowledge for real world projects, demonstrating Ability to design and implement specific requirements.
3. Analyze and improve physics: Students should be able to do this Physics analysis of performance, application optimization Techniques to improve these metrics.

### B- Subject- specific skills

The student acquires the skill of working in the field of education

- 2 The student acquires the skill of working in the field of industry, health and environment and electrical power generation stations

The student acquires the skill of working in the field of scientific research - 3

### Teaching and learning methods

Giving theoretical and practical lectures, workshops.

### Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

### C- Thinking Skills

#### Teaching and learning methods

Giving theoretical and practical lectures, workshops.

#### Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

D- General and transferred skills (other skills related to employability and personal development).

## Program structure

Week	Hours	Required Learning Outcomes	Unit Name/Subject	Teaching Method	Method of Assessment
1		Standards of Length, Mass, and Time. • Matter and Model Building. • Density and Atomic Mass. • Dimensional Analysis. • Conversion of Units. • Position, Velocity, and Speed. Acceleration.	Physics and Measurement •	Theoretical presentation	Sudden and quarterly exams
2		• Position, Velocity, and Speed. Acceleration.	Motion in One Dimension	Theoretical presentation	Sudden and quarterly exams
3		• The Concept of Force. • Newton's First Law and Inertial Frames. Mass. • Newton's Second Law. • The Gravitational Force and Weight	The Laws of Motion	Theoretical presentation	Sudden and quarterly exams
4		• Systems and Environments. • Work Done by a Constant Force. • The Scalar Product of Two Vectors. • Work Done by a Varying Force.	Energy and Energy Transfer	Theoretical presentation	Sudden and quarterly exams
5		• Systems and Environments. • Work Done by a Constant Force. • The Scalar Product of Two Vectors. • Work Done by a Varying Force.	Energy and Energy Transfer	Theoretical presentation	Sudden and quarterly exams
6		• Variation of Pressure with Depth. • Pressure Measurements. • Buoyant Forces and Archimedes's Principle.	Fluid Mechanics Pressure	Theoretical presentation	Sudden and quarterly exams
7		• Variation of Pressure with Depth. • Pressure Measurements. • Buoyant Forces and Archimedes's Principle.	Fluid Mechanics Pressure	Theoretical and practical presentation	Sudden and quarterly exams
8		• Heat and Internal Energy. • Specific Heat and Calorimetry. • Latent Heat. • Work and Heat in Thermodynamic Processes	Heat and the First Law of Thermodynamics	Theoretical and practical presentation	Sudden and quarterly exams
9		• Heat and Internal Energy. • Specific Heat and Calorimetry. • Latent Heat. • Work and Heat in Thermodynamic Processes	Heat and the First Law of Thermodynamics	Theoretical and practical presentation	Sudden and quarterly exams
10		• Properties of Electric Charges. • Charging Objects by Induction. • Coulomb's Law. • The Electric Field. • Electric Potential Magnetic Fields •	Electric Fields	Theoretical and practical presentation	Sudden and quarterly exams

		Magnetic Fields, Magnetic Field and Forces.			
11		<ul style="list-style-type: none"> <li>• Properties of Electric Charges.</li> <li>• Charging Objects by Induction.</li> <li>• Coulomb's Law.</li> <li>• The Electric Field .</li> <li>• Electric Potential</li> <li>• Magnetic Fields</li> <li>• Magnetic Fields, Magnetic Field and Forces.</li> </ul>	Electric Fields	Theoretical and practical presentation	Sudden and quarterly exams
12		<ul style="list-style-type: none"> <li>The Nature of Light.</li> <li>Measurements of the Speed of Light.</li> <li>The Ray Approximation in Geometric Optics.</li> <li>Reflection.</li> </ul>	The Nature of Light and the Laws of Geometric Optics	Theoretical and practical presentation	Sudden and quarterly exams
13		Reflection.	Reflection.	Theoretical and practical presentation	Sudden and quarterly exams
14		Preparatory Week	Preparatory Week	Theoretical and practical presentation	Sudden and quarterly exams
15		Final exam	Final exam	Theoretical presentation	Sudden and quarterly exams

*Infrastructure*

*Required Course Books*

Main references (sources)

Recommended books and references (scientific journals, reports,....)

