



Mathematics I ENGC121

Academic Year	: 2022-2022 Fall
Credit Hour	: (2-0-1) 3
Course web page	: https://classroom.google.com
	Class code : g4bgbg6
Pre-requisites	: None.

Catalog Description:

Definition of functions, domain and range of functions, graph of functions, symmetry analysis: odd and even functions test ,composing of functions, shifting scaling and reflecting of functions, equation of straight lines, trigonometric functions and their identities, limits of fundamental functions, limits of trigonometric functions, sandwich theorem, limit when x approaches infinity, introduction to derivative, differentiation by definition, differentiations rules, differentiation of trigonometric functions, The Chain Rule, Implicit Differentiation, Applications of Derivatives, related rate, Extreme Values of Functions, Concavity, Curve Sketching, Matrices.

Text Book:

Thomas Jr, G. B., Weir, M. D., Hass, J., Heil, C., & Edition, T. (2014). Early TraNSCENDENTaIS.

Course Outcomes:

By successfully completing this course, students shall be able to:

1. Distinguish between functions and equations.
2. Evaluate the domain and range of discrete as well as continuous function.
3. Compose functions from fundamental entities and evaluate their domain and range.
4. Graph functions both in hand and using the online-graph calculator.
5. Test the symmetry of functions around the y-axis and the point of origin.
6. Shift, compress, and stretch functions horizontally and vertically.
7. Calculate the trigonometric functions using the radian system, test their symmetry and derive their identities.
8. Express the equation of straight line in terms of slope and intercept and find the slope of another parallel or perpendicular line from a predefined line.
9. Distinguish between the limit and the value of a function at a specific point.
10. Apply the limit rules to polynomial, rational, and trigonometric functions.
11. Calculate the limit of a function squeezed between two defined functions using the sandwich theorem.
12. Determine the limit of functions as x approached infinity.
13. Differentiate functions indirectly using the limit rules.
14. Apply differentiation rules on functions using classical derivative.
15. Differentiate trigonometric functions.
16. Differentiate composed functions with one or more intermediate variables.
17. Evaluate derivatives of implicit relations.
18. Employ derivative rules to study applied problems such as optimization, curve sketching, and finding extreme points.



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Weekly Teaching Plan:

Week 1	Introduction to functions
December/2020	
	Definition of function, the difference between functions and equations, types of functions, the domain and range of functions. The Vertical Line Test for a Function.
Week 2	Composing functions
	Creating new functions from algebraic operations, evaluating the domain and range of the composed functions, Excluding the singularity of composed functions.
Week 3	Symmetry analysis of functions
	Definition of symmetry, types of symmetry, even, odd, and nonsymmetric function, mathematical test of symmetry, graphical test of symmetry.
Week 4	Straight Lines
	Equation of straight line, calculating the slope, the intercept with y-axis, lines defined by two points, lines defined by a slope and intercept, parallel lines, perpendicular lines, distance between a point and a line.
Week 5	Trigonometric functions
	Definition of radian system, conversion between degree and radian systems, definition of trigonometric functions and their graphs, symmetry of trigonometric functions, domain and range of trigonometric functions.
Week 6	Limits
	Definition of limit, the difference between limit and function's value, limit rules, limits of trigonometric functions, sandwich theorem.
Week 7	Limits-continued and differentiation
	Limits involving infinity, introduction to differentiation, evaluating derivative, classical derivative and differentiations rules, derivative of trigonometric function.
Week 8	Differentiation-Continued
	Tangent Lines to a curve and normal to the tangent, Velocity and Acceleration.
Week 9	The Chain Rule
	Derivative of a Composite Function, Outside-Inside Rule, The Chain Rule with Powers of a Function.
Week 10	Implicit Differentiation
	Implicitly Defined Functions, Derivatives of Higher Order, Lenses, Tangents, and Normal Lines.

Week 11	Applications of Derivatives
	Introduction to related rate, Related Rates Equations, Related Rates Problem Strategy.
Week 12	Extreme Values of Functions
	Local (Relative) Extreme Values, Finding Extrema, First Derivative Test for Local Extrema
Week 13	Concavity
	The Second Derivative Test for Concavity, Points of Inflection, Second Derivative Test for Local Extrema
Week 14	Curve Sketching
	Procedure for Graphing, Graphical Behavior of Functions from Derivatives, Vertical; Horizontal; and Oblique asymptotes.
Week 15	Matrices
	Dimensions, addition, subtraction, multiplication, transpose, determinants, cofactors.



Students Behavior in Class

As the classes are held online and lectures are delivered live where all students must be present while the teacher is delivering the lectures, it is obligatory to adhere to the following rules:

- Use the chat section only for discussing the subject and the relevant questions about the lecture content.
- Do not use the class stream for resisting the course plan, encouraging strike, or confusing others.
- If you have a specific question, use the private comments to discuss that with the course instructors. That makes it easy for us to follow your concerns case by case.
- Submit assignments, quizzes, and evaluations tests by the due date.

Failure to meet behavioral expectations may lead to dismissal from the classroom.

Plagiarism and Cheating

Each student must submit his own work. Copying someone's work whether in part or in full is considered cheating and both students will receive grade 0 for the first time. Repeating that misdemeanor will be reported to the school officials to apply the legal procedures to those students.

Email Policy

The instructor will be happy to answer questions related to course content via email. Complex technical questions should be addressed in tutorial, after the main lecture or via Google classroom.

Grading Policy:

Attendance	5pt
Quiz	5pt
Test1	15pt
Test2	15pt
Final exam	60pt
Total	100pt

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Mechanical Engineering Department



Exam Policy

- No phones calls or web contact are allowed during the exams.
 - The final exam must be taken to complete the course.
 - Every student should show up 30 minutes before the final exam to help proctors verify his/her identity and walk him/her through the examination steps.
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Instructor : Dr. Mohanad K Radhi
Room No. : 409, Mechanical Engineering Department (main Building), 4th floor.
Email ID : radhi83@uomosul.edu.iq
Last updated : December, 2022.

Co Instructors : Suha Hashim
Email ID :

Engineering Drawing

ENGC123

Spring course	:	2023
Credit hour	:	(0-3-0) 1
Course web page	:	https://classroom.google.com
Class code :	:	uv3onb7
Pre-requisites	:	Introduction to Engineering drawing

Reference Books:

- "ENGINEERING DRAWING AND GRAPHIC TECHNOLOGY", Thirteen Edition, By: THOMAS E.FRENCH, CHARLES .VIERCK, ROBERT J.FOSTER
- ENGINEERING DRAWING AND AUTO CAD", By:RAMZY SYHOOD HAMIED
- 3. TECHNICAL GRAPHICS COMMUNCATION", THIRD EDITION, Gary R.

