K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	Mathematics (1)				
Course Code	BAS 011				
Academic Year	2022-2023				
Coordinator	Dr. Gamal El-Anani				
Teaching Staff	Dr. Gamal El-Anani				
Level	Level (0)				
Semester	First Term				
Number of Weekly	Lecture	2			
Contact Hours	Tutorial	2			
	Lab	0			
Department offering the	• Electronics and Communications Engineering,				
program	Computers and Systems Engineering,				
	Communications and Computer Engineering				
Department offering the	Basic Science				
course					
2- Aim of the course	2- Aim of the course				
1. To introduce students to concepts of Functions, Limits, and Continuity.					
2 To teach students differential calculus higher derivatives and Leibnitz theorem					

- 2. To teach students differential calculus, higher derivatives, and Leibnitz theorem.
- 3. To provide students with derivatives applications.
- 4. To provide students with the basics of Theory of equations.
- 5. To equip students with Matrices and its applications.
- 6. To teach students the principles of linear algebraic equations

Level A – General	problems by ap and mathemati A.2. Develop a simulation, and findings, and us judgment to dr A.3. Apply eng effective solution consideration for environmental, discipline and vor design and dev A.5. Practice re	Identify, formulate, and solve complex engineering lems by applying engineering fundamentals, basic science mathematics. Develop and conduct appropriate experimentation and/or lation, analyze and interpret data, assess and evaluate ngs, and use statistical analyses and objective engineering ment to draw conclusions Apply engineering design processes to produce cost- tive solutions that meet specified needs with deration for global, cultural, social, economic, onmental, ethical and other aspects as appropriate to the obline and within the principles and contexts of sustainable in and development. Practice research techniques and methods of investigation inherent part of learning.			
- Fevel B Fevel B 4- Course Contents	Vector Algebra - Binomial theorem - Partial fractions - Theory of equations - Numerical methods - Matrices - system of algebraic equations and applications - Gauss elimination method. Differential Calculus - Function - Basic functions - Limits - Continuity - Derivatives - Indefinite forms - Taylor and Maclaurine theorems - Application - Expansions - Curve fitting - Some mathematical and engineering applications - Approximation - Introduction to partial differentiation				
# Topic		Lecture	Tutorial/Practical	No of hours	
Functions, L	imits, and Continuity	4	4	8	
Differential Calculus6612			12		

Trigonometric Functions -		[
0				
Exponential and Logarithmi		8	8	16
Functions- Hyperbolic Func	tions			
Higher Derivatives, Leibnit	Z	6	6	12
Theorem		0	0	12
Applications of the Derivativ	ves	4	4	8
Total sum		20	20	50
lotal sum		28	28	56
5- Teaching and learning		1. Lecture (onl	ine/in class)	I
		2. Discussion	me/meiuss)	
methods		3. Tutorial		
		4. Problem sol	vina	
		5. Brain storm	v	
		6. Projects	ш <u></u>	
		7. Self-learnin	a	
			•	
		9. Computer S 10. Teamwork	mulation	
6- Teaching and learning		1. Additional T		
methods for disable studen	its	2. Online lectures and assignments		
		-	ny audio/visual a	
		4. Providing extra opportunities for practice		
7- Teaching and learning		1. Assign a portion of the office hours for those students		
methods for low capacity		and		
students		2. provide them with specific tailored tasks.		
		3. Repeat the explanation of some of the material and		
		tutorials.		
		4. Assign a teaching assistance to follow up their		
		performance		
8- Teaching and learning		•		
methods for outstanding		2. Give them advanced extra-curriculum topics.		
students		3. Encourage them to take part in a pilot research and case		
		studies.		
9- Students assessment				
_				
a- Assessment		lid Term Examina	•	line)
methods		ractical Examinati	on	
	3. O	Dral Examination		
	4. Fo	Formative (quizzes- presentation -reports)		
	5. Fi	Final Term Examination (written)		
b- Assessment schedule	- Exer	Exercise sheet/ Lab assignment : Weekly		
	- Quiz:	z-1:	V	Veek no. 5
		-		
	- Mid-Term exam: Week no . 8			Veek no. 8

	- Quizz-2:	Week no. 12			
	- Final – term examination:	Week no. 16			
c- Weighting of	- Class tutorial and quizzes :	10 %			
assessment	- Mid-term examination:	20 %			
	- Final – term examination:	70 %			
		Total 100 %			
10- List of text books and re	ferences:				
a- Course notes	There are lectures notes prepared in the form of a book authorized by the department				
b- Text books/ References	 authorized by the department. Swokowski, E, Olinick ,M and Pence, D., Calculus, PWS Publishing Company - Boston, 1994. Mary Attenborough, Engineering Mathematics, McGraw - HILL Book Company Europe, 1994. Anthony croft,Robert Davison, Engineering Mathematics A modern Foundation for Electrical, Electronic & Control Engineering, Addison - Wesley - Publishing Company, 1992. 				
c- Periodicals, Web sites		cs and Mathematical engineering as:			
etc	www.math.hmc.edu				

	www.tutorial.math.lamar.edu, www.web.mit.edu
11-Course contents – Cou	rse related program competencies

www.math.hmc.edu,

11-Course contents – Course related program competencies				
	Level A			
	A.1	A.2	A.3	A.5
Functions, Limits, and Continuity	\checkmark			
Differential Calculus	V	V		√
Trigonometric Functions - Exponential and Logarithmic Functions- Hyperbolic Functions		V	1	
Higher Derivatives , Leibnitz Theorem	V	V	\checkmark	
Applications of the Derivatives			V	

12-Teaching and learning methods - Course related program competencies				
	Level A			
	A.1	A.2	A.3	A.5
Lecture (online/in class)	V	\checkmark	\checkmark	\checkmark
Discussion	1	\checkmark	1	1
Tutorial	\checkmark	\checkmark	1	1
Problem solving	\checkmark	\checkmark	\checkmark	\checkmark
Brain storming	\checkmark	\checkmark	\checkmark	\checkmark
Projects	\checkmark	\checkmark	\checkmark	\checkmark
Self-learning		\checkmark		
Research and Reporting			\checkmark	
Computer Simulation				
Teamwork				

13- Assessment methods - Course related program competencies					
Assessment methods Course related program comptencies					
			Leve	el A	
		A.1	A.2	A.3	A.5
1. Mid Term Examination (written/ online)		1	\checkmark	1	\checkmark
2. Practical Examination					
3. Oral Examination					
4. Formative (quizzes- presentation -reports)		1	\checkmark	\checkmark	\checkmark
5. Final Term Examination (written		\checkmark	\checkmark	\checkmark	\checkmark

de

0

Authorized from board of the department at 1/9/2022 Course coordinator:

Dr. Gamal El-Anany

K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	Physics (1)		
Course Code	BAS 012		
Academic Year	2022-2023		
Coordinator	Dr. Somia Ahmed Desol	ky	
Teaching Staff	Dr. Somia Ahmed Desol	ky	
Level	Level (0)		
Semester	First Term		
Number of Weekly	Lecture	2	
Contact Hours	Tutorial	1	
	Lab	2	
Department offering the	Electronics and Communications Engineering,		
program	Computers and Systems Engineering,		
	 Communicat 	ions and Computer Engineering	
Department offering the	Basic sciences		
course			
2- Aim of the course			

- 1. To provide students with unit's systems and dimensions
- 2. To provide students with the concepts of fluid statics and dynamics.
- 3. To introduce students to definitions of viscosity, and elasticity.

4. To teach the principles of sound waves and propagation of sound waves in elastic media.

5. To teach different methods of heat transfer and heat flow and their applications.

6. To introduce students to Kinetic theory of gases and thermodynamics.

Level A – General	 A.1 Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science, and mathematics. A.2 Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions. A.3 Apply engineering design processes to produce cost-effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical, and other aspects as appropriate to the discipline and within the principles and contexts of sustainable design and development 				
Level B - Speciality					
4- Course Contents	- Course Measurements: Physics and measurements - (length, mass, time, the				
# Topic	opic Lecture Tutorial/Practical No of hours				
Physical quandimensions	ntities – Units and	2	3	5	
Field of grav	itational force	2	3	5	
Fluid statics Viscosity – E	and dynamics – Elasticity	6	6	12	
Sound waves media	Sound waves – Waves in elastic media 4 6 10				
Heat transfer		4	6	10	
Kinetic theor	ry of gases	2	2	4	
First and second thermodynam	ond laws of nics – entropy	4	6	10	
Total sum		24	32	56	
5- Teaching	5- Teaching and learning 1. Lecture (online/in class) 2. Discussion				

mothode	3.	Tutorial		
methods		Problem solving		
		Brain storming		
		8		
		8. Research and Reporting		
	9.	Computer Simulation		
	_	10. Teamwork		
6- Teaching and learning				
methods for disable studen				
	3.	Using as many audio/visual aids as possible.		
	4.	Providing extra opportunities for practice		
7- Teaching and learning	1.	Assign a portion of the office hours for those students		
methods for low capacity		and Drawide there with energific to ileved tooks		
students	2.	Provide them with specific tailored tasks.		
	5.	Repeat the explanation of some of the material and tutorials.		
	4.			
		performance		
8- Teaching and learning	1.	•		
methods for outstanding				
students	3.			
		studies.		
9- Students assessment				
a- Assessment	1. Mid Te	erm Examination (written/ online)		
methods	2. Practic	cal Examination		
	3. Oral Ex	xamination		
		ative (quizzes- presentation -reports)		
	5. Final T	Term Examination (written)		
b- Assessment schedule	- Exercise sl	sheet/ Lab assignment : Weekly		
	- Quizz-1:	Week no. 5		
	- Mid-Term	n exam: Week no . 8		
	- Quizz-2:	Week no. 12		
	- Final – ter	rm examination: Week no. 16		
c- Weighting of	- Class tuto	orial , Practical work and quizzes : %20		
assessment	- Mid-term	examination: % 20		
	- Final – ter	rm examination: %60		
		Total 100 %		
10- List of text books and re	erences:			

a- Course notes	There are lectures notes prepared in the form of a book
	authorized by the department.
b- Text books/ References	[1 Raymond A. Serway and John W. Jewett, Jr., "Physics for
	Scientists and Engineers with Modern Physics", 8E, Brooks Cole, 2009.
	 [2] Shipman, Wilson, Todd, An introduction to Physical Science, D.C. Heath and and Company, Toronto, 1990. [3] Richard T.Weidner, Physics - Revised Version, Allyn and Bacon, Boston, USA, 1989.
	[4] Serway - Beicher, Physics for Scientists and Engineering with Modern, Saunders Collage publishing, USA, 1989.
c- Periodicals, Web sites etc	http://hyperphysics.phy-astr.gsu.edu/hbase/hph.html

11-Course contents – Course related program competencies							
	Leve	el A		Level B			
	A.1	A.2	A.3				
Physical quantities – Units and dimensions	V						
Field of gravitational force	1	\checkmark					
Fluid statics and dynamics –Viscosity – Elasticity	\checkmark	\checkmark	√				
Sound waves – Waves in elastic media	\checkmark	\checkmark	√				
Heat transfer	\checkmark		√				
Kinetic theory of gases	1		1				
First and second laws of thermodynamics – entropy	V						

12-Teaching and learning methods - Course related program competencies							
	Level A			Level B			
	A.1	A.2	A.3				
Lecture (online/in class)	V						
Discussion	1		\checkmark				
Tutorial	1	\checkmark	\checkmark				

Problem solving	V				
Brain storming			1		
Projects					
Self-learning					
Research and Reporting					
Computer Simulation					
Teamwork		\checkmark			

13- Assessment methods - Course related program competencies								
Assessment methods	Course related program comptencies							
		Level	Α		Level B			
		A.1	A.2	A.3	-1			
1. Mid Term Examination (written/ online)		1		\checkmark				
2. Practical Examination			\checkmark					
3. Oral Examination								
4. Formative (quizzes- presentation -report	ts)	1	\checkmark	\checkmark				
5. Final Term Examination (written				\checkmark				

Dr. Somaia Desouky

ar 1 -



5

K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	Mechanics	
Course Code	BAS 013	
Academic Year	2022-2023	
Coordinator	Dr. Gamal El-Anani	
Teaching Staff	Dr. Gamal El-Anani	
Level	Level (0)	
Semester	First Term	
Number of Weekly	Lecture	3
Contact Hours	Tutorial	2
	Lab	0
Department offering the	 Electronics ar 	nd Communications Engineering,
program	Computers a	nd Systems Engineering,
	Communicat	ions and Computer Engineering
Department offering the	Basic Science	
course		
2- Aim of the course		

2- Aim of the course

- 1. To provide students with the concepts of moments, and equilibrium of bodies in space.
- 2. To equip students with trusses analysis.
- 3. To provide students with the concepts of virtual work, center of mass, and moment of inertia.
- 4. To teach students linear and planer motion of particles in Cartesian coordinates.
- 5. To teach students motion of particles in a resistive medium.
- 6. To teach students batch movement and collision of particles.
- 7. To provide students with the concepts of dynamics of charged particles in magnetic and electric fields.
- 8. To provide students with the concepts of dynamics of rigid body
- 3- Course related program competencies

el B - iality	 A.1. Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics. A.2. Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions A.3. Apply engineering design processes to produce cost-effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline and within the principles and contexts of sustainable design and development. A.5. Practice research techniques and methods of investigation as an inherent part of learning. 						
A Course ContentsSyllabus: Application on space vectors: Resultant of forces - Moment of forces - Equivalent of Couples - Equivalent of systems - Equation of equilibrium of rigid body types of supports - Equilibrium of plane 							
# Topic	on space vectors: Desultant	Lecture	Tutorial/Practical	No of hours			
	on space vectors: Resultant Moment of forces - of Couples	4	4	8			
Equivalent of systems - Equation of equilibrium of rigid body types of supports - Equilibrium of plane systems -66			6	12			

