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Basic Engineering Science. Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 1st Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: Mathematics(1-A)

Code Symbol: BES011

Element of program: Major

Date of specification approval: 2011

Department offering the course: Basic Engineering Science. Dept.

By law 2006

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
4	2	----	6

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
-----	100%	-----	-----	-----	-----	-----	100%

B-Professional Information

2- Course Aims:

This course is designed to give the students a basic idea regarding the principle of Engineering Mathematics and its applications. This course is designed to give the students basic requirements for mathematics education. Students must know the basic principles of mathematics and be able to apply them to engineering problems.

3- Course Objectives:

- Illustrate the philosophy of the differentiation and the importance of finding the differentiation of various type of functions as an essential part of the mathematical background of engineers.
- Explain theory of equations and partial fractions.
- Demonstrate understanding the concepts of binomial theorem, and matrices.
- Demonstrate understanding of the basic principles of limits, continuity, rate of change of functions commonly used in engineering problems.
- Explain the fundamentals of explicit and implicit functions differentiation with successive differentiation and total differentiation.
- Explain the fundamentals of L'Hospital theorem.
- Demonstrate understanding of expansion of functions.

4- Relationship between the course and the program

Field	National Academic Reference Standard(NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A1,A5	B3	C1	D9

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A1) Demonstrate understanding of Concepts and theories of mathematics and sciences, appropriate to electrical engineering.	a1-1)Classify the functions according to degree, and continuity. a1-2)Demonstrate understanding of concepts for solving different types of simultaneous Algebraic equations. a1-3)Explain binomial theorem. a1-4)Report the basic principes of mathematical induction.
	A5) Illustrate Methodologies of solving engineering problems, data collection and interpretation	a5-1) Illustrate Methodologies for solving Math problems, including derivatives, differential equations. a5-2)Illustrate Methodologies for solving matrices problems. a5-3) Illustrate Methodologies for solving Math problems , including Partial Fraction
Intellectual skills	B3) Think in a creative and innovative way in problem solving and design.	b3-1)Examin the solutions obtained by Binomial theorem. b3-2)Solve problems serve to illustrate the studied equations. b3-3)Use the fundamentals of differentiation in engineering applications.
Professional skills	C1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems..	c1-1) Build a mathematics models and solve problems in engineering applications.
General skills	D9) Refer to relevant literatures..	d9-1)Utilize the IT and literature base resources for Engineering. D9-2)Seek learning opportunities outside the classroom environment.

6- Course Topics.

Topic No.	General Topics (Algebra)	Weeks
1st	Partial Fractions .	1-2
2nd	Mathematical Induction .	3-4
3rd	Theory of equations	5-7
4th	Binomial Theorem	9-11
5th	Matrices	12-15

Topic No.	General Topics (Calculus)	Weeks
1st	Basic definitions of Limits	1
2nd	Main value theorem, graph of polynomials	2
3rd	Basic rules of differentiation	3-4
4th	Differentiation exponential and Logarithmic functions	5
5th	Differentiation of trigonometric and inverse trigonometric functions.	6-7
6 th	Differentiation of hyperbolic and inverse hyperbolic functions.	9-11
7 th	N th Derivative, total differentiation	12-13
8th	L'Hospital Rule and expansion of functions	14-15