Catalog Description:

The course will cover the basic of engineering drawing which is how to draw line, circle, curve and angle. There are two parts in this course, first of all will be focused in engineering drawing. Students will develop understanding of fundamentals and application of the following topics: 1. Introduction to engineering drawing and its tools , Point.

- Introduction to engineering drawing and its tools , Point. .
- Introduction to engineering drawing and its tools , Line
- The types of line and its properties , Line
- Engineering shapes and the arcs , lamina.
- Multiview projection , Projection of Lamina on Auxiliary Plane.
- Dimensions , isometric
- Isometric projection , isometric.
- conclusion the missing view , section of isometric body

Graduate outcomes (GOs) addressed by the course:

i	ii	iii	iv	v	vi	vii
✓	✓		✓	✓		

Course Outcomes:

Upon successful completion of this course, students will be able to

- 1) Students acquire the necessary skill to draw shapes manually To be able to clarify and design a specific form or idea for implementation (i).
- 2) 2) Use different methods to draw geometric shapes (ii).
- 3) 3) Explanation of the engineering drawing of the different geometric shapes (i,iv).
- 4) Developing the ability to visualize the student & the student's creative abilities to be able to read engineering maps (iv,v).

Weekly Teaching Plan: October 15, 2023, to Febraury 15, 2023

Week 1	Introduction to engineering drawing and its tools , Point
Week 2	The types of line and its properties , Line
	Class worke 2 Homework 2 First Quiz
Week 3,4&5	Engineering shapes and the arcs , lamina. , Dimensions
	Class worke 3 Homework 3 Second Quiz
Week6,8,9,10,11,12,&13	Multiview projection , Projection of Lamina on Auxiliary Plane
	Class worke 3 Homework 3 Third Quiz
	1st Term Examination

Week 14&15	conclusion the missing view , section of isometric body		
	Class worke 2	Homework 2	Fourth Quiz
Final Exam			

Grading Policy:

Home works	4pt	Note: Attendance is compulsory, and absence from more than five lectures leads to a zero attendance mark.
Class Works	4pt	
Fourquizzes, (each 3pt)	12pt	
Attendance	5pt	
Participation	5pt	
1 st term Exam	20pt	
Final Exam	50pt	
Total	100pt	

Students' behavior in class

Please adhere to the following expectations to ensure a respectful environment that allows all students to learn effectively in all classes.

- All exams will be Closed-Book, Closed-Notes. Bring a calculator, pencil, and eraser for the exams.
- No phones or electronic devices are allowed to use during the exams. Phones and electronic devices must be switched off and put away during the final exam.
- The final exam must be completed in order to complete the course.
- Four Quizzes 40-minute duration time, will be held at the end of the class period on the dates indicated on the weekly schedule.
- Sharing of items during the exams is prohibited (e.g. calculators, rulers, erasers, etc.) under any circumstances.
- Students must be in the classroom on time and bring all subject notes and lectures provided by the teacher.
- Students are not allowed to talk to other students during the lecture. All speech should be directed to the lecturer.
- Students should avoid copying homework.

- Students are encouraged to use internet resources to enrich their knowledge about engineering drawing topics.

Copy Policy

The student's work is canceled if the instructor notices any actions of copying

Classroom:

Time: TBD.

Course web page: <https://classroom.google.com>

Google Classroom: If you have questions, please do not hesitate to contact the instructor.

Please, check Google classroom regularly for any updates.

The information contained in this syllabus is subject to change without notice.

Students are expected to be aware of any additional course policies presented by the instructor during the course.

Exams policy

- All exams will be closed book
 - No mobile is allowed
 - Sharing items with other students in the exam is prohibited
 - The final exam must be completed to complete the course.
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Instructor: Nooraldeen Saleh Alenazi

Room No.: 314

Email: nooraleln2017@uomosul.edu.iq



PHYSICS

1. تفاصيل المقرر

ENGE133

Autumn course	:	2023
Credit hour	:	(2-0-0) 2
Course web page	:	https://classroom.google.com
Class code	:	
Pre-requisites	:	Fundamentals of Engineering Physics

Reference Books:

- **Physics for scientists and engineers: An interactive approach.** Robert Hawkes, Javed Iqbal, Firas Mansour, Marina Milner-Bolotin and Peter Williams. 2nd edition, 2019.
- **Physics for Scientists and Engineers with modern physics.** Raymond A. Serway and John W. Jewett. 9th edition, 2014.
- **Fundamentals of Physics.** David Halliday, Robert Resnick and Jearl Walker. 10th Edition, 2014.
- **Engineering Mechanics: Dynamics - Volume 2.** J.L. Meriam, L.G. Kraige and J. N. Bolton. 8th edition, 2015.
- **Electronic Devices.** Thomas L. Floyd. 9th Edition, 2012.

Catalog Description:

2. وصف عام للمقرر

The course objects demonstrate sequence in physics primarily for students intending to major in a field of mechanical, electrical, architectural and civil engineering. Calculus will be used as needed and should be taken at least concurrently.

Topics included in this course divided into three chapters as:

Chapter One:

Introduction to Physics; Kinematics; Forces and motion; Newton's Laws of Motion; Work; Energy; power; Linear Momentum; Impulse; Simple Harmonic Motion; Universal Gravitation; Fluid Mechanics.

Chapter Two:

Atoms Structure; Atomic Energy Level; Materials Used in Electronics; Current and Voltage; electrical circuit; Ohm's Law; Power and Energy; Parallel and Series Networks; Kirchhoff's Law; Diodes and Transistors.

Chapter Three:

Basic of Architectural Physics; Solar Radiation; Heat Transfer (Conduction, Convection, and Radiation); Sound; Noise; Sound Intensity; Sound Insulation; and Thermal Behaviour of Materials.

3. محصلات الخريجين المستهدفة في المقرر.