- Equilibrium of space systems of forces and couples acting on rigid bodyImage: System of particles- The mass center of a system of particles - The mass moment of inertia of a system of particles.8816Dynamic: Displacement -velocity and acceleration of particle - Trajectory equations - Projectile particle motion on a straight path - Newton's law of motion6612- Simple harmonic motion of a particle - motion on circular path work and kinetic energy - vibration of rigid body.2828565 Teaching and learning methods1. Lecture (online/in class) 2. Discussion 3. Tutorial 4. Problem solving 5. Brain storming 6. Projects 7. Self-learning 8. Research and Reporting 9. Computer Simulation 10. Teamwork566 Teaching and learning methods for disable students1. Additional Tutorials 2. Online lectures and assignments 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice7. Teaching and learning methods for disable students1. Additional particles is a possible. 4. Providing extra opportunities for practice7. Teaching and learning methods for disable students1. Adsign a portion of the office hours for those students and 2. Online lectures and assignments 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice7. Teaching and learning methods for low capacity students1. Assign a portion of the office hours for those students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the materia and tutorials. 4. Assign a teaching assistance to follow up their performance <th></th> <th></th> <th>-</th> <th></th>			-			
- The mass moment of inertia of a system of particles.8816Dynamic: Displacement -velocity and acceleration of particle - Trajectory equations - Projectile particle motion on a straight path - Newton's law of motion6612- Simple harmonic motion on a particle - motion on circular path - work and kinetic energy - vibration of rigid body.448Total sum2828565- Teaching and learning methods1.Lecture (online/in class) 2.565- Teaching and learning methods for disable students1.Additional Tutorial 8.86. Teaching and learning methods for disable students1.Additional Tutorials 2.567- Teaching and learning methods for disable students1.Additional Tutorials 2.567- Teaching and learning methods for disable students1.Additional Tutorials 2.507- Teaching and learning methods for disable students1.Additional Tutorials 2.507- Teaching and learning methods for disable students1.Additional Tutorials 2.507- Teaching and learning methods for low capacity students1.Additional Tutorials 2.507- Teaching and learning methods for low capacity students1.Additional tutorials 2.5082.provide them with specific tailored tasks. 3.3.95092.provide them with specific tailored tasks. 3.3.3.992.provide them with speci						
acceleration of particle - Trajectory equations - Projectile particle motion on a straight path - Newton's law of motion 6 6 12 - Simple harmonic motion of a particle motion on circular path work and kinetic energy vibration of rigid body. 4 4 8 Total sum 28 28 56 5- Teaching and learning methods 1. Lecture (online/in class) 56 7. Simple harmonic motion of rigid body. 1. Lecture (online/in class) 56 5- Teaching and learning methods 1. Lecture (online/in class) 56 6. Projects 7. Self-learning 8 7. Self-learning 8 8 8 6. Teaching and learning methods for disable students 1. Additional Tutorials 1. Additional Tutorials 2. Online lectures and assignments 3. Using as many audio/visual aids as possible. 9 7. Teaching and learning methods for disable students 1. Additional Tutorials 1. Additional Tutorials 3. Using as many audio/visual aids as possible. 9 9 9 9 7. Teaching and learning methods for low capacity students 1. Assign a portion of the office hours for those students and 2 9 9 8. Repeat the explanation of some of the materia and tutorials.	- The mass moment of inertia of a	8	8	16		
motion on circular path work and kinetic energy - vibration of rigid body.448Total sum2828565- Teaching and learning methods1.Lecture (online/in class) 2.565- Teaching and learning methods1.Lecture (online/in class) 2.566- Teaching and learning methods for disable students1.Lecture (online/in class) 2.566- Teaching and learning methods for disable students1.Additional Tutorial 3.567- Teaching and learning methods for disable students1.Additional Tutorials 2.567- Teaching and learning methods for low capacity students1.Additional Tutorials 2.567- Teaching and learning methods for low capacity students1.Additional Tutorials 2.567- Teaching and learning methods for low capacity students1.Assign a portion of the office hours for those students and 2.567- Teaching and learning methods for low capacity students1.Assign a teaching assistance to follow up their and tutorials.8.Repeat the explanation of some of the materia and tutorials.4.Assign a teaching assistance to follow up their	acceleration of particle - Trajectory equations - Projectile particle motion on	6	6	12		
5- Teaching and learning methods 1. Lecture (online/in class) 2. Discussion 3. Tutorial 4. Problem solving 5. Brain storming 6. Projects 7. Self-learning 8. Research and Reporting 9. Computer Simulation 10. Teamwork 6- Teaching and learning methods for disable students 1. 4. Providing as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7- Teaching and learning methods for low capacity students 1. 7. Assign a portion of the office hours for those students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the materia 	motion on circular path - work and kinetic energy -	4	4	8		
 2. Discussion 3. Tutorial 4. Problem solving 5. Brain storming 6. Projects 7. Self-learning 8. Research and Reporting 9. Computer Simulation 10. Teamwork 6- Teaching and learning methods for disable students 2. Discussion 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7. Teaching and learning methods for low capacity students 2. Online lectures and assignments 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7. Teaching and learning methods for low capacity students 4. Assign a portion of the office hours for those students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the materia and tutorials. 4. Assign a teaching assistance to follow up their 	Total sum	28	28	56		
disable students 2. Online lectures and assignments 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7- Teaching and learning methods for low capacity students 1. Assign a portion of the office hours for those students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the materia and tutorials. 4. Assign a teaching assistance to follow up their		 Discussion Tutorial Problem solving Brain storming Projects Self-learning Research and Reporting Computer Simulation 				
disable students 2. Online lectures and assignments 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7- Teaching and learning methods for low capacity students 1. Assign a portion of the office hours for those students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the materia and tutorials. 4. Assign a teaching assistance to follow up their	6- Teaching and learning methods for	1. Additio	nal Tutorials			
3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7- Teaching and learning methods for low capacity students 1. Assign a portion of the office hours for those students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the materia and tutorials. 4. Assign a teaching assistance to follow up their				its		
4. Providing extra opportunities for practice 7- Teaching and learning methods for low capacity students 1. Assign a portion of the office hours for those students and 2. provide them with specific tailored tasks. 3. 3. Repeat the explanation of some of the materia and tutorials. 4. Assign a teaching assistance to follow up their			_			
capacity studentsstudents and2.provide them with specific tailored tasks.3.Repeat the explanation of some of the materia and tutorials.4.Assign a teaching assistance to follow up their						
 provide them with specific tailored tasks. Repeat the explanation of some of the materia and tutorials. Assign a teaching assistance to follow up their 		•	•	ours for those		
 Repeat the explanation of some of the materia and tutorials. Assign a teaching assistance to follow up their 	capacity students			orod tasks		
and tutorials. 4. Assign a teaching assistance to follow up their		•	•			
4. Assign a teaching assistance to follow up their			-			
				follow up their		
		-	-	-		
8- Teaching and learning methods for 1. Assign course project tasks to those students.		-				
outstanding students2. Give them advanced extra-curriculum topics.	outstanding students			•		
 Encourage them to take part in a pilot researc and case studies. 				n a pilot research		
	0 Students and 1					
9- Students assessment	9- Students assessment					

a- Assessment	1. Mid Term Examination (writte	en/online)			
	2. Practical Examination				
methods	3. Oral Examination				
	 Formative (quizzes- presentation -reports) 				
	5. Final Term Examination (written)				
b- Assessment schedule	 Exercise sheet/ Lab assignment : 	Weekly			
	- · ·				
	- Quizz-1:	Week no. 5			
	- Mid-Term exam:	Week no. 8			
	Wild Term exam.	Weekho. o			
	- Quizz-2:	Week no. 12			
	- Final – term examination:	Week no. 16			
c- Weighting of	- Class tutorial and quizzes :	10 %			
assessment	- Mid-term examination:	20 %			
	- Final – term examination:	70 %			
	Tota	al 100 %			

10- List of text books and references:

a- Course notes	There are lectures notes prepared in the form of a book
	authorized by the department.
b- Text books/ References	 Ferdinand P.Beer, E.Russell Johanston, Vector Mechanics for
	Engineers, McGraw - Hill, A Business Unit of M.H. Company Inc.,
	1987
	 Bichara B., John W., Static For Engineers, Springer Verlag, New
	York, 1997.
	 Bichara B., John W., Dynamic for Engineers, Springer Verlag, New
	York, 1997
c- Periodicals, Web sites	Web Sites related to engineering mathematics
etc	
	 http://emntserver.unl.edu/NEGAHBAN/EM373/Intro.htm
	al libbolar Onal/EV A complete a stam for machanics courses
	•Hibbeler OneKEY,A complete system for mechanics courses.
	•www.prenhall.com/onekey

11-Course contents – Course related program competencies						
	Level A					
	A.1	A.2	A.3	A.5		
Application on space vectors: Resultant of forces - Moment of forces - Equivalent of Couples	\checkmark					

Equivalent of systems - Equation of equilibrium of rigid body types of supports - Equilibrium of plane systems Equilibrium of space systems of forces and couples acting on rigid body	\checkmark	V		1
- The mass center of a system of particles - The mass moment of inertia of a system of particles. series solution of differential equations		V	V	
Dynamic: Displacement -velocity and acceleration of particle - Trajectory equations - Projectile particle motion on a straight path - Newton's law of motion	\checkmark	V	V	
- Simple harmonic motion of a particle - motion on circular path - work and kinetic energy - vibration of rigid body.			V	

12-Teaching and learning methods - Course related program competencies						
	Level A					
	A.1	A.2	A.3	A.5		
Lecture (online/in class)	1	1	1	1		
Discussion	1	1	V	1		
Tutorial	1	1	1	1		
Problem solving	1	1	1	1		
Brain storming	1	1	1	1		
Projects	1	1	\checkmark	1		
Self-learning		1				
Research and Reporting			\checkmark			
Computer Simulation						
Teamwork						

13- Assessment methods - Course related program competencies				
Assessment methods Course related program comptencies				
Level A				

	A.1	A.2	A.3	A.5
1. Mid Term Examination (written/ online)	\checkmark	\checkmark	\checkmark	\checkmark
2. Practical Examination				
3. Oral Examination				
4. Formative (quizzes- presentation -reports)	\checkmark	\checkmark	V	V
5. Final Term Examination (written	\checkmark	\checkmark	\checkmark	\checkmark

Dr. Gamal El-Anany

< de



K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	Engineering Draw	ing and Projection	
Course Code	MED 014		
Academic Year	2022-2023		
Coordinator	Dr. Essam A. Alim G	Jomah Elaraby	
Teaching Staff	Dr. Essam A. Alim G	omah Elaraby	
Level	Level (0)		
Semester	First Term		
Number of Weekly	Lecture	2	
Contact Hours	Tutorial	3	
	Lab	0	
Department offering the	 Electronics ar 	nd Communications Engineering,	
program	Computers a	nd Systems Engineering,	
	Communications and Computer Engineering		
Department offering the	Electronics Engineering and Electrical		
course	Communication		
2- Aim of the course			

- 1. To teach students different types of engineering lines and operations.
- 2. To equip student with isometric and view, and deduction of the third view.
- 3. To provide students with different methods of projection.
- 4. To teach students the projections of the point, the line, and the plane.
- 5. To teach students position problems.
- 6. To acquire students some skills for prisms presentation, and circle projection.
- 7. To teach students the cylindrical, and conical sections.
- 8. To teach students intersection of different rotational surfaces, and applications

Level B - Speciality Level A – General	 A.1 Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics. A.6 Plan, supervise and monitor implementation of engineering projects, taking into consideration other trades requirements. A.9 Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations. B.2 Design, model and analyze an electrical/electronic/digital system or component for a specific application; and identify the tools required to optimize this design. B.3 Design and implement: elements, modules, sub-systems or systems in electrical/electronic/digital engineering using technological and professional tools. 				
4- Course Contents	Syndouse rechniques and skins of engineering drawing, normal				
Different ty lines.	# Topic pes of engineering	Lecture 2	Tutorial/Practical	No of hours	
The point- ' plane.	The line- The	2	3	5	
	vrical constructions wing operations. 4 6 10				
different m	normal projection. 4 6 10				
Isometric a of third vie	nd view- deduction w.	4	6	10	
-	rawings of 3D arts and projection drawings.	4	6	10	

introduction to sheets an	d					
sheet layout engineering	u	4	6	10		
drawing.		-	0	10		
introduction to using						
computer software design		4	6	10		
tools in engineering draw	ing					
and projection.						
Tota	al sum	28	42	70		
5- Teaching and le	arning	1. Lecture (onl	ine/in class)			
me	ethods	2. Discussion				
		3. Tutorial				
		 Problem sol Brain stormi 	0			
		6. Projects	ш _б			
6- Teaching and learning		1. Additional T	utorials			
methods for disable studen	ts		res and assignments			
			ny audio/visual aids as	possible.		
	4. Providing extra opportunities for practice			ractice		
7- Teaching and learning		1. Assign a por	tion of the office hours	s for those students		
methods for low capacity		and				
students		2. provide them with specific tailored tasks.				
		3. Repeat the explanation of some of the material and				
		tutorials.				
		 Assign a teaching assistance to follow up their performance 				
8- Teaching and learning		1. Assign course project tasks to those students.				
methods for outstanding		-	dvanced extra-curricul			
students			hem to take part in a p	•		
		studies.				
9- Students assessment						
a- Assessment	1. N	lid Term Examinat	tion (written/ online)			
methods			- presentation -reports)		
		nal Term Examina	• •			
b- Assessment schedule	- Exercise sheet/ Lab assignment : Weekly			,		
	- Quiz	z-1:	Weekn	io. 5		
	- Mid-	Term exam:	Week n	o.8		
	- Quiz	z-2:	Week n	o. 12		
	- Final – term examination: Week no. 16			no. 16		
c- Weighting of	- Class	tutorial and quizze	es: 10 %	,		
assessment	- Mid-	term examination:	20 %			