Course Contents

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	-Partial fraction. -Differentiation basic definitions and limits.	6	4	2	-	a1-1,a1-2
WEEK-2	-Partial fraction applications. -Main value theorem, graph of polynomials..	6	4	2	-	a1-3
WEEK-3	-Mathematical Induction (Part I). -Basic rules of differentiation	6	4	2	-	a1-4
WEEK-4	-Mathematical Induction (Part II). -Differentiation of uv and u/v	6	4	2	-	b3-1
WEEK-5	-Theory of equation (Part I). -Differentiation exponential and logarithmic functions.	6	4	2	-	b3-2
WEEK-6	-Theory of equation (Part II). -Differentiation of trigonometric	6	4	2	-	b3-1, d9-1
WEEK-7	-Theory of equation (Part III). -Differentiation of inverse trigonometric functions.	6	4	2	-	A5-1
WEEK-8	Midterm of first Term (written examination)					
WEEK-9	-Binomial Theorem (Part I) -Differentiation of hyperbolic functions (Part I).	6	4	2	-	a1-4
WEEK-10	-Binomial Theorem (Part II) -Differentiation of hyperbolic functions (Part II).	6	4	2	-	a5-1
WEEK-11	-Binomial Theorem (Part III) -Differentiation of inverse hyperbolic functions	6	4	2	-	b3-1
WEEK-12	-Basic properties of matrices -N th derivative	6	4	2	-	b3-1
WEEK-13	-Different methods of finding inverse of matrices -Total differentiation	6	4	2	-	a5-3
WEEK-14	-Eigen values and Eigen vectors -L'Hospital rule.	6	4	2	-	b1-2, c1-1, d9-1
WEEK-15	-Solve system of linear equations using matrices. -Taylor an Maclaurin expansion of functions,	6	4	2	-	a5-2, b3-1, d9-2

Course Contents

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Renorting	Group Working	Discovering	simulation and Modelling	Lab. Experiments
Knowledge & understanding	a1-1	*			*	*								
	a1-2	*			*	*								
	a1-3	*			*	*								
	a1-4	*			*	*								
	a5-1	*			*	*								
	a5-2	*			*	*								
Intellectual Skills	a5-3	*			*	*								
	b3-1	*			*	*								
	b3-2	*			*	*								
Professional Skills	b3-3	*			*	*								
	c1-1	*			*	*								
General Skills	d9-1		*							*	*			
	d9-2		*							*	*			

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)		Assessment Methods												
		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring	
Knowledge & Understanding	a1-1	*												
	a1-2	*		*										
	a1-3	*	*	*	*	*		*				*		
	a1-4	*		*		*								
	a5-1	*		*	*									
	a5-2	*	*											
Intellectual Skills	a5-3	*												
	b3-1	*	*	*		*	*						*	
	b3-2	*												

Course Contents

	b3-3	*							*			
Professional Skills	c1-1	*		*								
General Skills	d9-1					*	*	*	*			
	d9-2					*		*	*			

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	100	66.66%	16th
Mid-Term Examination (Written)	40	26.66%	8th
Term work (Tutorial and report assessment)	10	6.66%	Weekly
Total	150	100%	

11- Facilities required for teaching and learning:

11-1 Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

12-1 Essential books

- 1- Thomas and finney Addison, "Calculus and Analytic Geometry", Westey Publishing Company, U.S.A., 2006
- 2- LB Prasad, "A Text Book of Practical Mathematics (Two Volume)" , Khanna Publishers Delhi – India,1990 .
- 3-Hamdy A.Taha, "Operations research an iintroduction", 2003
- 4-Schaum's outlines series calculus, 1974
- 5-Th.Shifrin, "Multivariable Mathematics", wiley, 2005
- 6-J.H.Hubbard and B.B.Hubbard, "Vector Calculus, Linear Algebra, and differential Forms", (second edition), Prentice Hall, 2001.

12-2 Periodicals, Web sites, ---- etc.

-Cauchy Schwarz inequality on Wikipedia

http://en.wikipedia.org/wiki/Cauchy-Schwarz_inequality

www.lix.polytechnique.fr/~liberti/kissing-ctw.ps.gz

http://college.cengage.com/mathematics/larson/calculus_analytic/7e/students/

Course coordinator

Dr. Adel Mohamed Elrefaey

Head of the Department

Prof. Dr. Gamal Ibrahim Mohamed

Basic Engineering Science. Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 1st and 2nd Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: Mechanics

Code Symbol: BES003

Element of program: Major

Date of specification approval: 2011

Department offering the course: Basic Engineering sciences

By law 2006

Lecture	Tutorial	Laboratory	Total
2	2	----	4

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
-----	---	50%	50%	-----	-----	-----	100%

B-Professional Information

2- Course Aims:

To develop an understanding of the principles of statics, vectors and force systems. To introduce the concepts of free body diagram also, analysis of structures: trusses, frames and machines. Also to know the basic concepts of the dry friction.