Graduate outcomes (GOs) addressed by the course:

i	ii	iii	iv	v	vi	vii
✓	✓		✓	✓		

4. الاهداف التعليمية للمقرر الدراسي , تتطابق مع محصلات الخريجين التي تم اختيارها اعلاه

Course Outcomes:

Students who study principles of physics will be able to

- 1- State SI units, and write the units and their abbreviations correctly (i);
- 2- Determine whether a physical quantity is a vector or a scalar (i);
- 3- Distinguish between kinematic and kinetic energy (i,iv);
- 4- Define, calculate, and distinguish between distance and displacement, average and instantaneous speed and velocity, and average and instantaneous acceleration (i,iv);
- 5- State, explain, and apply Newton's three laws of motion (ii,v);
- 6- Differentiate between static and kinetic friction, and solve friction problems (i,ii);
- 7- State and apply Hooke's law for ideal springs (iv,v);
- 8- Define work, and calculate the work done by a constant force in one and two dimensions (iv,v);
- 9- State the work–energy theorem, and use it to solve problems (iv,v);
- 10- Apply the principle of conservation of mechanical energy to solve simple problems in mechanics (iv,v);
- 11- Calculate both kinetic and potential energy (i,iv);
- 12- Calculate the power (i,iv);
- 13- Define linear momentum, and calculate and compare momenta of various objects (i);
- 14- Express Newton's laws in terms of rates of change of linear momentum (i);
- 15- Define and calculate impulse (i,iv);
- 16- State, explain, and apply the simple harmonic motion (i,ii);
- 17- Solve problems using Newton's law of universal gravitation and calculate the gravitation for different locations (i.e. Earth, Moon, Sun and etc.) (i,ii);
- 18- Calculate the pressure and density of fluid at different depth;
- 19- Explain the Hydrostatic Pressure;
- 20- Explain Pascal's principle and the operation of a hydraulic lift;
- 21- Define and describe the buoyant forces and Archimedes's principle, furthermore, weighing an object immersed in a fluid;
- 22- Derive the equation of continuity for fluids;
- 23- Use Bernoulli's equation to calculate flow speed and pressure of a moving fluid for simple situations.

- 24- Define and describe the flow of heat through a material by direct molecular contact (conduction).
- 25- Define and describe the transfer of heat by the movement or flow of molecules -liquid or gas (convection).
- 26- Define and describe the transfer of heat by electromagnetic waves through a gas or vacuum (Radiation).
- 27- Define and describe the energy flow and its direction that comes from the sound (Sound intensity).
- 28- Voice leaks, the causes and how can be avoided (Sound Insulation).
- 29- Define and describe the Bohr model of an atom.
- 30- Define electron, proton, neutron and nucleus.
- 31- Explain electron shells and orbits.
- 32- Explain and calculate the energy levels.
- 33- Define valence electron, free electron and ions.
- 34- Explain insulators, conductors, and semiconductors and how they differ.
- 35- Define valence band and conduction band, and compare between the semiconductor atom and the conductor atom.
- 36- Understanding the fundamental concepts of current and voltage.
- 37- Explain the electrical circuit elements and its objects.
- 38- Define Ohm's law, and calculate power and energy
- 39- Analyze the electric circuits in both parallel and series connections.
- 40- Define Kirchhoff's law, and analysis the electrical circuits using Kirchhoff's law.
- 41- Explain the electrical symbols for a diode and diode applications.
- 42- Define the bias and its effect on the depletion region.
- 43- Define the barrier potential and its effects.
- 44- Explain the electrical symbol of a transistor, and describe the basic transistor operation.

5. جدول بمفردات المنهج والاسابيع المخصصة لكل موضوع

Weekly Teaching Plan: December 20, 2022, to February 10, 2023

Week 1 Dece. 2022	Introduction to physics; Standards of length, mass and time; Scalar and Vector quantities; Kinematics; Position, Displacement and Distance; Speed, Velocity and Acceleration; Forces and motion; Mass and gravity force; Newton's three laws of motion.
Week 2	Spring forces and Hooke's law; Friction forces; Uniform circular motion; Work; Kinetic and Potential Energy; The work-kinetic energy theorem; Conservation of total mechanical energy; and Power. (Tutorial sheet No.1) H.W1
Week 3	Linear momentum; Momentum and kinetic energy; Rate of change of linear momentum and Newton's laws; Law of conservation of linear momentum; Impulse; and Simple Harmonic Motion. (Tutorial sheet No.2) H.W2
First Quiz	
Week 4	Universal gravitation; Newton's law of universal gravitation; Free-fall acceleration and the gravitational force; and Solve problems using Newton's law of universal gravitation and calculate the gravitation for different locations.
Week 5	Fluid mechanics; Pressure and density of fluid at different depth; Hydrostatic pressure; Pascal's principle and the operation of a hydraulic lift; Buoyant forces and Archimedes's principle; the equation of continuity for fluids; and the Bernoulli's

	equation. (Tutorial sheet No.3) H.W3
Second Quiz	
Week 6	Basic of Architectural Physics; and Solar Radiation. (Tutorial sheet No.4) H.W4
Week 7&8	Heat Transfer (Conduction, Convection, and Radiation). (Tutorial sheet No.5) H.W 5
Third Quiz	
Week 9	Sound; Noise; Sound Intensity
Week 10	Sound Insulation; and Thermal Behaviour of Materials.
Semi-Final Exam	
Week 11	Atoms Structure; Atomic Energy Level; and Materials Used in Electronics.
Week 12	Current and Voltage; electrical circuit; and Ohm's Law. (Tutorial sheet No.6) H.W 6
Fourth Quiz	
Week 13	Power and Energy; and Parallel and Series Networks.
Week 14	Kirchhoff's Law. (Tutorial sheet No.7) H.W 7
Fifth Quiz	
Week 15	Diodes and Transistors.
Final Exam	

6. وصف طريقة توزيع الدرجات على اعمال الطلبة

Grading Policy:

Home works	7pt	<p>Note: Attendance is compulsory, and absence from more than five lectures leads to a zero-attendance mark.</p>
Quizzes	5pt	
Attendance	4pt	
Participation	4pt	
Mid-Term Exam	20pt	
Final Exam	60pt	
Total	100pt	

Students' behavior in class

Please adhere to the following expectations to ensure a respectful environment that allows all students to learn effectively in all classes.

- Students must be in the classroom on time and bring all subject notes and lectures provided by the teacher.
- Students are not allowed to talk to other students during the lecture. All speech should be directed to the lecturer.
- Students' mobile must be off-mode, and the lecturer cannot permit the student to receive mobile calls.
- Students should avoid copying and pasting homework.
- Students are encouraged to use internet resources to enrich their knowledge about vibration topics.

Copy and Paste Policy

The student's work is canceled if the instructor notices any actions of copying and pasting.

Classroom:

Time: TBD.

Course web page: <https://classroom.google.com>

Google Classroom: If you have questions, please do not hesitate to contact the instructor.

Please, check Google classroom regularly for any updates.

The information contained in this syllabus is subject to change without notice.

Students are expected to be aware of any additional course policies presented by the instructor during the course.