B - Electronic references, Internet sites ...

Course Books

reference books

Research, internet, scientific journals

Research, internet, scientific journals

Course Development Plan

field studies



## Course description form

### Course description

This course emphasizes the fundamental language skills of reading, writing, speaking, listening, thinking, viewing and presenting.

Teaching Institution	Northern Technical University
Scientific Department / Center	Technical College of Kirkuk
Course name/code	English language
Forms of attendance available	Weekly
Semester/year	
Number of hours of study (total)	weeks (2 theoretical hour/week) with a total of (60 hours/year).
Date of preparation of this description	2024-2-18
Course Aims	
The student learns how to communicate effectively and appropriately in real life situation and use English effectively for study purpose across the curriculum. In addition, develop the interest in and appreciation of Literature, integrate the use of the four language skills i.e. Reading, Listening, Speaking and Writing.	

learning outcomes teaching, Learning and Assessment Methods

  
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A\ Knowledge and Understanding

A1- Developing reading skills and reading speed.

A2-

A3-

B- Subject- specific skills

B1 - Writing summaries in which they will communicate appropriately, accurately and effectively what has been read.

B2 -

Teaching and learning methods

Giving theoretical and practical lectures, workshops.

Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

C- Thinking Skills

C1- Developing abilities as critical thinkers, readers and writers.

Teaching and learning methods

Giving theoretical and practical lectures, workshops.

Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

D- General and transferred skills (other skills related to employability and personal development).

D1- Reading for intensive information retrieval and interpretation required by university studies.

D2-

D3-

**Program structure**

Week	Hours	Required Learning Outcomes	Unit Name/Subject	Teaching Method	Method of Assessment
1		The uses of there is/ there are	English Language	Theoretical presentation	Sudden and quarterly exams
2		Present Tense Simple	English Language	Theoretical presentation	Sudden and quarterly exams
3		Understanding Passive and Active Voice	English Language	Theoretical presentation	Sudden and quarterly exams
4		Simple Past Tense	English language	Theoretical presentation	Sudden and quarterly exams
5		Can/ Can't ability and permission	English language	Theoretical presentation	Sudden and quarterly exams
6		The use of would like, want and like.	English language	Theoretical presentation	Sudden and quarterly exams
7		Everyday English: talking about yourself	English language	Theoretical and practical presentation	Sudden and quarterly exams
8		The present continuous tense	English language	Theoretical and practical presentation	Sudden and quarterly exams
9		Negative and tag questions	English language	Theoretical and practical presentation	Sudden and quarterly exams
10		Present Continuous Form with Future Meanings (1, 2, 3)	English language	Theoretical and practical presentation	Sudden and quarterly exams
11		How to write a paragraph about yourself, how to write an essay	English language	Theoretical and practical presentation	Sudden and quarterly exams
12		Present Perfect Tense	English language	Theoretical and practical presentation	Sudden and quarterly exams
13		Review for WH-questions	English language	Theoretical and practical presentation	Sudden and quarterly exams
14		The uses of hot verbs (Do, Does, and Did)	English language	Theoretical and practical presentation	Sudden and quarterly exams