3- Course Objectives:

- To understand engineering applications on vectors
- To calculate the group force and momentum of a group of forces
- To study the equilibrium of a body and a group of bodies
- To study and apply principles of friction
- To understand principles of body kinematics

4- Relationship between the course and the program

Field	National Academic Reference Standard(NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A1	B2,B3,B11	C1	D3

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A1) Demonstrate understanding of Concepts and theories of mathematics and sciences, appropriate to electrical engineering.	a1- 1) Demonstrate understanding forces and their resultants by scalar and vector approach. a1-2) Recognize ability to draw free body diagrams for systems. a1-3) Explain simplify systems of forces and moments to equivalent systems. a1-4) Explain how to determine internal forces within a system. a1-5) Illustrate the laws of dry friction and their applications. a1-6) Explain relate time, position, velocity, and acceleration of particles using common coordinate systems. a1-7) Choose Newton's law, work energy methods, and impulse momentum methods to Solve particle kinetics problems. a1-8) Choose vectors to describe the motion of a rigid body undergoing translation, rotation about a fixed axis, and general plane motion. a1-9) Choose Newton's law and work-energy methods to solve kinetics problems involving coplanar motion of a rigid body. a1-10) Demonstrate understanding the intersection of forces and moments with motion variables: position, velocity, and acceleration.
Intellectual skills	B2) Select appropriate solutions for engineering problems based on analytical thinking.	b2-1) Design time, position, velocity, and acceleration of particles. b2-2) Solve particle kinetics problems using Newton's second law. b2-3) Formulate the interaction of forces and moments with motion variables: position, velocity, and acceleration.
	B3) Think in a creative and innovative way in problem solving and design.	b3-1) Design idealize practical problems by mathematical models.
	B11) Analyze results of numerical models and assess their limitations.	b11-1) Analyze simple structures such as beams, trusses, frames and mechanical systems. b11-2) Develop the analytical skills to solve equilibrium problems involving particles and rigid bodies.
Professional skills	C1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems.	c1-1) Use the various branches of mechanics and the difference between the statics and dynamics. c1-2) Express force in a Cartesian vector form c1-3) Resolve a force into components along specified directions. c1-4) Use the dot product to determine the angle between the two vectors. c1-5) Express force in a Cartesian vector form. c1-6) Resolve a force into components along specified directions.
General skills	D3) Communicate effectively.	d3-1 Use information technologies effectively

Course Contents

6- Course Topics.