Exams policy

- All exams will be closed book
 - No mobile or programmable calculator is allowed
 - Sharing items with other students in the exam is prohibited
 - The final exam must be completed to complete the course.
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Instructor: Dr. Ahmed Fouad Al-Neama

Room No.: 410

Email: ahmedfalneama@uomosul.edu.iq



Assessment tools for ENGE133								
		ملاحظات	i	ii	iv	v	SUM	نسبة
Home works	4pt	ما المحصل التعليمي المستهدف تحقيقه من الواجب ؟		1			1	75 %
HW1	1pt			1			1	80 %
HW2	1pt				1		1	80 %
HW3	1pt				1		1	80 %
HW4	1pt				1		1	80 %
HW5	1pt					1	1	75 %
HW6	1pt					1	1	75 %
HW7	1pt					1	1	70 %
							7 pt	5pt
Quizzes	5pt	ما المحصل التعليمي المستهدف تحقيقه من الامتحان القصير ؟						
Q1	1pt		1				1	50 %
Q2	1pt		1				1	60 %
Q3	1pt			1	1		1	40 %
Q4	1pt				1		1	40 %
Q4	1pt						1	60 %
							6 pt	3 pt
Mid-Term Exam	20pt	ما المحصل	4	4	6	6	20 pt	12 pt
Participation+ Attendance	10 pt	التعليمي المستهدف					10 pt	10 pt
Final Exam	60pt	تحقيقه؟	10	15	20	15	60 pt	40 pt
Total	100pt		14	20	31	24	100pt	70 pt



Manufacturing processes 1

MEC102

Spring course	:	2023
Credit hour	:	(2-3-0) 3
Course web page	:	https://classroom.google.com
Class code :	:	k2pkiaa
Pre-requisites	:	Manufacturing processes 1

Reference Books:

- طرق التصنيع والعمليات , د. احمد الخطيب و د. خالد ايوب , مطبعة جامعة الموصل/ دار الكتب للطباعة والنشر, 1981
- الوسيط في هندسة الانتاج , د. حسين رجب السيد, دار الراتب الجامعية , بيروت 1984
- مبادئ عمليات الانتاج, د. قحطان خلف الخزرجي , د. عادل محمود حسن , مطبعة التعليم العالي , الطبعة الثانية , 1987

Catalog Description:

Manufacturing can be basically defined as an addition processes by which raw materials of low utility and value due to it's inadequate material properties and poor or irregular size, shape and finishing are converted into high utility and valued products with definite dimensions, forms and finish imparting some functional ability. An introduction to the principle of the manufacturing processes, properties of materials, types of materials, types of manufacturing processes, general consideration of manufacturing, selection methods of production, casting processes and production of ferrous metals in addition to workshop laboratory will be covered in this course..

Graduate outcomes (GOs) addressed by the course:

i	ii	iii	iv	v	vi	vii
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✓	✓	✓		✓		✓
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Course Outcomes:

Students will develop understanding of fundamentals and application of the following topics:

- 1- Measuring tools, Metrology.(**i**)
- 2- Sources of Error in measurement, Geometric error.(**ii**)
- 3- Clearance & Tolerance, Tolerance zone diagram.
- 4- Fits (Clearance & interference)
- 5- Hole base system & shaft base system.(**ii**)
- 6- Machine tools (Turning, Drilling) .(**iii**)
- 7- Machine tools (Milling and Grinding).(**v**)
- 8- Secondary manufacturing processes (Welding, and Joining).(**vii**)

Workshop Laboratory

- 1- Turning , Threaded (**i**).
- 2- Mig and Oxy – acetylene Welding (**ii**)
- 3- Casting and sand lab.(**iii**)
- 4 Milling and grinding (**v**)
- 5- Micro – meter and Gage blocks , Measuring lab. (**vii**)
- 6- Tool Life (**vii**)

Note: students will be divided in six groups in workshop lab.

Weekly Teaching Plan: Mars 19, 2023, to July 2, 2023

Week 1	Processes of precise measurement. Workshop lab.
Week 2	I-T International Tolerance. Workshop lab.
Week 3	Clearance fits. Workshop lab.
Week 4	Interference fits. Workshop lab.
Week 5	Sources of Error in measurement . Workshop lab.
First Exam.	
Week 6	Geometric errors . Workshop lab.
Week 7	Metal cutting. Workshop lab.
Week 8	Cutting tool material. Workshop lab.



Week 9	Type of cutting tools . Workshop lab.
Week 10	Tool life (T) . Workshop lab.
Second Exam.	
Week 11	Tool life for max production . Workshop lab.
Week 12	Tool life for min production cost . Workshop lab.
Week 13	Reich ratio . Workshop lab.
Week 14	Tangential velocity for special cases. Workshop lab.
Week 15	Solve examples . Workshop lab.
Final Exam	

1. وصف طريقة توزيع الدرجات على اعمال الطلبة

Grading Policy:

Home works	5pt	Note: Attendance is compulsory, and absence from more than five lectures leads to a zero attendance mark.
Quizzes	5pt	
Attendance	5pt	
Participation	5pt	
1 st term Exam	10pt	
2 nd term Exam	10pt	
Workshop	10pt	
Final Exam	50pt	
Total	100pt	

Students' behavior in class

Please adhere to the following expectations to ensure a respectful environment that allows all students to learn effectively in all classes.

- Students must be in the classroom on time and bring all subject notes and lectures provided by the teacher.
- Students are not allowed to talk to other students during the lecture. All speech should be directed to the lecturer.

Mechanical Engineering Department

- Students' mobile must be off-mode, and the lecturer cannot permit the student to receive mobile calls.
- Students should avoid copying and pasting homework.
- Students are encouraged to use internet resources to enrich their knowledge about vibration topics.

Copy and Paste Policy

The student's work is canceled if the instructor notices any actions of copying and pasting.

Classroom:

Time: TBD.

Course web page: <https://classroom.google.com>

Google Classroom: If you have questions, please do not hesitate to contact the instructor.

Please, check Google classroom regularly for any updates.

The information contained in this syllabus is subject to change without notice.

Students are expected to be aware of any additional course policies presented by the instructor during the course.

Exams policy

- All exams will be closed book
- No mobile or programmable calculator is allowed
- Sharing items with other students in the exam is prohibited
- The final exam must be completed to complete the course.

Instructor: Amer Yahya Mohammed Al - Jarjees

Room No.: 101

Email: amer.aljarjees60@uomosul.edu.iq

Co-Instructor: Qays Hazim Ismael

Room No.: 304

Email: qayshazim1970@uomosul.edu.iq

University of Mosul

Mechanical Engineering Department





Computer Programming I MEC 10

Academic Year : 2022-2023 Fall Course
Credit Hour : (1-1-0) 2
Course web page : <https://classroom.google.com> Class code : 4amuvoq

Catalog Description:

Introduction to Matlab, Matlab graphical user interface, Main tabs, supporting windows, Matlab editor, m-files, Numbers and formats, variables, introduction to Octave-online, Matlab basic operations, built in functions, Matrices construction, vectors construction, Matrices indexing, Logical and relational expressions, Control structures.

Reference Books:

No textbook is required. The supporting material will be provided by the instructor.