15		Modal verbs (Ability and Possibility)	English language	Theoretical presentation	Sudden and quarterly exams
16		Modal verbs (Requests, permission, and offers), Advice	English language	Theoretical presentation	Sudden and quarterly exams
17		Modal verbs (Obligation, and Necessity), Non-necessity and negative obligation	English language	Theoretical presentation	Sudden and quarterly exams
18		Modal verbs (Certainty and Uncertainty)	English language	Theoretical presentation	Sudden and quarterly exams
19		Relative clauses with who, which, that.	English language	Theoretical presentation	Sudden and quarterly exams
20		Relative clauses; prepositions; whom.	English language	Theoretical and practical presentation	Sudden and quarterly exams
21		Relative clauses with whose, what, when, where and why.	English language	Theoretical and practical presentation	Sudden and quarterly exams
22		Relative clauses with ~ ing, ed and infinitive forms.	English language	Theoretical and practical presentation	Sudden and quarterly exams
23		Defining and 'adding extra' relative clauses	English language	Theoretical presentation	Sudden and quarterly exams
24		Adjectives and adverbs: Use of adjectives; word order.	English language	Theoretical and practical presentation	Sudden and quarterly exams
25		Participle adjectives; it+ adjective+ infinitive ; the young	English language	Theoretical presentation	Sudden and quarterly exams
26		Adverbs position	English language	Theoretical presentation	Sudden and quarterly

					exams
27		Adverb types	English language	Theoretical presentation	Sudden and quarterly exams
28		Comparison 1: adjectives and adverbs	English language	Theoretical presentation	Sudden and quarterly exams
29		Comparison 2: sentence patterns	English language	Theoretical presentation	Sudden and quarterly exams
30		The use of too and enough, a bit, very, much, a lot, so , such	English language	Theoretical presentation	Sudden and quarterly exams

<i>Infrastructure</i>	
<i>Required Course Books</i>	Course Books
Main references (sources)	reference books
Recommended books and references (scientific journals, reports,....)	Research, internet, scientific journals
B - Electronic references, Internet sites ...	Research, internet, scientific journals

Course Development Plan
field studies

## Course description form

### Course description

Defining the concept of the whole and the part as an input. Defining the design principles and forms of relationships that are used to connect the design elements

Teaching Institution	Northern Technical University
Scientific Department / Center	Technical College of Kirkuk
Course name/code	Principles of art and architecture
Forms of attendance available	Weekly
Semester/year	
Number of hours of study (total)	weeks (4 theoretical hour/week) with a total of (60 hours/year).
Date of preparation of this description	2024-2-18
Course Aims	
Providing students with knowledge, skills, and attitudes in learning the basics of practicing various artistic activities by arriving at multiple solutions to the subject of artistic work. By determining the aesthetic values of works of art. - That the student is able to develop solutions to understand the third dimension in the artistic work. - That the student becomes able to perform artistic work with graphic and color depth to complete the requirements of the artistic work	

learning outcomes teaching, Learning and Assessment Methods



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#### A\ Knowledge and Understanding

Cognitive objectives include the mental processes of acquiring, understanding, applying, analysing, synthesising and evaluating information, and the verbs in these objectives often begin with present tense verbs to define, interpret, compare, create or criticize. For example, the cognitive learning objective of a class in Implementation: "By the end of this lesson, the learner will be able to apply"....

#### B- Subject- specific skills

The psychomotor field is represented by (physical skills and abilities) that require coordination, movement, and manipulation. Learning objectives in that field often begin with present tense verbs that indicate (performance, display, practice, or use). The objective of skill learning in preparing a class may be: "By the end of this lesson, the learner will be able to use/trace..." Examples of present tense verbs that can be used in formulating skill objectives are Using, installing, being good at using, coloring, blending, mixing, throwing, ) throwing, holding the pen, shaping, jumping, running, acting, imitating, (imitating, implementing, designing, singing, playing

#### Teaching and learning methods

Giving theoretical and practical lectures, workshops.

#### Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

#### C- Thinking Skills

C1- Developing abilities as critical thinkers, readers and writers.

C2- The ability to analyses, deduce, evaluate and issue judgement

#### Teaching and learning methods

Giving theoretical and practical lectures, workshops.

#### Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

D- General and transferred skills (other skills related to employability and personal development).