Topic No.	General Topics	Weeks
1st	Introduction to statics, Mechanics, the subject and axioms of statics, Newton's three laws of motion, Newton's law of gravitational attraction, moment of force about a point O, replacement of a force by a force and couple.	1
2nd	Force Vector, Force resultant in two dimensions, scalar and vectors, types of vectors, operations on vectors.	2
3rd	Parallelogram law, addition of rectangular force components, the dot and cross product, some examples of dot product and examples of the cross product (moment of force)	3
4th	Force resultant in three dimensions, (converging and non-converging forces).	4
5th	Plane system of converging forces, The composition of two forces applied at a single point, the projection of a geometric sum of vectors on an axis.	5
6th	An analytical method for determination of a resultant of a plane system of converging forces and graphical methods (polygon of forces).	6
7th	Conditions of equilibrium of a plane system of converging forces, a theorem on the equilibrium of three non parallel forces lying in one plane.	7
8th	Plane system of non-converging forces, the composition of two parallel forces acting in the same direction, the composition of two forces unequal in magnitude and acting in opposite direction	9
9th	Non-concurrent coplanar forces, methods for determining the resultant, analytical methods and graphical method (Funicular or string polygon), conditions for equilibrium for system of non converging forces.	10
10th	Plane trusses, simple truss, stresses, Bow's notation, support reactions and free body diagram, zero force members, methods for solving the trusses.	11
11th	Analytical method of isolated joints. Methods of sections.	12
12th	Cantilever truss and graphical methods.	13
13th	Frames and machines, applications for equations of equilibrium.	14
14th	Friction, types of friction, the laws of sliding friction and the laws of rolling friction.	15
15th	Introduction to dynamics, Background, basic concepts, Newton's laws, engineering and mechanics, and methods for solving problems.	16
16th	Kinematics of particles, 1. rectilinear motion, basic concepts such as position, velocity, and acceleration, distance , displacement and speed.	17
17th	Determination of the motion of the particle.	18
18th	Graphical solution of rectilinear motion.	19
19th	Curvilinear motion, Basic concepts, position vector, velocity and acceleration. Rectangular components of the velocity and acceleration.	20
20 th	Application on the rectangular components of velocity and acceleration, Projectiles.	21
21th	Tangential and normal components, radial and transverse components of the velocity and acceleration, cylindrical and spherical coordinates.	22
22th	Motion of several particles, dependent motion and relative motion of two particles.	24
23th	Kinematics of particles, Newton's second law of motion, Linear momentum of a particle, systems of units, and equations of motion in rectangular coordinates including friction force.	25
24 th	Newton's second law of motion in tangential and normal components and radial and transverse components.	26
25th	Work of a force, work exerted by constant force, weight force, spring force, and principle of work and energy.	27
26th	Power and efficiency	28
27th	Principle of impulse and momentum.	29
28th	Direct central impact, and Oblique central impact	30

Course Contents

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	Introduction to statics, Mechanics, the subject and axioms of statics, Newton's three laws of motion, Newton's law of gravitational attraction, moment of force about a point O, replacement of a force by a force and couple.	4	2	2	-	a1-1,a1-2,a1-3, a1-4,a1-5,a1-6, b2-1,b2-2,b2-3, c1-1
WEEK-2	Force Vector, Force resultant in two dimensions, scalar and vectors, types of vectors, operations on vectors.	4	2	2	-	a1-3,a1-4,a1-5, a1-6,a1-7, b2-3
WEEK-3	Parallelogram law, addition of rectangular force components, the dot and cross product, some examples of dot product and examples of the cross product (moment of force)	4	2	2	-	a1-8,b2-3, c1-2
WEEK-4	Force resultant in three dimensions, (converging and non-converging forces).	4	2	2	-	a1-8,b2-3
WEEK-5	Plane system of converging forces, The composition of two forces applied at a single point, the projection of a geometric sum of vectors on an axis.	4	2	2	-	a1-8,a1-9,a1-10, b2-3
WEEK-6	An analytical method for determination of a resultant of a plane system of converging forces and graphical methods (polygon of forces).	4	2	2	-	a1-9,a1-10,b11-1
WEEK-7	Conditions of equilibrium of a plane system of converging forces, a theorem on the equilibrium of three non parallel forces lying in one plane.	4	2	2	-	a1-9,a1-1,b2-3, c1-2
WEEK-8	Midterm of first Term (written examination)					
WEEK-9	Plane system of non-converging forces, the composition of two parallel forces acting in the same direction, the composition of two forces unequal in magnitude and acting in opposite direction	4	2	2	-	a1-9,a1-10,b2-3
WEEK-10	Non-concurrent coplanar forces, methods for determining the resultant, analytical methods and graphical method (Funicular or string polygon), conditions for equilibrium for system of non converging forces.	4	2	2	-	a1-9,a1-10,b2-3, c1-5
WEEK-11	Plane trusses, simple truss, stresses, Bow's notation, support reactions and free body diagram, zero force members, methods for solving the trusses.	4	2	2	-	a1-9,a1-10,b2-3, c1-3
WEEK-12	Analytical method of isolated joints. Methods of sections.	4	2	2	-	a1-9,a1-10, b11-2, c1-3
WEEK-13	Cantilever truss and graphical methods.	4	2	2	-	a1-2, a1-9,a1-10, b3-1, d5-1
WEEK-14	Frames and machines, applications for equations of equilibrium.	4	2	2	-	a1-9,a1-10, b11-2, d5-1
WEEK-15	Friction, types of friction, the laws of sliding friction and the laws of rolling friction.	4	2	2	-	a1-9,a1-10, b11-2
WEEK-16	Introduction to dynamics, Background, basic concepts, Newton's laws, engineering and mechanics, and methods for solving problems.	4	2	2	-	a1-9,a1-10, b2-1, b3-1, c1-5, c1-6