Course Outcomes:

By successfully completing this course, students shall be able to:

1. Explain the main sections of Matlab interface.
2. Interact with main tabs of the Matlab window.
3. Use the supporting windows effectively along with the command window.
4. Create M-files and write codes inside them and detect errors and warnings.
5. Use the open source alternative to Matlab and Create, edit, and run M-files online using Octave server.
6. Choose the suitable format to control the accuracy of calculations and results.
7. Perform the basic arithmetic operations on scalars and arrays.
8. Create variables and use them in computations.
9. Employ the built-in functions to perform computational and formatting tasks.
10. Construct and manipulate matrices and vectors using different commands.
11. Access matrix or vector elements by indexing.
12. Understand logical and relational expressions and employ them to build conditional statements.
13. Repeat a piece of code and manipulate matrices using loops.



Weekly Teaching Plan:

Week1	Solving Problems using computer
	Algorithm
Week2	flow charts
Week 3	Introduction to Matlab
	What is Matlab? When to use Matlab, The main interface, Command History, New/Open variable, Workspace, Clear workspace
Week 4	Supporting Windows
	Creating/Editing Variables, Matlab editor, m-files.
Week 5	Numbers & Formats
	Numbers representation, formats, variables rules, listing variables in the workspace, testing variable name validity, types of data.
Week 6	Matlab Basic Operations
	Preparing the workspace and command window, scalar arithmetic, built-in functions.
Week 7	Mid semester exam
Week 8	Matrices Construction
	Square brackets, array size, ones and zeros array, matrices concatenations, matrices replication.
Week 9	Vectors construction
	Column vectors, row vectors, shifting between column and re-vectors, creating vectors, matrices indexing, accessing a single element, accessing multiple elements.
Week10	Output commands
	disp, fprintf, Numeric Display Formats, More examples on how to use fprintf in MATLAB
Week11	Applications



	Control Structures
Week 12	Logical and relational expressions, conditional statement if... elseif.....else...end, looping with for.....end..
Week13	Plotting in MATLAB
	The plot command, The fplot command, Plotting multiple graphs in the same plot, Formating a plot, plots with error bars, surface plot.
Week 14	Review and Discussion
Week 15	Evaluation Test

Students Behavior in Class

As the classes are held online and lectures are delivered live where all students must be present while the teacher is delivering the lectures, it is obligatory to adhere to the following rules:

- Join the live lecture on time and mute your mike, turn off your camera, and avoid distracting others.
- Use the discussion and chat section only for recording your attendance and the relevant questions about the lecture content.
- Be aware that both the Google Meet and Classroom are not social media, so consider the university ethics and follow the formal instructions.
- Do not use the class stream for resisting the course plan, encouraging strike, or confusing others.
- If you have a specific question, use the private comments to discuss that with the course instructors. That makes it easy for us to follow your concerns case by case.
- Submit assignments, quizzes, and evaluations tests by the due date. Failure to meet behavioral expectations may lead to dismissal from the classroom.

Plagiarism and Cheating

Each student must submit his own work. Copying someone's else work whether in part or in full is considered cheating and both students will receive grade 0 for the first time. Repeating that misdemeanor will be reported to the school officials to apply the legal procedures to those students.

Email Policy

The instructor will be happy to answer questions related to course content via email. Complex



Mechanical Engineering Department

technical questions should be addressed in tutorial, after the main lecture or via Google classroom.

Teaching Techniques:

We do our best to minimize the difference between the distance learning and the traditional in class counterpart. Lecture notes and examples are handwritten during the lecture and then converted to a PDF file and posted along with the recorded lecture on the electronic class.

Grading Policy:

Attendance	15 pt	Attendance is compulsory and absenteeism of more than 30% of classes will cause grade "NA".
Evaluation Test	25 pt	
Final Report	18pt	
Final exam	42pt	
Total	100pt	

Exam Policy

- No phones calls or web contacts are allowed during the exams.
- The final exam must be completed to complete the course.
- Every student should show up 30 minutes before the final exam to help proctors verify his/her identity and walk him/her through the examination steps.

Instructor : Dr. Ramiz Ibraheem Saeed
Room No. : 303
Email ID : ramizibraheem76@uomosul.edu.iq

Co-Instructor : Mrs. Eman M. Ali
Room No. :
Email ID : emanmali@uomosul.edu.iq

Last updated : September 2022



Calculus II

ENGC122

Spring course	:	2023
Credit hour	:	(2-0-2) 3
Course web page	:	https://classroom.google.com
Class code :	:	
Pre-requisites	:	Mathematics I

Reference Books:

- **Calculus and Analytic Geometry** by George B. Thomas, any edition.

Catalog Description:

The second semester under graduate course primarily intended for students mechanical engineering. There will be these parts:

- 1- Finite and infinite integral
- 2- Application of definite integrals.
- 3- Integral and Transcendental functions.

Emphasis on applications and calculations which under graduate students in engineering may encounter in their next courses.

Graduate outcomes (GOs) addressed by the course:

I	ii	iii	iv	v	Vi	vii
✓	✓	✓				

Course Outcomes:

Upon successful completion of this course, students will be able to

- 1) Integrate all the types of equations those be able to integrate such as transcendental equations (logarithm and hyperbolic), linear, non-linear, and rational equations.
- 2) Find the dimensions such as length, area, and volume for any shapes by utilizing the integrate.
- 3) Both the definite and finite integral will be cover in this course.



Weekly Teaching Plan: February 26, 2023, to July 2, 2023

Week 1-2	Area and Estimating with Finite Sums. The Definite Integral.
Week 3-4	The Fundamental Theorem of Calculus.
	Tutorial sheet No.1 Homework 1 Quiz
Week 5-7	Indefinite Integrals and the Substitution Method. Definite Integral Substitutions and the Area between Curves. Volumes calculation Using Cross-Sections.
	Tutorial sheet No.2 Homework 2 Quiz
Week 8	Volumes calculation Using Cylindrical Shells. Arc Length calculation.
	Tutorial sheet No.3 Homework 3 Quiz
Week 9	Areas of Surfaces of Revolution. The Logarithm Defined as an Integral.
Week 10	Hyperbolic Functions.
	Tutorial sheet No.4 Homework 4 Quiz
Week 11	Using Basic Integration Formulas.
	Tutorial sheet No.5 Homework 5 Quiz
Week 12-15	Integration by Parts. Trigonometric Integrals. Trigonometric Substitutions. Integration of Rational Functions by Partial Fractions.
Final Exam	

Grading Policy:

Home works	10 pts
Quizzes	30 pts
Final Exam	60pts
Total	100pts

Students' behavior in class

Please adhere to the following expectations to ensure a respectful environment that allows all students to learn effectively in all classes.