D1- Benefiting from the scientific department's program

.D2 - Using the curricula of corresponding departments in Arab colleges

.D3- Communicate with external artistic display means



## Program structure

Week	Hours	Required Learning Outcomes	Unit Name/Subject	Teaching Method	Method of Assessment
1		Overview of the course and its objectives	Introduction to Art and Architecture	Theoretical presentation	Sudden and quarterly exams
2		Engineering tool, elements	Elements of Design	Theoretical presentation	Sudden and quarterly exams
3		Principles of design	Introduction to the Principles of design	Theoretical presentation	Sudden and quarterly exams
4		Drawing Fundamentals for Architects	Importance of drawing skills in architecture	Theoretical presentation	Sudden and quarterly exams
5		Understanding Space and Scale , proportion	Exploring the concepts of space and scale in art and architecture	Theoretical presentation	Sudden and quarterly exams
6		Architectural composition	types of geometric forms' connections	Theoretical presentation	Sudden and quarterly exams
7		Color Theory and Application	Basics of color theory and its significance in art and architecture	Theoretical and practical presentation	Sudden and quarterly exams
8		Architectural Styles: From Classical to Contemporary	Introduction to various architectural styles throughout history	Theoretical and practical presentation	Sudden and quarterly exams
9		Introduction to Interior Design	Exploring the principles of interior design in architectural spaces	Theoretical and practical presentation	Sudden and quarterly exams
10		Landscape Design and Site Planning	Introduction to landscape design principles	Theoretical and practical presentation	Sudden and quarterly exams
11		Architectural Representation: Models and Visualization	Introduction to architectural models and their role in design	Theoretical and practical presentation	Sudden and quarterly exams
12		Sustainable Design and Green Architecture	Introduction to sustainable design practices in architecture	Theoretical and practical presentation	Sudden and quarterly exams
13		Future Trends in Architecture	Exploring emerging technologies and their impact on architecture	Theoretical and practical presentation	Sudden and quarterly exams
14		Trends in sustainable design, smart cities, and adaptive reuse	Discussion on the future challenges and opportunities in the field of architecture	Theoretical and practical presentation	Sudden and quarterly exams

15		Exploring different visualization techniques (renderings, digital modeling, etc.)	Understanding the importance of effective communication in architectural representation	Theoretical presentation	Sudden and quarterly exams
16		Exploring environmentally friendly materials and energy-efficient strategies	Case studies of green buildings and their sustainable features	Theoretical presentation	Sudden and quarterly exams

<i>Infrastructure</i>	
<i>Required Course Books</i>	Course Books
Main references (sources)	reference books
Recommended books and references (scientific journals, reports,....)	Research, internet, scientific journals
B - Electronic references, Internet sites ...	Research, internet, scientific journals

Course Development Plan
field studies

## Course description form

### Course description

The student will have learned about the main architectural elements, their meanings, and the components of architectural drawing boards. 2 - Applying the technical relationships of the essential components in developing a system for preparing structures internally through architectural drawing and the components of architectural drawing boards. Students discuss and explore the foundations of projection and sector conventions in interior architecture projects. Developing creative systems in drawing production. Through its basics and terminology, students feel the extent and value of architectural drawing in interior design and furniture.

Teaching Institution	Northern Technical University
Scientific Department / Center	Technical College of Kirkuk
Course name/code	Architectural drawing
Forms of attendance available	Weekly
Semester/year	
Number of hours of study (total)	10 practical
Date of preparation of this description	2024-2-18
Course Aims	

  
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By the end of this course, the student will have become acquainted with the main architectural elements, their implications, and the components of architectural drawing boards. 2 - Applying the technical relationships of the essential components in developing an internal facility preparation system through architectural drawing and the components of architectural drawing boards. Students discuss and explore the foundations of projection and sector conventions in interior architecture projects. Creative systems in producing architectural drawing through its basics and terminology. Students feel the extent and value of architectural drawing in interior design and furniture.

learning outcomes teaching, Learning and Assessment Methods

A\ Knowledge and Understanding

1 - Identify the concept of architectural drawing, its elements, and components of architectural drawing panels

2-Identify the technical terminology of architectural drawing and their technical implications

3- Learn about the methods of highlighting the main architectural elements in the components of interior architecture through architectural .drawing, projections and sectors

B- Subject- specific skills

1 - The ability to control the use of projections and sectors in decorative designs

The ability to use artistic and technical methods in the language of architectural drawing in paintings

2- The ability to create creative systems in architectural drawing by creating designs that enjoy authenticity, contemporaneity, and an aesthetic spirit that .keeps pace with the era of globalization

Teaching and learning methods

Giving theoretical and practical lectures, workshops.

Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

### C- Thinking Skills

Gaining the ability and skill to distinguish signs and symbols available in advanced engineering drawing to implement the idea with the highest possible accuracy. Acquiring the skill of direct work in implementing the creative idea using the available design means. Using the principles of engineering drawing to solve various design problems

### Teaching and learning methods

Giving theoretical and practical lectures, workshops.

### Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

### D- General and transferred skills (other skills related to employability and personal development).

1 - The ability to distinguish, analyze and find appropriate solutions for pedestrians All design. 2 - The ability for students to interact among themselves within student groups ( for group work). 3 - The ability to clarify ideas in the form of integrated architectural plans In an educational manner.

## Program structure

Week	Hours	Required Learning Outcomes	Unit Name/Subject	Teaching Method	Method of Assessment
1		General introduction	General principles.	Theoretical presentation	Sudden and quarterly exams
2		Engineering tool, elements	Architectural Compositions.	Theoretical presentation	Sudden and quarterly exams
3		Architectural design principles	Pencils Techniques.	Theoretical presentation	Sudden and quarterly exams
4		point	Types of Lines (one dimension) Final Presentation	Theoretical presentation	Sudden and quarterly exams
5		Line (one dimension) linear elements	Day sketch.	Theoretical presentation	Sudden and quarterly exams
6		Line (one dimension) linear elements	Engineering shapes (Circle, Square, Triangle)...etc	Theoretical presentation	Sudden and quarterly exams
7		Plan(2D) walls, roofs, floors	Regular & Irregular in practice.	Theoretical and practical presentation	Sudden and quarterly exams
8		Volumes components of volume, volume dual.	Presentation in graphic. Final Presentation	Theoretical and practical presentation	Sudden and quarterly exams
9		Form (3d).	Day sketch	Theoretical and practical presentation	Sudden and quarterly exams
10		Properties of form	Texture in Architecture & Materials. Final Presentation	Theoretical and practical presentation	Sudden and quarterly exams
11		Primary shapes, primary solids.	Light Degrees between (white, gray & black)	Theoretical and practical presentation	Sudden and quarterly exams
12		regular shapes, transformation of form	Use Colors between Art composition & Engineering shapes.	Theoretical and practical presentation	Sudden and quarterly exams
13		Method of a joining forms	Colage.	Theoretical and practical presentation	Sudden and quarterly exams
14		Types of compositions	Planes (two dimensions) Final Presentation	Theoretical and practical presentation	Sudden and quarterly exams
15		Edges, Articulation of forms	Day Sketch.	Theoretical presentation	Sudden and quarterly exams
16		Engineering Volumes (three dimensions).	Final Presentation	Theoretical presentation	Sudden and quarterly exams

*Infrastructure*

*Required Course Books*

Course Books

Main references (sources)

reference books

Recommended books and references (scientific journals, reports,....)

Research, internet, scientific journals

B - Electronic references, Internet sites ...

Research, internet, scientific journals

Course Development Plan

field studies

## Course description form

### Course description

The free hand drawing curriculum for the architecture student aims at several important goals for the formation of the architect during his academic years, which go beyond learning the means and techniques of free hand drawing to develop visual perception and a mature architectural engineering vision of the world, which is very important for the architect

Teaching Institution	Northern Technical University
Scientific Department / Center	Technical College of Kirkuk
Course name/code	Free Hand
Forms of attendance available	Weekly
Semester/year	
Number of hours of study (total)	weeks (6 practical hour/week)
Date of preparation of this description	2024-2-18
Course Aims	
The balance of vision and the development of artistic taste for objects and formations	
Exercising the sense of sight on the vision and linking it to previous information about the theory of perspective to form thought, perception and visualization of that form.	
Exercising the hand on expression by creating a harmonious relationship between the vision, the brain and the hand to express the visual perception of the world.	