	- Final – term examination: 70 %				
	Total 100 %				
10- List of text books and references:					
a- Course notes	There are lectures notes prepared in the form of a book authorized by the department.				
b- Text books/ References	 [1] Ken Morling, Geometric and Engineering Drawing, 3rd edition, Routledge, ISBN-10: 0415536197, July 2012. [2] Richard Shelton Kirby, The Fundamentals of Mechanical Drawing, Nabu Press, 2009. [3] Cecil Jensen, Jay Helsel Dennis Short, Engineering Drawing and Design, McGraw Hill, 7th. Ed., 2007. 				
c- Periodicals, Web sites etc	Web Sites related to Drawing Engineering and Projection. https://www.mygreatlearning.com/academy/learn-for-free/courses/engineering-graphics-drawing				

11-Course contents – Course related program competer	11-Course contents – Course related program competencies				
		Level /	4	Lev	vel B
	A.1	A.6	A.9	B.2	B.3
Different types of engineering lines.	1				√
The point- The line- The plane.	1	1		\checkmark	
Geometrical constructions and drawing operations.	1	V	1	\checkmark	1
Introduction to projection- different methods of projection- normal projection.	1	V			\checkmark
Isometric and view- deduction of third view.		V	V	V	
Assembly drawings of 3D isometric parts and projection of assembly drawings.	1	1	V		\checkmark
introduction to sheets and sheet layout engineering drawing.	1	1		\checkmark	
introduction to using computer software design tools in engineering drawing and projection.		1	V	\checkmark	

12-Teaching and learning methods - Course related program competencies

	Level A			Leve	el B
	A.1	A.6	A.9	B.2	B.3
Lecture (online/in class)	1	1	\checkmark	\checkmark	\checkmark
Discussion			\checkmark	\checkmark	
Tutorial	V	V		\checkmark	
Problem solving			V		\checkmark
Brain storming	V	V		\checkmark	
Projects		V		\checkmark	V

13- Assessment methods - Course related program competencies						
Assessment methods	Course relate	ed prog	ram co	ompter	icies	
			Level A	l	Lev	vel B
		A.1	A.6	A.9	B.2	B.3
1. Mid Term Examination (written/ online)		\checkmark	V		\checkmark	1
2. Formative (quizzes- presentation -reports)		V			\checkmark	
3. Final Term Examination (written		V	V	\checkmark	\checkmark	\checkmark

TESP



Dr. Essam Abdel Alim Gomah

K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	History of Engineering	and Technology	
Course Code	MED 015		
Academic Year	2022-2023		
Coordinator	Dr/ aya salem		
Teaching Staff	Dr/ aya salem		
Level	Level (0)		
Semester	First Term		
Number of Weekly	Lecture	2	
Contact Hours	Tutorial	0	
	Lab	0	
Department offering the	Electronics a	nd Communications Engineering,	
program	Computers a	nd Systems Engineering,	
	Communications and Computer Engineering		
Department offering the	Basic sciences		
course			
2- Aim of the course			

1. To provide students with overview the engineering roll in developing countries and the engineering activities and ethics of engineers.

- 2. To inform students technology transfer and society required and decision-making elements and ideal solution.
- 3. To inform students development of teaching process.
- 4. To Provide students with NVQ Levels and skills in each level and skill and levels measurements.
- 5. To give students the basics of defining the 'why' and the 'what'.
- 6. To give students an overview for project plan and how tocomplete a project.

A.5 Practice research techniques and methods of investigation as an inherent part of							
_	learning.						
Beneral	A.7 Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams.						
Level A – General		effectively – graph g contemporary to	nically, verbally and in wr pols	iting – with a range of			
Lev			ible thinking and acquire I respond to new situatic	•			
Level B - Speciality							
4- Course Contents	and social sciences	, Engineering Edu blogy and Trainin	d Technology Develop acation and its Disciplin g, Different work metho t.	es, Scientific thinking			
			لولوجيا الانسانيات والعلوم الا. يلي , التدريب والتكنولوجيا من				
# Topic		Lecture	Tutorial/Practical	No of hours			
Engineerin Countries	g Roll in Developing	4	0	4			
Engineerin of Engineer	g activities and ethics rs	6	0	6			
Technolog required	y transfer and society	4	0	4			
	a making elements and ution –Assessment 1 4 0 4						
Developm process	hent of teaching 4 0 4						
skills in ea levels meas	ch level and skill and surements 2 0 2						
Application Project	on examples, Course 4 4						
Total sum		28	0	28			
5- Teachin	- Teaching and learning 1. Lecture (online/in class)						

methods 2. Discussion 3. Brain storming 4. Projects 5. Self-learning 5. Self-learning 6. Teaching and learning 1. Additional Tutorials methods for disable students 2. Online lectures and assignments 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7. Teaching and learning 1. Additional Tutorials methods for low capacity 1. Assign a portion of the office hours for those students and and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 3. Final Term Examination (written/ online) 2. Practical Examination 3. Oral Examination -provide type of the assignment : a. Assessment methods 1. Mild Term Examination (written) - 3. Final Term Examination (written) - - 4. Assign a teaching assignment : Weekly - 9. Students - - - 9. Oral			2 Discussion	
4. Projects 5. Self-learning 6. Research and Reporting 7. Teamwork 6-Teaching and learning methods for disable students 1. Additional Tutorials 2. Online lectures and assignments 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7. Teaching and learning methods for low capacity 1. Additional tutorials. 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 2. provide them with specific tailored tasks. 3. Resign a portion of tass to those students. 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance 8-Teaching and learning methods for outstanding students 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 9-Students assessment methods 1. Additerm Examination (written/ online) 2. Final Term Examination (written/ online) 3. Oral Examination 3. Oral Examination 3. Oral	methods			
5. Self-learning 6. Research and Reporting 7. Teamwork 6. Nessarch and Reporting 7. Teamwork 6. Additional Tutorials 2. Online lectures and assignments 3. Additional Tutorials 2. Online lectures and assignments 3. Repeat the explanation of the office hours for those students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students 5. Encourage them to take part in a pilot research and case studies. 9. Students assessment methods 6. Noral Examination 1. Mid Term Examination (written/ online) 2. Firal Term Examination (written) 3. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 6. -Quizz-1: Week no. 5 6. Mid-Term examination: Week no. 16 c-We			C C	
6. Research and Reporting 7. Teamwork 6. Teaching and learning methods for disable students 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7. Teaching and learning methods for low capacity students a. Bepeat the explanation of the office hours for those students and 2. providing extra opportunities for practice 7. Teaching and learning methods for low capacity students a. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students students 9. Students assessment methods 1. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students students 9. Students assessment methods 1. Mid Term Examination (written/ online) 2. Formative (quizzes- presentation -reports) 3. Final Term Examination (written) 9. Assessment methods 1. Mid Term exam: 9. Quizz-1: 9. Assessment schedule 1. Formative (quizzes- presentation -reports) 5. Final Term examination: 9. Quizz-1: 9. Quizz-2: Week no. 16 <td< th=""><th></th><th></th><th></th></td<>				
6. Teaching and learning methods for disable students 7. Teamwork 1. Additional Tutorials 0. Online lectures and assignments 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7. Teaching and learning methods for low capacity students 1. Assign a portion of the office hours for those students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance 1. Assign course project tasks to those students. 5. Teaching and learning methods for outstanding students 1. Assign course project tasks to those students. 6. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 9. Students assessment methods 1. Mild Term Examination (written/ online) 2. Practical Examination 2. Practical Examination - reports) 3. Final Term Examination (written) - Quizz-1: Week no. 5 6. Mid-Term exam: Week no. 16 c-Weighting of assessment assessment - Class tutorial and quizzes : 15% 6. Final - term examination: 15 % 6. Final - term examination: 10 % 1. Du list of text books and references: - Total 100 %				
methods for disable students 2. Online lectures and assignments 3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7. Teaching and learning methods for low capacity students 1. Assign a portion of the office hours for those students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 4. Assign a partient of the office hours for those students and 2. provide them with specific tailored tasks. 5. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 3. Oral Examination 9. Students assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 3. Oral Examination 3. Oral Examination 5. Final Term Examination (written) b. Assessment schedule -Exercise sheet/ Lab assignment: Week no. 5 6. Wid-Term examination: Week no. 16 c. Weighting of assessment -Class tutorial and quizzes : 15% assessment -Final -term examination: 70 % 6. Final -term examination: 70 % -Final -term examination: 70				
3. Using as many audio/visual aids as possible. 4. Providing extra opportunities for practice 7. Teaching and learning methods for low capacity students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students 9. Students assessment 1. Mid Term Examination 9. Students assessment methods 1. Mid Term Examination 3. Oral Examination 3. Oral Examination 4. Provide tass signment : 4. Provide tassignment : 4. Assessment schedule 6. Teacting of assessment : 9. Students assessment : 9. Assessment schedule 1. Mid Term Examination (written/ online) 2. Practical Examination : 3. Oral Examination (written) 9. Assessment schedule 1. Assign a period and quizzes : 9. Quizz-1: Week no. 8 9. Quizz-2: Week no. 16 0. Quizz-2: Week no. 16 0. Class tutorial and quizzes : 15% 0. Hid-term examination:<	6- Teaching and learning		1. Additional Tutorials	
4. Providing extra opportunities for practice 7. Teaching and learning methods for low capacity students 1. Assign a portion of the office hours for those students and students 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance Performance 8. Teaching and learning methods for outstanding students 1. Assign course project tasks to those students. 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 9. Students assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 3. Oral Examination 3. Oral Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 5. Nid-Term examination (written) 4. Quizz-1: Week no. 5 4. Mid-Term examination: Week no. 16 c-Weighting of assessment -Class tutorial and quizzes : 15% 4. Final – term examination: 15 % 4. Final – term examination: 15 % 6. There are lectures notes prepared in the form of a book authorized by the department.	methods for disable stude	ents	2. Online lectures and assignments	
7- Teaching and learning methods for low capacity students 1. Assign a portion of the office hours for those students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance performance 1. Assign course project tasks to those students. 8- Teaching and learning methods for outstanding students 1. Assign course project tasks to those students. 9- Students assessment methods 1. Assign course project tasks to those students. 9- Students assessment methods 1. Mid Term Examination (written/ online) 0. Practical Examination - 1. Oral Examination - 2. Final Term Examination (written) - 9- Students assessment methods - 1. Assessment schedule - Exercise sheet/ Lab assignment : 4. Formative (quizzes- presentation -reports) - 5. Final Term examination 1. 9- Quizz-1: Week No. 5 - Mid-Term examination: 15% - Quizz-2: Week no. 16 c- Weighting of assessment - 0. Total 100 % - 10- List of text books and references: Total 100 % 10- List of text books and references:			3. Using as many audio/visual aids as possible.	
methods for low capacity students and 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students 1. Assign course project tasks to those students. 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 9. Students assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination (A: Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 2. Students assessment 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 2. Practical Examination (written) 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 9. Cuizz-1: Week no. 5 - Mid-Term exam: Week no. 16 - Quizz-2: Week no. 16 - Class tutorial and quizzes : 15% - Final - term examination: 70 % - Final - term examination: 70 % - Final - term examination: 70 % - Final - term examination:			4. Providing extra opportunities for practice	
students 2. provide them with specific tailored tasks. 3. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students 1. Assign course project tasks to those students. 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 9. Students assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 3. Oral Examination 3. Oral Examination - Formative (quizzes- presentation -reports) 5. Final Term Examination (written) - Exercise sheet/ Lab assignment : Weekly 9. Quizz-1: Week no. 5 - Mid-Term exam: Week no. 12 - Final – term examination: 15 % - Quizz-2: Week no. 16 C- Weighting of assessment - Class tutorial and quizzes : 15% - Final – term examination: 15 % - Final – term examination: 70 % - Total 100 %	7- Teaching and learning		1. Assign a portion of the office hours for those students	
3. Repeat the explanation of some of the material and tutorials. 4. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students 1. Assign course project tasks to those students. 9. Students assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 3. Oral Examination (written/ online) 2. Practical Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 5. Final Term Examination (written) b. Assessment schedule -Exercise sheet/ Lab assignment : Week no. 5 9. Guizz-1: Week no. 5 - Mid-Term exam: Week no. 12 - Final - term examination: 15% - Mid-term examination: 15% - Class tutorial and quizzes : 15% - Final - term examination: 70 % - Final - term examination: 70 % - Total 100 % 10- List of text books and terereces: - There are lectures notes prepared in the form of a book authorized by the department. - Hook authorized by the department.	methods for low capacity		and	
tutorials. 4. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students 1. Assign course project tasks to those students. 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 9. Students assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 3. Oral Examination 3. Oral Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 5. Final Term Examination (written) 4. Assessment schedule - Exercise sheet/ Lab assignment : Weekly 9. Quizz-1: Week no. 5 - Mid-Term examination: Week no. 12 9. Quizz-2: Week no. 16 - Quizz-2: Final - term examination: 15% 6. Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 10 % 10. List of text books ant/- Errerese There are lectures notes prepared in the form of a book authorized by the department. Total too %	students			
4. Assign a teaching assistance to follow up their performance 8. Teaching and learning methods for outstanding students 1. Assign course project tasks to those students. 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 9. Students assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 3. Oral Examination 3. Oral Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 5. Final Term Examination (written) b. Assessment schedule -Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week no. 5 -Mid-Term exam: Week no. 12 - Final - term examination: 15% -Mid-term examination: 15% - Weighting of assessment -Class tutorial and quizzes : 15% -Mid-term examination: 15% - Final - term examination: Total 100 % Total 100 % Total 100 % Total 100 Total 100 100				
8. Teaching and learning methods for outstanding students 1. Assign course project tasks to those students. 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 9. Students assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 2. Practical Examination 3. Oral Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 5. Final Term Examination (written) b- Assessment schedule -Exercise sheet/ Lab assignment : Week no. 5 - Mid-Term exam: Week no. 8 -Quizz-1: - Quizz-2: Week no. 12 -Final - term examination: - Studenti examination: 15% -Mid-term examination: - Stater examination: 70% -Total 100 %				
8- Teaching and learning methods for outstanding students 1. Assign course project tasks to those students. 9- Students assessment methods 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 9- Students assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 3. Oral Examination 3. Oral Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 5. Final Term examination (written) b- Assessment schedule - Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week no. 5 - Mid-Term exam: Week no. 12 - Final - term examination: 15% - Quizz-2: Week no. 16 c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15 % - Final - term examination: 70 % - Total 100 % Total 100 %				
methods for outstanding students 2. Give them advanced extra-curriculum topics. 3. Encourage them to take part in a pilot research and case studies. 9-Students assessment methods 1. Mid Term Examination (written/online) 2. Practical Examination . 3. Oral Examination . 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) b-Assessment schedule -Exercise sheet/ Lab assignment : 4. Quizz-1: Week no. 5 - Mid-Term exam: Week no. 18 - Quizz-2: Week no. 16 c-Weighting of assessment -Class tutorial and quizzes : 15% - Mid-term examination: 15 % - Mid-term examination: 15 % - Mid-term examination: 10 %	9 Teaching and Issue			
students 3. Encourage them to take part in a pilot research and case studies. 9-Students assessment methods 1. Mid Term Examination (written/online) 2. Practical Examination Practical Examination (written/online) 3. Oral Examination - Practical Examination (written/online) 5. Final Term Examination (written) - Practical Examination (written) b- Assessment schedule - Exercise sheet/ Lab assignment : Week no. 5 - Quizz-1: Week no. 5 - Mid-Term exam: Week no. 12 - Quizz-2: Week no. 12 - Final - term examination: 16 c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15 % - Mid-term examination: 10 % total term examination: 70 %				
studies. 9- Students assessment a- Assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 3. Oral Examination 3. Oral Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) b- Assessment schedule - Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week no. 5 - Mid-Term exam: Week no. 5 - Mid-Term examination: Week no. 12 - Final – term examination: Week no. 12 - Final – term examination: 15% - Mid-term examination: 15% - Final – term examination: 70% - Total 100 % 10- List of text books and Ferences: a- Course notes There are lectures notes prepared in the form of a book authorized by the department.	-			
9- Students assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 3. Oral Examination 3. Oral Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 5. Final Term Examination (written) b- Assessment schedule - Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week no. 5 - Mid-Term exam: Week no. 8 - Quizz-2: Week no. 12 - Final - term examination: 10 c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15% - Mid-term examination: 10% 10- List of text books and references: Total 100 % 100 %	students			
a- Assessment methods 1. Mid Term Examination (written/ online) 2. Practical Examination 3. Oral Examination 3. Oral Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) 5. Final Term Examination (written) b- Assessment schedule - Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week no. 5 - Mid-Term exam: Week no. 8 - Quizz-2: Week no. 12 - Final – term examination: Week no. 16 c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15 % - Final – term examination: 70 % - Final – term examination: 70 % - Total 100 % Total 100 %				
methods2. Practical Examination 3. Oral Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written)b- Assessment schedule- Exercise sheet/ Lab assignment : • Quizz-1: • Quizz-1: • Week no. 5 • Mid-Term exam: • Quiez-2: • Final – term examination: • Week no. 12 • Final – term examination: • Week no. 16c- Weighting of assessment- Class tutorial and quizzes : • Mid-term examination: • Mid-term examination: • Total • 100 %10- List of text books and references: a- Course notesThere are lectures notes prepared in the form of a book authorized by the department.	9- Students assessment			
3. Oral Examination 4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) b- Assessment schedule - Exercise sheet/ Lab assignment : Week no. 5 - Quizz-1: Week no. 5 - Mid-Term exam: Week no. 8 - Quizz-2: Week no. 12 - Final – term examination: Week no. 16 c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15 % - Final – term examination: 70 % - Final – term examination: 70 % - Total 100 %	a- Assessment	1. N	lid Term Examination (written/ online)	
4. Formative (quizzes- presentation -reports) 5. Final Term Examination (written) b- Assessment schedule -Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week no. 5 - Mid-Term exam: Week no. 8 - Quizz-2: Week no. 12 - Final – term examination: Week no. 16 c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15 % - Final – term examination: 70 % - Final – term examination: 70 % - Total 100 %	methods	2. Pi	ractical Examination	
5. Final Term Examination (written) b- Assessment schedule - Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week no. 5 - Mid-Term exam: Week no. 8 - Quizz-2: Week no. 12 - Final – term examination: Week no. 16 c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15 % - Mid-term examination: 70 % - Final – term examination: 70 % - Total 100 %		3. 0	ral Examination	
b- Assessment schedule - Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week no. 5 - Mid-Term exam: Week no. 8 - Quizz-2: Week no. 12 - Final – term examination: Week no. 16 c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15% - Mid-term examination: 15% - Mid-term examination: 70 % - Final – term examination: 70 % - Total 100 %				
- Quizz-1: Week no. 5 - Mid-Term exam: Week no. 8 - Quizz-2: Week no. 12 - Final – term examination: Week no. 16 c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15% - Mid-term examination: 70% - Final – term examination: 70% - Total 100% There are lectures notes prepared in the form of a book authorized by the department.				
- Mid-Term exam: Week no. 8 - Quizz-2: Week no. 12 - Final – term examination: Week no. 16 c- Weighting of assessment - Class tutorial and quizzes : - Mid-term examination: 15% - Mid-term examination: 15% - Final – term examination: 70 % - Final – term examination: 70 % - Total 100 %	b- Assessment schedule	- Exer	cise sheet/ Lab assignment : Weekly	
- Quizz-2: Week no. 12 - Final – term examination: Week no. 16 c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15 % - Final – term examination: 70 % Total 100 % Total There are lectures notes prepared in the form of a book authorized by the department.		- Quiz	z-1: Week no. 5	
- Final - term examination:Week no. 16c- Weighting of assessment- Class tutorial and quizzes :15%- Mid-term examination:15 %- Final - term examination:70 %Total100 %		- Mid-	Term exam: Week no . 8	
c- Weighting of assessment - Class tutorial and quizzes : 15% - Mid-term examination: 15 % - Final – term examination: 70 % Total 100 %		- Quiz	z-2: Week no. 12	
assessment - Mid-term examination: 15 % - Final – term examination: 70 % Total 100 % 10- List of text books and references: a- Course notes There are lectures notes prepared in the form of a book authorized by the department.		- Final	- term examination: Week no. 16	
- Mid-term examination: 15 % - Final – term examination: 70 % Total 100 % 10- List of text books and references: a- Course notes There are lectures notes prepared in the form of a book authorized by the department.		- Class	tutorial and quizzes : 15%	
Total 100 % 10- List of text books and references: a- Course notes There are lectures notes prepared in the form of a book authorized by the department.	assessment	- Mid-	term examination: 15 %	
10- List of text books and references: a- Course notes There are lectures notes prepared in the form of a book authorized by the department.		- Final – term examination: 70 %		
10- List of text books and references: a- Course notes There are lectures notes prepared in the form of a book authorized by the department.		Total 100 %		
a- Course notes There are lectures notes prepared in the form of a book authorized by the department.				
authorized by the department.	10- List of text books and	referen	ices:	
	a- Course notes	There are lectures notes prepared in the form of a book		
		au	thorized by the department.	
b- Text books/ Richard Newton "Project Management Step by Step: How to Plan	b- Text books/	Richa	ard Newton "Project Management Step by Step: How to Plan	