- Students must be in the classroom on time and bring all subject notes and lectures provided by the teacher.
- Students are not allowed to talk to other students during the lecture. All speech should be directed to the lecturer.
- Students' mobile must be off-mode, and the lecturer cannot permit the student to receive mobile calls.
- Students should avoid copying and pasting homework.
- Students are encouraged to use internet resources to enrich their knowledge about vibration topics.

Copy and Paste Policy

The student's work is canceled if the instructor notices any actions of copying and pasting.

Classroom:

Time: TBD.

Course web page: <https://classroom.google.com>

Google Classroom: If you have questions, please do not hesitate to contact the instructor.

Please, check Google classroom regularly for any updates.

The information contained in this syllabus is subject to change without notice.

Students are expected to be aware of any additional course policies presented by the instructor during the course.

Exams policy

- All exams will be closed book.
 - No mobile or programmable calculator is allowed.
 - Sharing items with other students in the exam is prohibited.
 - The final exam must be completed to complete the course.
-

Instructor: Dr. Omer S. Alabidalkreem

Room No.: 009.2

Email: omerphd18@uomosul.edu.iq

Computer Aided Drawing

ENGC 124

Spring course	:	2022-2023
Credit Hour	:	(0-3-0) 1
Course web page	:	https://classroom.google.com
Class code :	:	nvutmnl
Pre-requisites	:	Engineering Drawing

Reference Book:

- Autodesk Auto CAD 2018 online help.

Catalog Description:

The subject is about teaching student engineering drawings using Autocad. Teaching the subject includes both theoretical lectures and Laboratory.

Graduate outcomes (GOs) addressed by the course:

i	ii	iii	iv	v	vi	vii
✓	✓					

Course Outcomes:

Upon successful completion of this course, students will be able to

- 1) Use auto CAD commands to make drawings.
- 2) Create annotations.
- 3) Create and insert symbols.
- 4) Understand of dimension.
- 5) Plot drawing with certain scales.
- 6) Understand of hatcging.



Weekly Teaching Plan: March 19, 2023, to July 2, 2023

Week 1	Getting started (start a new drawing, user interface, drafting settings)
Week 2-3	Drawing line (snap, rectangular, isometric grid, limits, units, ortho)
	Quiz
Week 4-6	Drafting setting (ortho snap, polar snap, absolute and relative coordinate system)
Week 7-8	Modify I (copy, rotate, move, scale, divide, measure, point, undo, redo)
	1st term Examination
Week 9	Layers (working with layers, properties, working with grips)
Week 10-11	Modify II (array, offset, fillet, chamfer, trim, extend, mirror)
	Quiz
Week 12 -13	Dimensions, Leadders, Hatcing, Hatchedit
Week 14-15	Block (insert block, image, plot, draworder)
	2 nd term Examination
Final Exam	

Grading Policy:

Home works	5pt	<p>Note: Attendance is compulsory, and absence from more than five lectures leads to a zero attendance mark.</p>
Quizzes	5pt	
Participation	5pt	
1 st term Exam	10pt	
2 nd term Exam	15pt	
Final Exam	60pt	
Total	100pt	

Students' behavior in Class

Please adhere to the following expectations to ensure a respectful environment that allows all students to learn effectively in all classes.



Mechanical Engineering Department

- Students must be in the classroom on time and bring all subject notes and lectures provided by the teacher.
- Students are not allowed to talk to other students during the lecture. All speech should be directed to the lecturer.
- Students' mobile must be off-mode, and the lecturer cannot permit the student to receive mobile calls.
- Students should avoid copying and pasting homework.
- Students are encouraged to use internet resources to enrich their knowledge about vibration topics.

Copy and Paste Policy

The student's work is canceled if the instructor notices any actions of copying and pasting.

Classroom:

Time: TBD.

Course web page: <https://classroom.google.com>

Google Classroom: If you have questions, please do not hesitate to contact the instructor.

Please, check Google classroom regularly for any updates.

The information contained in this syllabus is subject to change without notice.

Students are expected to be aware of any additional course policies presented by the instructor during the course.

Exams policy

- All exams will be closed book
 - No mobile or programmable calculator is allowed
 - Sharing items with other students in the exam is prohibited
 - The final exam must be completed to complete the course.
-

Instructor: Dr. Ahmed Khalid

Room No.: E 108

Email: alnajar.ahmed9@uomosul.edu.iq

Co-Instructor: Emad Hazem

Room No.: E 104

Email ID: emades2004@yahoo.com



ENGINEERING MECHANICS: STATICS II

ME151

Spring course	:	2023
Credit hour	:	(2-0-1) 2
Course web page	:	https://classroom.google.com
Class code :	:	
Pre-requisites	:	Statics I

Reference Books:

- Meriam, James L., and L. Glenn Kraige, "Engineering mechanics: statics", John Wiley & Sons, 2012.
- Hibbeler, RC, "Engineering Mechanics Statics", 14th edition, 2016.

Catalog Description:

This course aims to develop freshmen students' capacity to predict the effects of forces, moments, couples and the distributed loads that are applied to bodies. Also centroids , moment of inertia and analysis of two- and three-dimensional problem are presented during this course. Application of equilibrium principle to simple trusses and frames are presented. The course offers basic knowledge of the physical and mathematical principles of mechanics.

Graduate outcomes (GOs) addressed by the course:

I	ii	iii	iv	v	vi	vii
✓	✓		✓	✓		



Course Outcomes:

In MEC151, students will initially learn how to analyze and calculate resultant forces applied to bodies in equilibrium conditions. After successful completion of this course, students will be able to:

- 1) Formulate and solve problems under the effect of static loads and the relevance of equilibrium in 2D & 3D. (i).
- 2) Recognize forces, free body diagram approach to solve problems (ii).
- 3) Analysis of forces of simple truss and frames (i,iv).
- 4) Understand the friction phenomena and the friction force in machine parts. (iv,v).
- 5) Draw the free body diagram and analyze the applied forces (ii)
- 6) Determine the centroid and moment of inertia of deferent cross section (iv)

Weekly Teaching Plan: March 19, 2023, to July 2, 2023

Week 1-2	Trusses: Method of Joints + Review
	Trusses: Method of Sections + Recitation 1
	Homework 1
Week 3-4	Frames and machines
	Homework 2 Quiz
Week 5-7	Center of gravity, the center of mass and centroid of a body
	Homework 3 Quiz
	1st term Examination
Week 8-10	Applications of Friction in Machines
	Homework 4 Quiz
Week 11-15	Definition of moments of inertia for areas, the radius of gyration
	Homework 5 Quiz
	2nd term Examination
Final Exam	



Grading Policy:

Home works	4pt	Note: Attendance is compulsory, and absence from more than three lectures leads to a zero attendance mark.
Quizzes	6pt	
Attendance	3pt	
Participation	3pt	
1 st term Exam	12pt	
2 nd term Exam	15pt	
Final Exam	60pt	
Total	100pt	

Students' behavior in class

Please adhere to the following expectations to ensure a respectful environment that allows all students to learn effectively in all classes.