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رئيس قسم تقنيات هندسة العمارة والـ



learning outcomes teaching, Learning and Assessment Methods

#### A\ Knowledge and Understanding

- - Recognize the differences between the values of light, shade and shadows in the theory of perspective and learn to express them.
- Learn the methods and techniques of drawing with different materials such as pencils and colors
- Developing the ability to see the elements of artistic formation, such as lines, shapes, sizes, textures and directions, and analyze them in the model.

#### B- Subject- specific skills

- Developing the ability to see the elements of artistic formation, such as lines, shapes, sizes, textures and directions, and analyze them in the model.
  - Developing self-reliance in the process of vision and expression through a series of drawing exercises that range in difficulty from simple shapes to more complex ones.
- Obtaining a musical visual vision that will be important and useful for future architecture students.

#### Teaching and learning methods

Giving theoretical and practical lectures, workshops.

#### Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

#### C- Thinking Skills

C1- Developing abilities as critical thinkers, readers and writers.

#### Teaching and learning methods

Giving theoretical and practical lectures, workshops.

#### Assessment Methods

In-class and online quizzes, homework, peer feedback activities and practice exams.

#### D- General and transferred skills (other skills related to employability and personal development).

Giving the student the basic concepts and previous information about the reality that he draws through a model, and then criticizing the drawing so that the student acquires the skill of correct vision and the ability to express

. Diversifying the shapes and configurations of the model and the gradation in the degree of complexity from simple to complex

#### Program structure

Week	Hours	Required Learning Outcomes	Unit Name/Subject	Teaching Method	Method of Assessment
1		Introductory test for know the student aptitude	Free Hand	Theoretical presentation	Sudden and quarterly exams
2		Training for draw lines in different directions	Free Hand	Theoretical presentation	Sudden and quarterly exams
3		Simple model consist of cubes – stage 1	Free Hand	Theoretical presentation	Sudden and quarterly exams
4		Advance model consist of cubes – stage 1	Free Hand	Theoretical presentation	Sudden and quarterly exams
5		General discussion with the student about the drawing and paint	Free Hand	Theoretical presentation	Sudden and quarterly exams
6		Simple model consist of circle shapes & cylinders – Stage 1	Free Hand	Theoretical presentation	Sudden and quarterly exams
7		Simple model consist of circle shapes & cylinders – Stage 2	Free Hand	Theoretical and practical presentation	Sudden and quarterly exams
8		Simple model consist of circle shapes & cylinders – Stage 3	Free Hand	Theoretical and practical presentation	Sudden and quarterly exams
9		Simple model consist of oblique cubes – stage 1	Free Hand	Theoretical and practical presentation	Sudden and quarterly exams

10		Simple model consist of oblique cubes – stage 2	Free Hand	Theoretical and practical presentation	Sudden and quarterly exams
11		Simple model consist of potteries	Free Hand	Theoretical and practical presentation	Sudden and quarterly exams
12		simple model consist of irregular forms1	Free Hand	Theoretical and practical presentation	Sudden and quarterly exams
13		Advance model consist of irregular forms2	Free Hand	Theoretical and practical presentation	Sudden and quarterly exams
14		General discussion with the student about the drawing and paint	Free Hand	Theoretical and practical presentation	Sudden and quarterly exams
15		Simple model consist of oblique cubes – stage 1	Free Hand	Theoretical presentation	Sudden and quarterly exams
16		Simple model consist of oblique cubes – stage 2	Free Hand	Theoretical presentation	Sudden and quarterly exams

#### *Infrastructure*

#### *Required Course Books*

#### Course Books

#### Main references (sources)

#### reference books

Recommended books and references (scientific journals, reports,....)

Research, internet, scientific journals

B - Electronic references, Internet sites ...

Research, internet, scientific journals

#### Course Development Plan

field studies