References	and Manage a Highly Successful Project", Pearson Education Canada, 2007. Revised edition, 2007
c- Periodicals, Web sites etc	Web sites related to history of engineering sciences

	Level	Level A						
	A.5	A.7	A.8	A.9				
Engineering Roll in Developing Countries	1	1						
Engineering activities and ethics of Engineers	1	1						
Technology transfer and society required		1	1					
Decision making elements and ideal solution –Assessment1		1	1					
Development of teaching process		\checkmark	1	1				
skills in each level and skill and levels measurements			1	\checkmark				
Application examples, Course Project			\checkmark	\checkmark				

12-Teaching and learning methods - Course related program competencies							
	Level	Level A					
	A.5	A.7	A.8	A.9			
Lecture (online/in class)	1	1					
Discussion	V	\checkmark					
Tutorial		\checkmark	\checkmark				
Problem solving		1	1				
Brain storming			1				
Projects			1	\checkmark			
Self-learning			\checkmark				
Research and Reporting			1	\checkmark			
Computer Simulation			1	\checkmark			
Teamwork				\checkmark			

13- Assessment methods - Course related program competencies								
Assessment methods	Course related program comptencies							
	Level A							
	A.5	A.7	A.8	A.9				
1. Mid Term Examination (written/ online)	1	1						
2. Practical Examination		\checkmark						
3. Oral Examination		\checkmark	\checkmark					
4. Formative (quizzes- presentation -reports)			1	\checkmark				
5. Final Term Examination (written				\checkmark				



Dr./ aya .m. salem

(L-a)

K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

Course Title Digital and Logic Circuits CSE 016 Course Code Academic Year 2022-2023 Coordinator Doctor. Soheir metwaly afifi Doctor. Soheir metwaly afifi **Teaching Staff** Level Level (0)Semester First Term Number of Weekly Lecture 2 1 **Contact Hours** Tutorial Lab 2 Department offering the **Communications and Computer Engineering** • program Department offering the **Communications and Computer Engineering** • course 2- Aim of the course 1. Learn the principles of computer hardware, Presents various binary systems suitable forrepresentation of information in digital systems and illustrates binary arithmetic.Learn the simplification methods of combinational logic circuit. 2. Provides the basic postulates and theorems related to Boolean algebra. The various logic operations and the correlation between the Boolean expression and its implementation with logic gates

1- Basic Information

- 3. The various methods of minimization and simplification of Boolean expressions, Karnaugh maps, tabulation method, etc. are explained
- 4. Design and analysis procedures for combinational circuits are provided

Level A – General	 A.1. Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics. A.2. Demonstrate principles of design including elements design, process and/or a system related to specific disciplines. A.2. Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions. A4. Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues and risk management principles.
	A.5 Practice research techniques and methods of investigation as an inherent part of learning.
Level B - Speciality	 B3.Design and implement: elements, modules, sub-systems or systems in electrical/electronic/digital engineering using technological and professional tools. B4.Estimate and measure the performance of an electrical/electronic/digital system and circuit under specific input excitation, and evaluate its suitability for a specific application. B5. Adopt suitable national and international standards and codes to: design, build, operate, inspect and maintain electrical/electronic/digital equipment, systems and services.
4- Course Contents	: Introduction to computer hardware, Number systems and digital waveforms - Basic gates and logic functions with a discussion of the available ICs that represent these gates - Boolean algebra, Boolean expressions and truth tables - Sum of products and product of sum forms. Simplifying expressions - K-maps up to fourth degree - Combinational logic, decoders, encoders, multiplexers,

demultiplexers, magnitude logic comparators -Digital arithmetic, adders, subtractions, Simple arithmetic and logic unit. Basic PLD architectures.

مقدمة لعتاد الحاسب الآلي. نظم العد والاشكال الموجبة الرقمية- البوابات الاساسية والدوال المنطقية مع شرح للدوائر المنطقية المتاحة لهذه البوبات – الجبر البوليني والتعبيرات البولينية وجداول الحقيقة – صور مجموع المضروب ومضروب المجموع – تبسيط التعبيرات المنطقية – خرائط كارنوف حتي الدرجة الرابعة – المنطق التراكبي – المكودات وفاكك الشفرة – الانتقاء – وعكسه – المقارنات المنطقية – الحاسبات الرقمية –المجمعات – والطارحات – وحدة الحساب والمنطق البسيطة –اجهزة المنطق المبرمج PLD

Practical Laboratory:

- Satisfy the truth table for all basic logic gates.
- Implement decoder and encoder using logic gates, and then using the decoder and encoder chips available.
- Implementing and driving 7 segment display.
- Building the half and full adder using logic gates, and using full adder chips.
- Implement an ALU that can perform addition, subtraction, AND, OR, operations using control lines.