- Students must be in the classroom on time and bring all subject notes and lectures provided by the teacher.
- Students are not allowed to talk to other students during the lecture. All speech should be directed to the lecturer.
- Students' mobile must be off-mode, and the lecturer cannot permit the student to receive mobile calls.
- Students should avoid copying and pasting homework.
- Students are encouraged to use internet resources to enrich their knowledge about vibration topics.

Copy and Paste Policy

The student's work is canceled if the instructor notices any actions of copying and pasting.

Classroom:

Time: TBD.

Course web page: <https://classroom.google.com>

Google Classroom: If you have questions, please do not hesitate to contact the instructor.

Please, check Google classroom regularly for any updates.

The information contained in this syllabus is subject to change without notice.



Students are expected to be aware of any additional course policies presented by the instructor during the course.

Exams policy

- All exams will be closed book
 - No mobile or programmable calculator is allowed
 - Sharing items with other students in the exam is prohibited
 - The final exam must be completed to complete the course.
-

Instructor: Sufyan A. Mohammed

Room No.: 104

Email: sufyan.a.mohammed@uomosul.edu.iq





Metallurgy PhysicsI

MEC152

Spring course	:	2023
Credit hour	:	(2-0-3)
Course web page	:	https://classroom.google.com
Class code :	:	
Pre-requisites	:	Bbp4myr

Reference Books:

- 1-"Engineering metallurgy", R.A.Higgins, part I, Sixth edition, New York 2002.
- 2-Modern physical metallurgy and material engineering, R.E.S and R.J.Bishop, Boston, Butterworth Heinman, Sixth edition, 1999.
- 3-Material science, R.S.Khurmi, R.S.Sedha, Ram Najar, New Delhi, 1987.
- 4-Materials and metallurgy", G.B.S. Narang and V.K.Manchanda, Bajrangi press, New Delhi.
- 5-مبادئ هندسة المعادن والمواد، الجامعة التكنولوجية، د. حسين باقر رحمة الله، 1986.
- 6-"Fundamentals of material science and engineering", William.d.callister, 4th ed., John weily &sons, 2012, U.S.A

Catalog Description:

This course explain atomic structure & atomic bonding in materials, Crystalline structure of metals and miller indices, Metals properties and mechanical tests of metals, Solidification and defects in metals, Fracture of metals and strengthening methods of metals, Cooling curves (types and construction), Thermal equilibrium diagrams, Solid solution thermal equilibrium diagram, Combination type thermal equilibrium diagram, Simple eutectic thermal equilibrium diagram, principles of Iron-carbon thermal equilibrium diagram, Steels ,Cast irons, principles of heat treatment of steels, principles of time temperature transformation curve.



Graduate outcomes (GOs) addressed by the course:

i	ii	Iii	iv	v	vi	vii
✓	✓		✓	✓		

Course Outcomes:

Upon successful completion of this course, students will be able to:

- 1- Know about the mechanical properties of metallic materials.
- 2-Read the phase diagrams and able to correlate with the microstructures of alloys.
- 3-Knowledge on the types, properties and applications of steels, cast irons.
- 4-Obtain the required properties ordered by the design using heat treatments.

Weekly Teaching Plan: March 19, 2023, to June, 2023

Week 1-2	Atomic structure & atomic bonding in materials. Crystalline structure of metals and miller indices
Week 3-4	Metals properties and Mechanical tests of metals. Solidification and defects of metals.
	Homework 1 Quiz
Week 5-7	Fracture of metals and strengthening methods of metals. Cooling curves (types and construction). Thermal equilibrium diagrams.
	Homework 2 Quiz
	Solid solution thermal equilibrium diagram.
Week 8	Homework 3 Quiz
	Simple eutectic thermal equilibrium diagram

	Homework 4	Quiz
Week 11 -13	Principles of Iron-carbon thermal equilibrium diagram. Steels, cast irons.	
	Homework 5	Quiz
Week 14	Principles of heat treatment.	
	2 nd term Examination	
Week 15	Principles of time temperature transformations.	
Note:	This course include different experiments in the field of physical metallurgy.	
Final Exam	(theory exam and practical exam)	

Grading Policy:

Home works	5pt	Note: Attendance is compulsory, and absence from more than five lectures leads to a zero attendance mark.
Quizzes	5pt	
Practical lab.	10pt	
1 st term Exam	15pt	
2 nd term Exam	15pt	
Final Exam(theory-practical)	40pt-10pt	
Total	100pt	

Students' behavior in class

Please adhere to the following expectations to ensure a respectful environment that allows all students to learn effectively in all classes.

- Students must be in the classroom on time and bring all subject notes and lectures provided by the teacher.
- Students are not allowed to talk to other students during the lecture. All speech should be directed to the lecturer.
- Students' mobile must be off-mode, and the lecturer cannot permit the student to receive mobile calls.
- Students should avoid copying and pasting homework.
- Students are encouraged to use internet resources to enrich their knowledge about vibration topics.

Copy and Paste Policy

The student's work is canceled if the instructor notices any actions of copying and pasting.

Classroom:

Time: TBD.

Course web page: <https://classroom.google.com>

Google Classroom: If you have questions, please do not hesitate to contact the instructor.

Please, check Google classroom regularly for any updates.

The information contained in this syllabus is subject to change without notice.

Students are expected to be aware of any additional course policies presented by the instructor during the course.

Exams policy

- All exams will be closed book
- No mobile or programmable calculator is allowed
- Sharing items with other students in the exam is prohibited
- The final exam must be completed to complete the course.

Instructor: Awad Hallosh Khedher

Ahmed Saadoon Abdalaziz

Room No.: 406

Email: Ahmed.Saadoon@uomosul.edu.iq

الملحقات

Graduate Outcomes	محصلات الخريجين : يرجى قراءة ملف البوربوينت	1
Course learning outcomes	الاهداف التعليمية للمقرر الدراسي : يرجى قراءة ملف البوربوينت	2
	طريقة توزيع الدرجات : يرجى قراءة ملف البوربوينت والمثال التالي (تقييم مباشر)	3
	عمل استبيان للطلاب لمعرفة مدى تحقق محصلات الخريجين الموضوع (تقييم غير مباشر)	4
	الحافظة : تحتوي جميع الملفات المتعلقة بالمقرر جاهزة للتدقيق	5

1. المطلوب يحدد الاستاذ عدد المخرجات التي يمكن تحقيقها خلال الفصل الدراسي على الأقل 2 من المخرجات باستثناء مشروع التخرج والذي يجب ان يحقق جميع المخرجات ان امكن.