# Торіс	Lecture	Tutorial/Practical	No of hours			
Number Systems	4	4	8			
Computer Arithmetic	6	6	12			
Logic gates	4	4	8			
Basics of digital circuits and the simple combined logic elements	6	6	12			
Boolean Algebra Logic Simplification	8	8	16			
Total sum	28	28	56			
5- Teaching and learning methods	 Lectures Labs Research assignments Discussion Tutorial Problem solving 					

	6. Brain storming 7. Brainete
	7. Projects
	8. Self-learning
	9. Research and Reporting
	10. Computer Simulation11. Teamwork
6- Teaching and learning	1. Additional Tutorials
methods for disable student	-
	 Using as many audio/visual aids as possible.
	4. Providing extra opportunities for practice
7- Teaching and learning	1. Assign a portion of the office hours for those students
methods for low capacity	and
students	2. provide them with specific tailored tasks.
	3. Repeat the explanation of some of the material and
	tutorials.
	4. Assign a teaching assistance to follow up their
	performance
8- Teaching and learning	1. Assign course project tasks to those students.
methods for outstanding	2. Give them advanced extra-curriculum topics.
students	3. Encourage them to take part in a pilot research and case
	studies.
9- Students assessment	
a- Assessment	1. Mid Term Examination (written/ online)
methods	2. Practical Examination
	3. Oral Examination
	4. Formative (quizzes- presentation -reports)
	5. Final Term Examination (written)
b- Assessment schedule	- Exercise sheet/ Lab assignment : Weekly
	- Quizz-1: Week no. 5
	- Mid-Term exam: Week no . 8
	- Quizz-2: Week no. 12
	- Final – term examination: Week no. 16
c- Weighting of	- Class tutorial and quizzes : 20 %
assessment	- Mid-term examination: 20 %
	- Final – term examination: 60 %
	Total 100 %
10- List of text books and re	erences:
2. Course notes	There are lectures notes prepared in the form of a book
a- Course notes	There are lectures notes prepared in the form of a book authorized by the department.

b- Text books/ References	1.Digital Electronics, A. D. Godse, D. A. Godse, Technical Publication
	Pune, 2nd. Ed., 2008
	2. Digital logic design, Brian Holdsworth, Clive Woods. British Library
	Cataloguing, 4th. Ed., 2002.
c- Periodicals, Web sites	http://www.tutorialspoint.com/computer_fundamentals/
etc	

	Level A				Level B		
	A.1	A.2	A.4	A.5	B.3	B.4	B.5
Number Systems	1		1				
Computer Arithmetic	1	1		\checkmark	V	V	\checkmark
Logic gates		V	1			V	\checkmark
Basics of digital circuits and the simple combined logic elements	1	V	V		V	V	
Boolean Algebra Logic Simplification	1	V	\checkmark	V		1	1

12-Teaching and learning methods - Course related program competencies								
	Level A				Level			
	A.1	A.3	A.4	A.5	B.3	B.4	B.5	
Lecture (online/in class)	\checkmark							
Discussion	\checkmark	1	V	1	1	1	1	
Tutorial	\checkmark	1	\checkmark	\checkmark	1			
Problem solving			1	\checkmark	1			
Brain storming				1	1	1	1	
Projects				1	1	1	1	
Self-learning							\checkmark	
Research and Reporting						1		
Computer Simulation						\checkmark	\checkmark	

Teamwork							
----------	--	--	--	--	--	--	--

13- Assessment methods - Course related program competencies									
Assessment methods	Course related program comptencies								
		Level	Α		Leve	l B			
		A.1	A.3	A.4	B.2	B.3	B.4	B.5	
1. Mid Term Examination (written/ online)		V	1	1	\checkmark	1			
2. Practical Examination									
3. Oral Examination									
4. Formative (quizzes- presentation -reports)		1	\checkmark	\checkmark	\checkmark	\checkmark			
5. Final Term Examination (written		1	\checkmark	\checkmark	\checkmark	\checkmark			

Doctor. Soheir afifi

- and and



K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

Course Title Human Rights HUM 017 **Course Code** Academic Year 2022-2023 Coordinator Dr / Somia Ahmed Dr/ Somia Ahmed **Teaching Staff** Level Level (0)First Term Semester Number of Weekly Lecture 1 Tutorial **Contact Hours** 0 Lab 0 Department offering the • Electronics and Communications Engineering, program Computers and Systems Engineering, ٠ Communications and Computer Engineering Department offering the Basic sciences course 2- Aim of the course توعية الطالب بثقافة حقوق الانسان والحريات العامة . ٠ اكساب الطالب المعارف والمهارات اللازمة المتعلقة بمفهوم حقوق الانسان على الصعيدين الدولي والوطني . المام الطالب بالمافهيم الاساسية حول قانون حقوقالانسان ومصادره. ان يميز الطالب بين انواع حقوق الانسان والقيود التي ترد عليه . تعريف الطالب بحقوق الانسان ومدى اتساقها مع المفاهيم الدولية . 3- Course related program competencies

1- Basic Information

Level A – General	 A.5 Practice research techniques and methods of investigation as an inherent part of learning A.7 Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams. A.8 Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools A.9 Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations. A.10 Acquire and apply new knowledge; and practice self, lifelong and other learning 				
Level B - Speciality	strategies.				
4- Course Contents	الالمام باهمية حقوق الانسان والنشأة التاريخية لتلك الحقوق والمدارس الفقهية لتأصيل تلك الحقوق واحكام الاتفاقيات الدولية الخاصة بحقوق الانسان, والمنظمات الدولية العالمية والاقليمية القائمة علي حماية تلك الحقوق وموقف الدستور المصري من حقوق الانسان والحماية القانونية لها علي الصعيد الوطني والصعيد الدولي, بالاضافة الي حقوق الانسان في الشريعة الاسلامية. الاصول التارخية الفلسفية لحقوق الانسان – المصادر الدولية لحقوق الانسان (العالمية والاقليمية) – المصادر الوطنية لحقوق الانسان – الاجهزة العالمية القائمة علي حماية حقوق الانسان (العالمية) – المصادر الوطنية لحقوق الانسان – الاجهزة حقوق الانسان – الحامية العائمة علي حماية حقوق الانسان ما لحمن المتحدة) – الحماية الوطنية لحقوق الانسان – الحماية العائمة علي حماية حقوق الانسان (العالمية والاقليمية) – المصادر الوطنية لحقوق الانسان – الاجهزة العالمية القائمة علي حماية حقوق الانسان (العالمية والاقليمية) – المصادر الوطنية لحقوق الانسان – الاجهزة العالمية القائمة علي حماية حقوق الانسان (العلمية الامم المتحدة) – الحماية الوطنية لحقوق الانسان – حقوق الانسان – الحقوق الانسان (العالمية الامم المتحدة) – الحماية الوطنية لحقوق الانسان – الاجهزة العالمية القائمة علي حماية حقوق الانسان (العالمية الم المتحدة) – الحماية الوطنية لحقوق الانسان –				
# Topic		Lecture	Tutorial/Practical	No of hours	
	أهمية حقوق الانسان تعريف حقوق الانسان	2	0	2	
تطور فكرة حقوق الانسان حقوق الانسان في عصر النهضة		2	0	2	
حقوق الانسان في الاديان السماوية		2	0	2	
معوقات حقوق الانسان		2	0	2	
اساليب المناداة بحقوق الانسان		2	0	2	
اليات حقوق الانسان		2	0	2	
نطبيقات في حق <i>و</i> ق الانسان		2	0	2	
Total sum 5- Teaching and learning		140141. Lecture (online/in class)2. Discussion			

methods		3. Tutorial			
		4. Brain storming			
		5. Projects			
		6. Self-learning			
		7. Research and Reporting			
		3. Computer Simulation			
		9. Teamwork			
6- Teaching and learning		1. Additional Tutorials			
methods for disable studer	its	. Online lectures and assignments			
		Using as many audio/visual aids as possible.			
		4. Providing extra opportunities for practice			
7- Teaching and learning		Assign a portion of the office hours for those students			
methods for low capacity		and			
students		 provide them with specific tailored tasks. 			
		3. Repeat the explanation of some of the material and			
		tutorials.			
		4. Assign a teaching assistance to follow up their			
		performance			
8- Teaching and learning		1. Assign course project tasks to those students.			
methods for outstanding		2. Give them advanced extra-curriculum topics.			
students		Encourage them to take part in a pilot research and case studies.			
		studies.			
9- Students assessment					
a- Assessment	1. Mid Term Examination (written/ online)				
methods		ractical Examination			
		ral Examination			
	4. Formative (quizzes- presentation -reports)				
		nal Term Examination (written)			
b- Assessment schedule	- Exerc	cise sheet/ Lab assignment : Weekly			
	- Quizz	z-1: Week no. 5			
	- Mid-	Term exam: Week no . 8			
	- Quizz	z-2: Week no. 12			
	- Final	- term examination: Week no. 16			
c- Weighting of	- Class	tutorial and quizzes : 15 %			
assessment	- Mid-	term examination: 15 %			
	- Final	- term examination: 70 %			
	Tot	al 100 %			
10- List of text books and references:					
a- Course notes	Th	ere are lectures notes prepared in the form of a book			
		thorized by the department.			
	uu	nonzea og me acparationa.			

b-Text books/ References	 عصام محمد احمد زناتي , قانون حقوق الانسان , دار النهضة العربية ,
	2010
	 عبد الواحد الفار , قانون حقوق الانسان في الفكر الوضعي والشريعة الاسلامية , دار النهضة العربية , 1987.
	الاسلامية , دار النهضة العربية , 1987.
c- Periodicals, Web sites	 المجلة المصرية للقانون الدولي .
etc	اصدارات المجلس القومي لحقوق الانسان <mark>.</mark>

11-Course contents – Course related program competencies					
	Level	Level A			
	A.5	A.7	A.8	A.9	A.10
أهمية حقوق الانسان	1				
تعريف حقوق الانسان	ľ				
تطورفكرة حقوق الانسان		\checkmark			
حقوق الانسان في عصر النهضة	\checkmark				
حقوق الانسان في الاديان السماوية	1	1			
معوقات حقوق الانسان		1		1	
اساليب المناداة بحقوق الانسان		1	\checkmark		
اليات حقوق الانسان			\checkmark		1
نطبيقات في حقوق الانسان			\checkmark		1

12-Teaching and learning methods - Course related program competencies						
	Level A					
	A.5	A.7	A.8	A.9	A.10	
Lecture (online/in class)	1					
Discussion	1	\checkmark				
Tutorial	1	1		\checkmark		
Problem solving		1		\checkmark		
Brain storming			1			

Projects		\checkmark	\checkmark	
Self-learning				\checkmark
Research and Reporting		\checkmark		\checkmark
Computer Simulation			\checkmark	
Teamwork				\checkmark

13- Assessment methods - Course related program competencies							
Assessment methods	Course related program competencies						
	Level A						
	A.5	A.8	A.9	A.10			
1. Mid Term Examination (written/ online)	\checkmark						
2. Practical Examination	\checkmark	\checkmark					
3. Oral Examination	\checkmark	\checkmark					
4. Formative (quizzes- presentation -reports)		\checkmark	1				
5. Final Term Examination (written			\checkmark	\checkmark			

Authorized from board of the department at 1/9/2022 Course coordinator:



Dr. Somaia Desouky

2 au



K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	Mathematics (2)			
Course Code	BAS 021			
Academic Year	2022-2023			
Coordinator	Dr. Gamal El-Anani			
Teaching Staff	Dr. Gamal El-Anani			
Level	Level (0)			
Semester	Second Term			
Number of Weekly	Lecture	2		
Contact Hours	Tutorial	2		
	Lab	0		
Department offering the	 Electronics ar 	nd Communications Engineering,		
program	Computers a	nd Systems Engineering,		
	Communicati	ions and Computer Engineering		
Department offering the	Basic Science			
course				
2- Aim of the course				

1. To teach student integral calculus, and integration of transcendental functions.

2. To equip students with methods of Integration, the definite integral, numerical Integration, and Improper Integrals to solve engineering problems.

3. To acquire students a good idea to use iterative methods.

4. To teach students the concepts and applications of infinite series.

5. To provide students with the arithmetic operations on conical sections.

Level A – General	 A.1. Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics. A.2. Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions A.3. Apply engineering design processes to produce cost-effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline and within the principles and contexts of sustainable design and development. A.5. Practice research techniques and methods of investigation as an inherent part of learning. 						
Level B - Speciality							
4- Course Contents	 Analytic geometry: Equation of second degree - Equation of pair of straight lines - Translation and rotation of axes - Conic sections Cartesian, Cylindrical and Polar spherical coordinates - Method of representing a vector in space - Equation of sphere and surface of revolutions -Plain equation in space - Equation of second order - Translation, Rotation of axis in space. Integral Calculus: Indefinite integral Method of integration (theory and functions) - Definite integral (direct and indirect) - Application on definite integral (areas and volumes) - Numerical Integration - Numerical integration. 						
# Topic		Lecture	Tutorial/Practical	No of hours			
Indefinite in (theory and	ntegral Method of integration functions)	4	4	8			
	Definite integral (direct and indirect) - Application on definite integral (areas and 6 6 12						

Numerical integration	8	8	16	
Equation of second degree - Equation of pair of straight lines - Translation and rotation of axes - Conic sections - Cartesian, Cylindrical and Polar spherical coordinates	6	12		
Method of representing a vector in space - Equation of sphere and surface of revolutions -Plain equation in space - Equation of second order - Translation, Rotation of axis in space.	4	8		
Total sum	28	28	56	
5- Teaching and learning methods	 Lecture (online/in class) Discussion Tutorial Problem solving Brain storming Projects Self-learning Research and Reporting Computer Simulation Teamwork 			
6- Teaching and learning methods for disable students	 Additional Tutorials Online lectures and assignments Using as many audio/visual aids as possible Providing extra opportunities for practice 			
 7- Teaching and learning methods for low capacity students 8- Teaching and learning methods for outstanding students 	 Providing extra opportunities for practice Assign a portion of the office hours for those students and provide them with specific tailored tasks. Repeat the explanation of some of the material and tutorials. Assign a teaching assistance to follow up their performance Assign course project tasks to those students. 			
outstanding students	 Give them advanced extra-curriculum topics. Encourage them to take part in a pilot research and case studies. 			
9- Students assessment a- Assessment methods 1. Mid Term Exam 2. Practical Exami 3. Oral Examination	nation	ten/ online)		