2. الاهداف التعليمية المتوقع من الطالب الحصول عليها بعد اجتيازه للمقرر بنجاح يتم صياغتها حسب تصنيف بلوم بما يتوافق مع محصلات الخريجين التي تم اختيارها
3. اضافة لما ذكر اعلاه يتم اتباع نفس الاجراء وتحديد المخرجات المتوقع تحقيقها في كل امتحان او واجب بيتي او امتحان قصير كما موضح في المثال التالي. وكذلك عمل احصائية لبيان مدى المخرجات المتحققة اعتماداً على نسبة النجاح لكل عمل (واجب , امتحان , الخ).



Assessment tools for ME152

		ملاحظات	i	ii	iv	v	SUM	نسبة النجاح
Home works	5pt	ما المحصل التعليمي المستهدف تحقيقه من الواجب؟						
HW1	1pt							
HW2	1pt							
HW3	1pt							
HW4	1pt							
HW5	1pt							
							5pt	
Quizzes	5pt	ما المحصل التعليمي المستهدف تحقيقه من الامتحان القصير؟						
Q1	1pt							
Q2	1pt							
Q3	1pt							
Q4	1pt							
Q5	1pt							
Lab.	10pt						5pt	
1 st term Exam	15pt						10 pt	
2 nd term Exam	15pt	ما المحصل التعليمي المستهدف تحقيقه؟					15 pt	
Final Ex-theory	40pt						40 pt	
Final Ex-practical	10pt						10pt	
Total	100pt						100pt	



COMPUTER PROGRAMING II

MEC 153

Spring course	:	2023
Credit hour	:	(1-1-0) 2
Course web page	:	https://classroom.google.com
Class code	:	vhbsjqa
Pre-requisites	:	Computer Programing II

Reference Books:

- No textbook is required. The supporting material will be provided by the instructor.

Catalog Description:

Computer programming and the use of computers to solve engineering and mathematical problems. Emphasizes applying problem solving skills; directs students toward graduate-level project implementation. In this course, symbolic functions and their applications are described. Solving expressions and equations is applied. MATLAB function substitution is used in indifferent problems. Employing MATLAB tools to solve different types of calculus problems, such as differentiation and integration. Additional features are used to create a variety of two-dimensional plots. Image processing is introduced.

Graduate outcomes (GOs) addressed by the course:

i	ii	iii	iv	v	vi	vii
✓	✓					

Course Outcomes:

By successfully completing this course, students shall be able to:

- 1) Recognizing symbolic function and its application (i).
- 2) Integrating a symbolic function or expression into a plot diagram (ii).

- 3) Interpreting data on plotting diagrams with different appearance (ii)
- 4) Using MATLAB tools effectively in solving mathematical equations (i).
- 5) Understanding how to simplify mathematical equations using computer language (i).
- 6) Executing multiple variables and solving a system of equations to return the solutions in a structure array (ii).
- 7) Using Symbolic Math Toolbox to differentiate and integrate symbolic expressions (ii).
- 8) Applying engineering applications using double integration numerically (ii).
- 9) Analyzing images using Image Processing Toolbox functionality throughout the analysis process (ii).

Weekly Teaching Plan: March 19, 2023, to July 2, 2023

Week1	Create symbolic variables and functions
	Symbolic Math Expressions, Defining Symbolic variables, Plotting Symbolic Function, Surface plot (Optional),
Week2	Evaluation of Symbolic Expressions, Expand Function, Simplify Function, Solving Equation
	Tutorial sheet No.1 Quiz_1
Week 3,4	Applications
	Engineering applications
	Tutorial sheet No.2 Quiz_2
Week 5	Solving Expression and Equations
	The function solve, MATLAB function fzero, MATLAB function subs
Week 6,7	Calculus
	Differentiation
	Tutorial sheet No.2
Week 8	1st term Exam
Week 10,11	Calculus
	Integration of Symbolic Functions.
	Quiz 3
Week 12	Application of Double Integration

	Center of Mass (two dimensional)
Week 13,14	Projects, Assignment
Week 15	Introduction to image processing
Week 16	2 nd term Exam
Week 17	Practical Test

Grading Policy:

Home works	4pt	<p>Note: Attendance is compulsory, and absence from more than five lectures leads to a zero attendance mark.</p>
Quizzes	6pt	
Participation	4pt	
1 st term Exam	15pt	
2 nd term Exam	15pt	
Practical test	6pt	
Final Exam	50pt	
Total	100pt	

Students' behavior in class

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- Students are not allowed to talk to other students during the lecture. All speech should be directed to the lecturer.
- Students' mobile must be off-mode, and the lecturer cannot permit the student to receive mobile calls.
- Students should avoid copying and pasting homework.
- Students are encouraged to use internet resources to enrich their knowledge about vibration topics.



Copy and Paste Policy

The student's work is canceled if the instructor notices any actions of copying and pasting.

Classroom:

Time: TBD.

Course web page: <https://classroom.google.com>

Google Classroom: If you have questions, please do not hesitate to contact the instructor.

Please, check Google classroom regularly for any updates.

The information contained in this syllabus is subject to change without notice.

Students are expected to be aware of any additional course policies presented by the instructor during the course.

Exams policy

- All exams will be closed book
 - No mobile or programmable calculator is allowed
 - Sharing items with other students in the exam is prohibited
 - The final exam must be completed to complete the course.
-

Instructor : Dr. Ramiz Ibraheem Saeed
Room No. : 303
Email ID : ramizibraheem76@uomosul.edu.iq

Co-Instructor: Mrs. Eman M. Ali
Room No. :
Email ID : emanmali@uomosul.edu.iq

Last updated : April 2020



		ملاحظات	i	ii	SUM	percentage
Home works	4pt	ما المحصل التعليمي المستهدف تحقيقه من الواجب ؟				
HW1	1pt		1		1	7٠ %
HW2	1pt		1		1	7٠ %
HW3	1pt			1	1	7٠ %
Assignment	1pt			1	1	8٠ %
					4 pt	2.9 pt
Quizzes	6pt	ما المحصل التعليمي المستهدف تحقيقه من الامتحان القصير ؟				
Quiz 1	2pt		2		2	8٠ %
Quiz 2	2pt		2		2	8٠ %
Quiz 3	2pt			2	2	7٠ %
					6 pt	2.4 pt
Practical test	6 pt	ما المحصل التعليمي المستهدف تحقيقه؟	3	3	6 pt	2.7 pt
1 st term Exam	15pt		5	10	15 pt	9 pt
2 nd term Exam	15pt		5	10	15 pt	9 pt
Final Exam	50pt		25	25	50 pt	35 pt
Participation	4 pt			4 pt	4 pt	
Total	100pt		4٤	52	100pt	65 pt