	4. Formative (quizzes- presenta	ation -reports)
	5. Final Term Examination (writ	tten)
b- Assessment schedule	- Exercise sheet/ Lab assignment :	Weekly
	- Quizz-1: - Mid-Term exam:	Week no. 5 Week no. 8
	- Quizz-2:	Week no. 12
	- Final – term examination:	Week no. 16
c- Weighting of	- Class tutorial and quizzes :	10 %
assessment	- Mid-term examination:	20 %
	- Final – term examination:	70 %
	Tot	tal 100 %

10- List of text books and ref	erences:
a- Course notes	There are lectures notes prepared in the form of a book authorized by the department.
b- Text books/ References	 Swokowski, E, Olinick ,M and Pence, D., Calculus, PWS Publishing Company - Boston, 1994. Mary Attenborough, Engineering Mathematics, McGraw - HILL Book Company Europe, 1994. Anthony croft,Robert Davison, Engineering Mathematics A modern Foundation for Electrical, Electronic & Control Engineering, Addison - Wesley - Publishing Company, 1992.
c- Periodicals, Web sites etc	Web Sites related to Mathematics and Mathematical engineering as: <u>www.math.hmc.edu</u> , <u>www.tutorial.math.lamar.edu</u> , <u>www.web.mit.edu</u>

11-Course contents – Course related program competencies						
		Level A				
	A.1	A.2	A.3	A.5		
Indefinite integral Method of integration (theory and functions)	\checkmark					
Definite integral (direct and indirect) - Application on definite integral (areas and volumes)	\checkmark	V		1		
Numerical integration		V	\checkmark			

Equation of second degree - Equation of pair of straight lines - Translation and rotation of axes - Conic sections - Cartesian, Cylindrical and Polar spherical coordinates	V	V	V	
Method of representing a vector in space - Equation of sphere and surface of revolutions -Plain equation in space - Equation of second order - Translation, Rotation of axis in space.			V	

12-Teaching and learning methods - Course related program competencies						
	Level A					
	A.1	A.2	A.3	A.5		
Lecture (online/in class)	1	\checkmark	1	1		
Discussion	1	\checkmark	\checkmark	1		
Tutorial	1	\checkmark	1	1		
Problem solving	1	\checkmark	1	1		
Brain storming	1	\checkmark	1	1		
Projects	\checkmark	\checkmark	\checkmark	\checkmark		
Self-learning		\checkmark				
Research and Reporting			\checkmark			
Computer Simulation						
Teamwork						

13- Assessment methods - Course related program competencies						
Assessment methods Course related program comptencies						
			Leve	el A		
		A.1	A.2	A.3	A.5	
1. Mid Term Examination (written/ online)		1	\checkmark	\checkmark	\checkmark	
2. Practical Examination						
3. Oral Examination						
4. Formative (quizzes- presentation -repor	ts)	\checkmark		\checkmark		

5. Final Term Examination (written	\checkmark	1	\checkmark	\checkmark]
------------------------------------	--------------	---	--------------	--------------	---

Authorized from board of the department at 4/2/2023 Course coordinator:

Dr. Gamal El-Anany





K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	Physics (2)			
Course Code	BAS 022			
Academic Year	2022-2023			
Coordinator	Dr. Somia Ahmed Desoky			
Teaching Staff	Dr. Somia Ahmed Desoky			
Level	Level (0)			
Semester	2 nd Term			
Number of Weekly	Lecture 2			
Contact Hours	Tutorial 1			
	Lab 2			
Department offering the	• Electronics and Communications Engineering,			
program	 Computers and Systems Engineering, 			
	Communications and Computer Engineering			
Department offering the	Basic sciences			
course				
2- Aim of the course				

- 1. To teach students the fundamentals of electrostatic fields due to static charges.
- 2. To provide students with basic laws and theories in electrostatics.
- 3. To introduce the concepts of electric potential and Capacitance.
- 4. To identify the definition of resistance, the units of resistance, and the factors effecting the amount of resistance in a circuit.
- 5. To predict the effect of varying voltage and resistance upon the current in a circuit .
- 6. The student should be able to solve simple computational problems which relate the voltage, resistance and current for a simple circuit.
- 7. To teach students the concepts of steady magnetic field due to dc currents and the motion of charged particles in uniform magnetic fields.
- 8. To provide students with basic laws and theories in steady magnetic fields.
- 9. To introduce the concept of inductance.

	A.1 Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science, and mathematics.						
neral	and interpret	A.2 Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions.					
Level A – General	meet specified economic, env	ngineering design processes to produce cost-effective solutions that becified needs with consideration for global, cultural, social, nic, environmental, ethical, and other aspects as appropriate to the ne and within the principles and contexts of sustainable design and coment					
	A.5 Practice resear of learning	ch techniques an	d methods of investiga	tion as an inherent part			
Level B - Speciality							
4- Course Contents	Electricity and Magnetism: Electrostatic Coulomb's Law and Electric Field Gauss's Law Electric Potential ,Electrical current and resistance - Ohm's law - electric power - semiconductors - electromotive force - Kirchhoff's rules - Magnetic fields - Maxwell equations - Ampere's law, Maxwell s equations - Faraday's law - Gauss's law.						
# Topic		Lecture	Tutorial/Practical	No of hours			
	aw and Electric Field		Tutorial/Practical	No of hours			
	aw and Electric Field	Lecture					
Coulomb's L		Lecture 2	3	5			
Coulomb's L Gauss's Law Electric Poter	ntial Electric Energy. and	Lecture 2 2	3	5			
Coulomb's L Gauss's Law Electric Poter Capacitance, Properties of	ntial Electric Energy. and	Lecture 2 2 6	3 3 6	5 5 12			
Coulomb's L Gauss's Law Electric Poter Capacitance, Properties of Current(In D	ntial Electric Energy. and Insulators c Circuits) and	Lecture 2 2 6 4	3 3 6 6	5 5 12 10			
Coulomb's L Gauss's Law Electric Poter Capacitance, Properties of Current(In D Resistance The Magnetic	ntial Electric Energy. and Insulators c Circuits) and	Lecture 2 2 6 4	3 3 6 6 6 6	5 5 12 10 10			
Coulomb's L Gauss's Law Electric Poter Capacitance, Properties of Current(In D Resistance The Magnetic Sources of th Faradays Law	ntial Electric Energy. and Insulators c Circuits) and c Field	Lecture 2 2 6 4 4 2 2	3 3 6 6 6 6 2	5 5 12 10 10 4			

5- Teaching and learning		1. Lecture (online/in class)				
methods		2. Discussion				
		3. Tutorial				
		4. Problem solving				
		5. Brain storming				
		6. Projects				
		7. Self-learning				
		8. Research and Reporting				
		9. Computer Simulation10. Teamwork				
6- Teaching and learning		1. Additional Tutorials				
methods for disable studer	nts	2. Online lectures and assignments				
		3. Using as many audio/visual aids as possible.				
		4. Providing extra opportunities for practice				
7- Teaching and learning		1. Assign a portion of the office hours for those students				
methods for low capacity		and				
students		2. Provide them with specific tailored tasks.				
		3. Repeat the explanation of some of the material and				
		tutorials.				
		4. Assign a teaching assistance to follow up their				
		performance				
8- Teaching and learning		1. Assign course project tasks to those students.				
methods for outstanding		2. Give them advanced extra-curriculum topics.				
students		3. Encourage them to take part in a pilot research and case				
		studies.				
9- Students assessment						
a- Assessment		id Term Examination (written/ online)				
methods		ractical Examination				
		ral Examination				
		ormative (quizzes- presentation -reports)				
		nal Term Examination (written)				
b- Assessment schedule	- Exerc	cise sheet/ Lab assignment : Weekly				
	- Quiz	z-1: Week no. 5				
	- Mid-	Term exam: Week no . 8				
	- Quizz	z-2: Week no. 12				
	- Final	- term examination: Week no. 16				
c- Weighting of	- Class	tutorial , Practical work and quizzes : %20				
assessment	- Mid-	term examination: % 20				
	- Final	- term examination: %60				
		Total 100 %				

10- List of text books and references:					
a- Course notes	There are lectures notes prepared in the form of a book				
	authorized by the department.				
b-Text books/ References	 Shipman, Wilson, Todd, An introduction to Physical 				
	Science, D.C. Heath and Company, Toronto, 1990.				
	 Richard T.Weidner, Physics - Revised Version, Allyn and 				
	Bacon, Boston, USA, 1989.				
	Serway - Beicher, Physics for Scientists and Engineering with				
	Modern, Saunders Collage Publishing, USA, 1989.				
c- Periodicals, Web sites	http://burgershusics.phy.actr.com.adu/bhase/hab.html				
etc	http://hyperphysics.phy-astr.gsu.edu/hbase/hph.html				

11-Course contents – Course related program competencies					
	Level A				
	L	A.1	A.2	A.3	A5
Coulomb's Law and Electric Field		\checkmark			\checkmark
Gauss's Law		V	V		
Electric Potential		V	1	1	
Capacitance, Electric Energy. and Properties of Insulators		V	V		V
Current(In Dc Circuits) and Resistance		V		\checkmark	
The Magnetic Field		V		V	
Sources of the Magnetic Field		\checkmark			

12-Teaching and learning methods - Course related program competencies					
	Level	Α			
	A.1	A.2	A.3	A.5	
Lecture (online/in class)	1				
Discussion	1		\checkmark		
Tutorial	\checkmark		\checkmark	1	

Problem solving	1			\checkmark
Brain storming		\checkmark	1	
Projects		1		\checkmark
Self-learning				
Research and Reporting				
Computer Simulation				
Teamwork	\checkmark			

13- Assessment methods - Course related program competencies							
Assessment methods	Course related program comptencies						
		Level	Α				
		A.1	A.2	A.3	A.5		
1. Mid Term Examination (written/ online)		1		\checkmark			
2. Practical Examination			\checkmark		\checkmark		
3. Oral Examination							
4. Formative (quizzes- presentation -report	ts)	1	\checkmark	\checkmark			
5. Final Term Examination (written		1		\checkmark	\checkmark		

Authorized from board of the department at 2023 Course coordinator:

Dr. Somaia Desouky

au 1 -



K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	Engineering chemistry			
Course Code	– BAS 023			
Academic Year	2022-2023			
Coordinator	Dr/ aya salem			
Teaching Staff	Dr/ aya salem			
Level	Level (0)			
Semester	second Term			
Number of Weekly	Lecture 2			
Contact Hours	Tutorial 1			
	Lab 2			
Department offering the	 Electronics and Communications Engineering, 			
program	 Computers and Systems Engineering, 			
	Communications and Computer Engineering			
Department offering the	Electronics Engineering and Electrical			
course	Communication			
	Computers and Systems Engineering			
2- Aim of the course				

- 1. introduce the concepts, procedures and methodology Equations of State Introduction to Chemical Thermodynamics -
- 2. develop the Material & Energy Balance in Fuel Combustion and Chemical Processes -
- 3. introduce the General Properties of Solutions Dynamic Equilibrium in Physical and Chemical Processes -
- 4. Expose the Principles in Electrochemistry Introduction to Corrosion Engineering
- 5. management some topics in process Chemical Industries (Industry & Chemistry of Cement Chemical Fertilizer Industries Sugar Industry Dyes & Dyeing Industry Petrochemical Industries Sulfuric acid Industry).

Level A – General	 A.5 Practice research techniques and methods of investigation as an inherent part of learning. A.7 Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams. A.8 Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools A.9 Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations. A.10 Acquire and apply new knowledge; and practice self, lifelong and other learning
	strategies.
Level B - Speciality	
4- Course Contents	BAS 023: Engineering Chemistry
	5 Hrs. = [2 Lect. + 1 Tut + 2 Lab]
	Equations of State - Introduction to Chemical Thermodynamics - Material & Energy
	Balance in Fuel Combustion and Chemical Processes - General Properties of
	Solutions - Dynamic Equilibrium in Physical and Chemical Processes - Basic
	Principles in Electrochemistry - Introduction to Corrosion Engineering - Selected
	topics in process Chemical Industries (Industry & Chemistry of Cement - Chemical
	Fertilizer Industries - Sugar Industry - Dyes & Dyeing Industry - Petrochemical
	Industries - Sulfuric acid Industry).
	معادلات الحالة. مقدمة في الديناميكا الحرارية الكيميائية. الميزان المادي والحراري في احتراق الوقود والعمليات الكيميائية. الخواص العامة للمحاليل.

الاتزان الديناميكي في العمليات الفيزيائية والكيميائية. اساسيات الكيمياء الكهربية. مقدمة في هندسة التاكل. موضوعات مختارة في العمليات الصناعية الكيميائية (كيمياء وصناعة الاسمنت . الأسمدة الكيميائية. صناعة السكر. الصباغة ومواد الصباغة. الصناعات البتروكيميائية. صناعة حمض الكبريتيك)

# Topic	Lecture	Tutorial/Practical	No of hours
Equations of State	2	1	2
Introduction to Chemical Thermodynamics	2	1	2
Material & Energy Balance in Fuel Combustion and Chemical Processes	6	3	6
General Properties of Solutions	4	2	4
Dynamic Equilibrium in Physical and Chemical Processes	2	1	2
Basic Principles in Electrochemistry	4	2	4
Introduction to Corrosion Engineering	4	2	4
Selected topics in process Chemical Industries (Industry & Chemistry of Cement - Chemical Fertilizer Industries - Sugar Industry - Dyes & Dyeing Industry - Petrochemical Industries - Sulfuric acid Industry).	4	2	4

Total sum 5- Teaching and learning methods	 Lecture (onl Discussion brain stormi Projects Self-learning Research an Computer St Teamwork 	ng	28			
	 Discussion brain stormi Projects Self-learning Research an Computer S Teamwork 	ng				
6- Teaching and learning	1. Additional T					
methods for disable students	 Online lectures and assignments Using as many audio/visual aids as possible. Providing extra opportunities for practice 					
7- Teaching and learning methods for low capacity students	 Assign a portion of the office hours for those students and provide them with specific tailored tasks. Assign a teaching assistance to follow up their performance 					
8- Teaching and learning methods for outstanding students	 Assign course project tasks to those students. Give them advanced extra-curriculum topics. Encourage them to take part in a pilot research and ca studies. 					
9- Students assessment						
methods 2. 1 3. 0 4. 1	ractical Examinati Dral Examination	- presentation -repo				
b- Assessment schedule - Qui	zz-1:	We	ek no. 5			
- Mic	-Term exam:	Wee	ek no . 8			
- Qui	zz-2:	Wee	ek no. 12			
- Fina	l – term examinatio	on: We	ek no. 16			
c-Weighting of - quiz	zes :	15	%			
assessment - Mic	-term examination:	15	%			
- Fina	I – term examinatio	on: 70	%			
		Total	100 %			
10- List of text books and referen	es:					
a- Course notes <u>T</u>	here are lectures n	otes prepared in the	e form of a book			

	authorized by the department.
b- Text books/ References	 Theodore L. Brown, et al, Chemistry the Central Science,
	Prentice Hall Int.
	(Pearson International latest edition), 2009.
c- Periodicals, Web sites	
etc	

	Level A							
	A.5	A.7	A.8	A.9	A.10			
Equations of State	V	V						
Introduction to Chemical Thermodynamics	V	1						
Material & Energy Balance in Fuel Combustion and Chemical Processes		V	1					
General Properties of Solutions		V	1					
Dynamic Equilibrium in Physical and Chemical Processes Basic Principles in Electrochemistry			V	V				
Introduction to Corrosion Engineering			1	1				
Selected topics in process Chemical Industries (Industry & Chemistry of Cement - Chemical Fertilizer Industries - Sugar Industry - Dyes & Dyeing Industry - Petrochemical Industries - Sulfuric acid Industry).				1	V			

	Level A	Level A							
	A.5	A.7	A.8	A.9	A.10				
Lecture (online/in class)	1								
Discussion	1	\checkmark							
Futorial	1	1	\checkmark	1					
Problem solving		1		1					
Brain storming			\checkmark						
Projects			\checkmark	\checkmark					
Self-learning					1				
Research and Reporting			\checkmark		1				
Computer Simulation				1					
Feamwork					1				

13- Assessment methods - Course related program competencies									
Assessment methods	Course related program comptencies								
	Level A								
	A.5	A.7	A.8	A.9	A.10				
1. Mid Term Examination (written/ online)	\checkmark	1							
2. Practical Examination		1							
3. Oral Examination		V	\checkmark						
4. Formative (quizzes- presentation -reports)			\checkmark	\checkmark					
5. Final Term Examination (written				\checkmark	\checkmark				

1-au

12-Teaching and learning methods - Course related program competencies

Authorized from board of the department at 11/2/2023 Course coordinator:



Dr./ aya .m. salem

K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	Principals of Man	ufacturing Engineering					
Course Code	MED 024						
Academic Year	2022-2023						
Coordinator	Dr. Abdel Salam Malek						
Teaching Staff	Dr. Abdel Salam Malek						
Level	Level (0)						
Semester	Second Term						
Number of Weekly	Lecture	2					
Contact Hours	Tutorial	1					
	Lab	2					
Department offering the	Electronics and Co	mmunications Engineering,					
program	Computers and Sys	stems Engineering,					
	Communications and Computer Engineering						
Department offering the	Department of Design & Manufacturing						
course	Engineering						
	•						

2- Aim of the course

- 1. To provide student with the nature of engineering materials.
- 2. To introduce students to engineering Instruments.
- 3. To acquire students the practical skills in metal forming and machining.
- 4. To teach students different methods of joining metals.
- 5. To introduce students to non-conventional machining.

04 Practice	e on standard Braz	ting operations.					
05 Practice	e on standard rivet	ing operations.					
	رة	على تشكيل الخشب بورشة النجا	 تمارين ونماذج عملية . 				
		على تشكيل المعادن بورش الخر					
# Topic	Lecture	Tutorial/Practical	No of hours				
Engineering materials; Ferrous and non-ferrous metals.	3	2	12				
Introduction to engineering Instruments.	2	2	10				
Metal forming and machining.	3	4	16				
Different methods of joining metals.	3	4 16					
Introduction to non- conventional machining.	3	2	12				
Total sum	14	14 56					
5- Teaching and learning methods	 Discussion Tutorial Problem so Brain storm Projects Self-learnin 	 Discussion Tutorial Problem solving Brain storming Projects Self-learning Research and Reporting 					
6- Teaching and learning	1. Additional	Tutorials					
methods for disable students	3. Using as ma	ures and assignments any audio/visual aids as	•				
7- Teaching and learning methods for low capacity students	1. Assign a po and	xtra opportunities for p rtion of the office hour	s for those students				
students	3. Repeat the tutorials.	 Repeat the explanation of some of the material and tutorials. Assign a teaching assistance to follow up their 					
8- Teaching and learning methods for outstanding students	 Assign cour Give them a 	se project tasks to thos advanced extra-curricu					
9- Students assessment							

a- Assessment	1. Mid Term Examination (written/ online)							
methods	2. Practical Examination							
	3. Oral Examination							
	Formative (quizzes- presentation -reports)							
	5. Final Term Examination (written)							
b- Assessment schedule	- Exercise sheet/ Lab assignment : Weekly							
	- Quizz-1: Week no. 05							
	- Mid-Term exam: Week no. 08							
	- Quizz-2: Week no. 12							
	- Final – term examination: Week no. 16							
c- Weighting of	- Class tutorial and quizzes : %							
assessment	- Mid-term examination: %							
	- Final – term examination: %							
	Total 100 %							
10- List of text books and re	ferences:							
a- Course notes	Lectures notes prepared in the form of a book authorized by the department.							
b- Text books/ References	1. M. Eissa: Production Engineering. 3th edition. Eitrac for publishing books (2005).							
	 H. El-Houfy: Nontraditional machining techniques. Taylor & Francis (2007). 							
c- Periodicals, Web sites etc	All Web sites related to the course.							

	Level A								Level B
	A.1	A.2	A.3	A.4	A.6	A.7	A.9	A.10	
Engineering Materials	V			1		V	1	1	
Manufacturing Processes: Casting and molding processes, metal forming, forming of plastics, powder metallurgy		1		1			1	1	
Material Joining processes: welding, soldering, brazing, riveting, joining by mechanical elements		\checkmark		1			1	1	

Material removal processes, metal cutting and finishing processes	\checkmark	\checkmark		\checkmark			1	V	
Practical training	\checkmark								

	Level A								Level B
	A.1	A.2	A.3	A.4	A.6	A.7	A.9	A.10	
Lecture (online/in class)	1	\checkmark	\checkmark	1	1	1	1	1	
Discussion	1	1	1	1	1	1	1	\checkmark	
Tutorial	1		\checkmark		1				
Problem solving	1		\checkmark		1				
Brain storming	1	\checkmark	\checkmark	1	1	\checkmark	1	1	
Projects					1	\checkmark			
Self-learning				\checkmark	1				
Research and Reporting									
Computer Simulation									
Teamwork					\checkmark	\checkmark			

13- Assessment methods - Course related program competencies									
Assessment methods	Course related program competencies								
	Level A								Level B
	A.1	A.2	A.3	A.4	A.6	A.7	A.9	A.10	
 Mid Term Examination (written/ online) 	\checkmark	V	\checkmark	1	\checkmark	\checkmark	V	1	
2. Practical Examination		\checkmark		\checkmark			\checkmark	\checkmark	
3. Oral Examination									
 Formative (quizzes- presentation - reports) 	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
5. Final Term Examination (written)	\checkmark	1	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	

Course coordinator:





Dr. Abdel Salam MALEK

K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	Computer Programm	ing	
Course Code	CSE025		
Academic Year	2022-2023		
Coordinator	Dr. Soheir Afifi		
Teaching Staff	Dr. Soheir Afifi		
Level	Level (0)		
Semester	Second Term		
Number of Weekly	Lecture	2	
Contact Hours	Tutorial	0	
	Lab	2	
Department offering the	Electronics and Communications Engineering		
program	Computers a	nd Systems Engineering,	
	Communicati	ions and Computer Engineering	
Department offering the	Computers and Systems Engineering,		
course			
2- Aim of the course			

judgment to draw conclusions A.3. Apply engineering design processes to produce cost- effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline and within the principles and contexts of sustainable design and development. A.5. Practice research techniques and methods of investigation as an inherent part of learning.
A.3. Apply engineering design processes to produce cost- effective solutions that meet specified needs with consideration for global, cultural, social, economic, environmental, ethical and other aspects as appropriate to the discipline and within the principles and contexts of sustainable
A.3. Apply engineering design processes to produce cost- effective solutions that meet specified needs with consideration for global, cultural, social, economic,
A.3. Apply engineering design processes to produce cost-
judgment to draw conclusions
simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering
and mathematics. A.2. Develop and conduct appropriate experimentation and/or
problems by applying engineering fundamentals, basic science
A.1. Identify, formulate, and solve complex engineering
red program competencies
bles to the screen with controlled formatting e simple C-programs that utilize for-loops to repeat blocks of instructions
int, double and char e and comment simple C-programs that may print text, special characters and
in the concept of a variable and declare, initialize and modify variables of data
8
tement, for statement and while statement.functions, arrays, pointers and
rogram statements like input/output statements, the flow control statements
types and operators
am structure ble declarations
•

4- Course Contents	Syllabus: Introduction to computer software, evolution of programming languages, machine code, assembly language, high level languages, types and characteristics of translators. Basics of C++ programming language including C++ program structure, variables, data types, constants, expressions, and arithmetic and logic operators. C++ program statements including: input/output statements, flow control statements (if statement, if else statement, nested if and switch case statement), iterative statements (for loop, while loop and do while loop). Introduction to functions including function declaration, calling function, passing parameters to function, macros and recursion. Introduction to pointers and arrays.			
# Topic		Lecture	Tutorial/Practical	No of hours
Introduction to computer software, evolution of programming languages, machine code, assembly language, high level languages		4	4	8
Basics of C++ programming language including C++ program structure, variables, data types, constants		6	6	12
expressions, and arithmetic and logic operators. C++ program statements including: input/output statements, flow control statements (if statement, if else statement, nested if and switch case statement),		4	4	8
iterative statements (for loop)		8	8	16
while loop and do while loop Introduction to functions including function declaration, calling function, passing parameters to function, macros and recursion. Introduction to pointers and arrays.		8	8	16

Total sum		30		30	60	
5- Teaching and learning methods			 Lectures Tutorials. Homework Exercises Reports Projects 			
students 7- Teaching and learning m	Inching and learning methods for disable ints1. Assign a portion of the office hours for the students.1. Assign a portion of the office hours for the students.1. Assign a portion of the office hours for the 			as and evaluate them in of some of the course tance to follow up the pup of students.		
capacity students		 those students and provide them with specific tailored tasks. Repeat the explanation of some of the material and tutorials. Assign a teaching assistance to follow up their performance 				
8- Teaching and learning m outstanding students	ethods for	 Assign course project tasks to those students. Give them advanced extra-curriculum topics. Encourage them to take part in a pilot research and case studies. 				
9- Students assessment						
a- Assessment methods	 Mid Term Exam Practical Examinatio Oral Examinatio Formative (quiztion 5. Final Term Examination) 	natio n zes-	n presenta	tion -reports)		
b- Assessment schedule	- Exercise sheet/ Lab	assig	nment :	Weekly		
	- Quizz-1:Week no. 5- Mid-Term exam:Week no. 8- Quizz-2:Week no. 12- Final – term examination:Week no. 16			o. 8 o. 12		
c- Weighting of assessment	 Class tutorial and quizzes: 10 % Mid-term examination: 10 % Lab/practical exam: 20 % Final – term examination: <u>60 %</u> Total 100 % 		_			

10- List of text books and references:				
a- Course notes	There are lectures notes prepared in the form of a book			
b- Text books/ References	Peter Van-Roy, Seif Haridi, Concepts, techniques, and models of computer programming, MIT Press USA, 2004.			
c- Periodicals, Web sites	http://www.learnalgorithms.in,			
	https://www.coursera.org/course/algo			

11-Course contents – Course related program competencies				
	Level A			
	A.1	A.2	A.3	A.5
Introduction to computer software, evolution of programming languages, machine code, assembly language, high level languages	1	1		
Basics of C++ programming language including C++ program structure, variables, data types, constants?	1	1	1	
expressions, and arithmetic and logic operators. C++ program statements including: input/output statements, flow control statements (if statement, if else statement, nested if and switch case statement),	V	1	1	
iterative statements (for loop)	V	V	1	
while loop and do while loop Introduction to functions including function declaration, calling function, passing parameters to function, macros and recursion. Introduction to pointers and arrays.	\checkmark	V	V	

12-Teaching and learning methods - Course related program competencies

	Level A			
	A.1	A.2	A.3	A.5
Lecture (online/in class)	\checkmark	\checkmark	\checkmark	
Discussion	1	\checkmark	1	
Tutorial	1	\checkmark	\checkmark	
Problem solving	1	\checkmark	1	
Brain storming	1	\checkmark	1	
Projects	1	\checkmark	1	
Self-learning		\checkmark		
Research and Reporting			\checkmark	
Computer Simulation	1	\checkmark	\checkmark	
Teamwork				

13- Assessment methods - Course related program competencies					
Assessment methods	Course related program compto	encies			
			Leve	el A	
		A.1	A.2	A.3	A.5
1. Mid Term Examination (written/ online)		1	\checkmark	\checkmark	\checkmark
2. Practical Examination					
3. Oral Examination					
4. Formative (quizzes- presentation -report	ts)	1	\checkmark	\checkmark	1
5. Final Term Examination (written		1	\checkmark	\checkmark	\checkmark

- در الردهر

Authorized from board of the department at 16/2/2023 Course coordinator:



Doctor. Soheir afifi

K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	Arabic Language				
Course Code	HUM 026				
Academic Year	2022-2023				
Coordinator	أد امين سعيد				
Teaching Staff	أد امين سعيد				
Level	Level (0)				
Semester	Second Term				
Number of Weekly	Lecture	2			
Contact Hours	Tutorial	0			
	Lab	0			
Department offering	 Electronics and 	Communications Engineering,			
the program	 Computers and 	Systems Engineering,			
	Communications and Computer Engineering				
Department offering	Humanities & Social Sciences				
the course					
2- Aim of the course					
ب والبناء للاسماء والافعال 1.	-				
ية بعض علاماته عن بعض .2					
لة العربية وتغيرات الجملة .3		م الم الم الم الم الم الم الم الم الم ال			
	– الافعال الخمسة والاسماء الخمسة وصور اعرابها – اللزوم والتعدي وصو				
حالات المنع من الصرف					
بي قواعد الاملاء العربية [. وعلامات الترقيم الواجبة	– صور تمييز العدد – صور الاضافة والمشتقات – الكشف في المعجم العر				
وعلامات الترقيم الواجبة					
3- Course related program of	competencies				

Level A – General	 A.1 Identify, formulate, and solve complex engineering problems by applying engineering fundamentals, basic science and mathematics. A.2 Develop and conduct appropriate experimentation and/or simulation, analyze and interpret data, assess and evaluate findings, and use statistical analyses and objective engineering judgment to draw conclusions. A.4 Utilize contemporary technologies, codes of practice and standards, quality guidelines, health and safety requirements, environmental issues, and risk management principles. 			
Level B - Specialist				
4- Course Contents	Syllabus: الجملة العربية بين الإسمية والخبرية – حالات الاعراب والبناء للاسماء والافعال - تقدير حركة الاعراب وانابة بعض علاماته عن بعض – نواسخ الجملة العربية وتغيرات الجملة – الافعال الخمسة والاسماء الخمسة وصور اعرابها – اللزوم والتعدي وصوره في اعراب الافعال – حالات المنع من الصرف – صور تمييز العدد – صور الاضافة والمشتقات – الكشف في المعجم العربي قواعد الاملاء العربية وعلامات الترقيم الواجبة			
# Topic		Lecture	Tutorial/Practical	No of hours
ت الأعراب و والافعال - عراب وانابة	الجملة العربية والخبرية – حالا والبناء للاسما تقدير حركة الا بعض علامات	4	0	0
نواسخ الجملة العربية وتغيرات الجملة – الافعال الخمسة والاسماء الخمسة وصور اعرابها			0	0
	اللزوم والتعدي اعراب الافعال – .	8	0	0
بدد – صور ة والمشتقات	صور تمييز الع الاضاف	6	0	0

ف في المعجم بي قواعد لاء العربية إمات الترقيم بية	العر. الاما	4	0	0	
Total sum 28 0				0	
5- Teaching and learn methods	ning	ing 1. Lecture (online/in class) 2. Discussion 3. Tutorial 4. Problem solving 5. Brain storming 6. Projects 7. Self-learning 8. Research and Reporting 9. Computer Simulation 10. Teamwork			
6- Teaching and learn methods for disable students	ning	 Additional Tutorials Online lectures and assignments Using as many audio/visual aids as possible. Providing extra opportunities for practice 			
7- Teaching and learn methods for low cap students	acity	g 1. Assign a portion of the office hours for those students and			
8- Teaching and learr methods for outstan students	-	2. Give them adv	project tasks to those stud vanced extra-curriculum to em to take part in a pilot ro	opics.	
9- Students assessme a- Assessment methods	 Mid Term Examination (written/ online) Practical Examination Oral Examination Formative (quizzes- presentation -reports) Final Term Examination (written) 				
b- Assessment schedule	- Quizz- - Mid-T - Quizz-	erm exam:	Week no. 4 Week no. 8 Week no. 12		
c- Weighting of assessment		tutorial and quizzes erm examination:	: 10% 20 %		

	- Final – term examination: 70%			
	Total 100 %			
10- List of text books	and references:			
a- Course notes	There are lectures notes prepared in the form of a book authorized by			
	the department.			
b- Text books/				
References	There are lectures notes prepared in the form of a book			
2c- Periodicals, Web				
sitesetc.				

11-Course contents – Course related program competencies				
	Level A			
	A.1	A.2	A.4	
الجملة العربية بين الإسمية والخبرية – حالات الاعراب والبناء للاسماء والافعال - تقدير حركة الاعراب وانابة بعض علاماته عن بعض	V			
نواسخ الجملة العربية وتغيرات الجملة ــ الافعال الخمسة والاسماء الخمسة وصور اعرابها	V	V		
اللزوم والتعدي وصوره في اعراب الافعال – حالات المنع من الصرف		1	1	
صور تمييز العدد ـــ صور الاضافة والمشتقات	\checkmark	1	\checkmark	
الكشف في المعجم العربي قواعد الاملاء العربية وعلامات الترقيم الواجبة			V	

12-Teaching and learning methods - Course related program competencies	Leve	IA	
Problem solving	\checkmark	V	\checkmark
Brain storming		V	\checkmark
Projects		V	\checkmark
Self-learning			
Research and Reporting			
Computer Simulation		\checkmark	\checkmark
Teamwork			

13- Assessment methods - Course related prog	gram competencies			
Assessment methods	Course related program comptencies			
		Level A	4	
		A.1	A.2	A.4
1. Mid Term Examination (written/ online)		1	1	1
2. Practical Examination				
3. Oral Examination		1	\checkmark	\checkmark
4. Formative (quizzes- presentation -repor	ts)	\checkmark	\checkmark	\checkmark
5. Final Term Examination (written		\checkmark	\checkmark	\checkmark

Authorized from board of the department at 1/9/2022 Course coordinator:



Prof. Amin Said Abd-Elghany

K 10, Bilbies – 10th of Ramadan



وزارة التعليم العالي المعهد العالي للهندسة الإلكترونية قرار وزاري 5053 – 2016/10/12 ك 10 طريق بلبيس العاشر من رمضان

Course Specification

1- Basic Information

Course Title	English Language	
Course Code	HUM 027	
Academic Year	2022-2023	
Coordinator	Dr. Abdel Salam Ma	lek
Teaching Staff	Dr. Abdel Salam Ma	lek
Level	Level (0)	
Semester	Second Term	
Number of Weekly	Lecture	2
Contact Hours	Tutorial	0
	Lab	0
Department offering the	Electronics and Co	mmunications Engineering,
program	Computers and Sys	stems Engineering,
	Communications as	nd Computer Engineering
Department offering the	Department of Bas	ic Science
course		
2- Aim of the course		

- 1. To improve the ability of students to listen, speak and write English.
- 2. To enhance vocabulary.
- 3. To enable students to compose freely and independently in speech and writing.
- 4. To enable the students for the use of grammar correctly,
- 5. To diagnose and treat the various English skills.
- 6. To enhance the imagination and creativity of the students.
- 7. To motivate the students.

	 A.5 Practice research techniques and methods of investigation as an inherent part of learning. A.7 Function officiently as an individual and as a member of multi disciplinant.
neral	A.7 Function efficiently as an individual and as a member of multi-disciplinary and multicultural teams.
Level A – General	A.8 Communicate effectively – graphically, verbally and in writing – with a range of audiences using contemporary tools.
Leve	A.9 Use creative, innovative and flexible thinking and acquire entrepreneurial and leadership skills to anticipate and respond to new situations.
	A.10 Acquire and apply new knowledge; and practice self, lifelong and other learning strategies.
Level B - Speciality	
4- Course Contents	Syllabus: How to talk about the people in your life - how to talk about greeting customs - how to explain who people are - how to correct a misunderstanding - writing a self - introduction - how to talk about your background - how to talk about tourism - how to describe objects - how to tall an anecdote - writing an intercultural experience - how to talk about your schooldays How to talk about your achievements - how to offer hospitality - how to talk about your education and career - writing a CV - how to say how you feel about things - how to talk about music - how to compare and discuss preference. how to explain what a film is about - writing a description of a film or book - how to talk about countries and governments - how to talk about rules and laws - how to talk about stories in the news - how to talk about past events - writing narrating a story - how to express strong feelings - how to talk about past events - writing narrating a story - how to express strong feelings - how to talk about your schooldays - how to talk about tories in the news - how to talk about your schooldays - how to talk about your adhievements - how to offer hospitality - how to talk about your ducation and career - writing a CV - how to say how you feel about things - how to talk about your achievements - how to talk about rules and laws - how to talk about your achievements - how to talk about rules and laws - how to talk about outries and governments - how to talk about rules and laws - how to talk about countries and governments - how to talk about rules and laws - how to talk about stories in the news - how to talk about past events - writing narrating a story - how to talk about governments - how to talk about rules and laws - how to talk about stories in the news - how to talk about past events - writing narrating a story - how to explain what a film is about - writing a description of a film or book - how to talk about stories in the news - how to talk about past events - writing narrating a story - how to talk about g

accommodation - how to give health advice - how to give extra information - writing a website recommendation – how to explain your point of view - how to talk about hopes and wishes - how to describe the plot of a story - how to talk about important decisions - writing a story with a moral.

# Topic		Lec	ture	Tutorial/Practical	No of hours
How to talk to and about pe	ople.	2		0	4
How to talk about things.		2		0	4
How to talk about yourself.		2		0	4
How to avoid misunderstand	dings.	3		0	6
How to have a good job interview.		3		0	6
Resume writing.		2		0	4
Total sum		14		0	28
5- Teaching and learning met	hods	1. 2. 3. 4. 5. 6. 7.	Lecture (onl Discussion Brain storm Projects Self-learning Research an Teamwork	ing g d Reporting	
6- Teaching and learning met for disable students	hods	1. 2. 3.	Using as ma	res and assignments ny audio/visual aids a tra opportunities for _l	•
7- Teaching and learning met for low capacity students	hods	1. 2. 3. 4.	Assign a por and Provide the Repeat the tutorials.	tion of the office hour m with specific tailore explanation of some o ching assistance to fol	rs for those students d tasks. f the material and
8- Teaching and learning met for outstanding students	hods	1. 2. 3.	Give them a	se project tasks to tho dvanced extra-curricu hem to take part in a	
9- Students assessment					
a- Assessment methods	 Pr Or Or Fc 	actio ral Ex orma	cal Examinati xamination tive (quizzes	tion (written) on - presentation -report ation (written)	s)

b- Assessment schedule	- Exercise sheet/ Lab assignment :	Weekly
	- Quizz-1:	Week no. 05
	- Mid-Term exam:	Week no. 08
	- Quizz-2:	Week no. 12
	- Final – term examination:	Week no. 16
c-Weighting of assessment	- Class tutorial and quizzes :	%
	- Mid-term examination:	%
	- Final – term examination:	%
	Tota	l 100 %
10- List of text books and refe	erences:	
a- Course notes	Lectures prepared notes authoriz	zed by the department.
b- Text books/ References	Mark Hancock & Annie McDonal Level, Oxford University press, La	
c- Periodicals, Web sites etc	All Web sites related to the course.	

			Leve	A		Level B
	A.5	A.7	A.8	A.9	A.10	
How to talk to and about people.	1	1	1	1	1	
How to talk about things.	1	1	1	1	1	
How to talk about yourself.	1	1	1	1	1	
How to avoid misunderstandings.	1	1	1	1	1	
How to have a good job interview.	1	1	1	1	1	
Resume writing	1	1	\checkmark	\checkmark	1	

12-Teaching and learning methods - Course related program competencies

	Level A	N				Level B
	A.5	A.7	A.8	A.9	A.10	
Lecture (online/in class)	\checkmark	\checkmark	\checkmark	\checkmark	1	
Discussion	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	
Tutorial						
Problem solving						
Brain storming	\checkmark	\checkmark	\checkmark	1	1	
Projects	\checkmark	\checkmark	\checkmark	1	1	
Self-learning	1	\checkmark	\checkmark	1	1	
Research and Reporting	1	\checkmark	\checkmark	\checkmark	1	
Computer Simulation						
Teamwork	1	1	1	1	\checkmark	

Assessment methods	Cours	Course related program competencies							
	Level A					Level			
	A.5	A.7	A.8	A.9	A.10				
 Mid Term Examination (written/ online) 	1	1	1	1	1				
2. Practical Examination	1	1	\checkmark	\checkmark	\checkmark				
3. Oral Examination									
 Formative (quizzes- presentation - reports) 	1	1	1	1	\checkmark				
5. Final Term Examination (written)	\checkmark	\checkmark	\checkmark	\checkmark	1				

Authorized from board of the department at / / Course coordinator:

24



Dr. Abdel Salam MALEK