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WEEK-17	Kinematics of particles, 1. rectilinear motion, basic concepts such as position, velocity, and acceleration, distance , displacement and speed.	4	2	2	-	a1-9,a1-10, b2-3, c1-5, c1-6
WEEK-18	Determination of the motion of the particle.	4	2	2	-	a1-9,a1-10, b3-1, b11-2,
WEEK-19	Graphical solution of rectilinear motion.	4	2	2	-	a1-9,a1-10, b11-1, c1-1, d5-1
WEEK-20	Curvilinear motion, Basic concepts, position vector, velocity and acceleration. Rectangular components of the velocity and acceleration.	4	2	2	-	a1-9,a1-10, b2-1, b3-1, c1-3, c1-4
WEEK-21	Application on the rectangular components of velocity and acceleration, Projectiles.	4	2	2	-	a1-9,a1-10, b2-1, b3-1,
WEEK-22	Tangential and normal components, radial and transverse components of the velocity and acceleration, cylindrical and spherical coordinates.	4	2	2	-	a1-9,a1-10, b2-1, b3-1
WEEK-23	MIDTERM OF SECOND TERM (WRITTEN EXAMINATION)					
WEEK-24	Motion of several particles, dependent motion and relative motion of two particles.	4	2	2	-	a1-9,a1-10, b2-1, b3-1
WEEKS-25	Kinematics of particles, Newton's second law of motion, Linear momentum of a particle, systems of units, and equations of motion in rectangular coordinates including friction force.	4	2	2	-	a1-9,a1-10, b2-2, b2-3, b3-1, c1-5, c1-6
WEEKS-26	Newton's second law of motion in tangential and normal components and radial and transverse components.	4	2	2	-	a1-9,a1-10, b2-2, c1-5, c1-6
WEEKS-27	Work of a force, work exerted by constant force, weight force, spring force, and principle of work and energy.	4	2	2	-	a1-9,a1-10, b2-2, c1-5, c1-6
WEEK-28	Power and efficiency	4	2	2	-	a1-9,a1-10,b11-2,
WEEK-29	Principle of impulse and momentum.	4	2	2	-	a1-9,a1-10, b2-3
WEEK-30	Direct central impact, and Oblique central impact	4	2	2	-	a1-9,a1-10, b3-1

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Working	Discovering	Simulation and Modelling	Lab. Experiments
Knowledge & understanding	a1-1	*	*	*	*	*	*	*		*	*			*
	a1-2	*	*	*	*	*	*	*		*	*			*
	a1-3	*	*	*	*	*	*	*		*	*			*
	a1-4	*	*	*	*	*	*	*		*	*			*
	a1-5	*	*	*	*	*	*	*		*	*			*
	a1-6	*	*	*	*	*	*	*		*	*			*
	a1-7	*	*	*	*	*	*	*		*	*			*
	a1-8	*	*	*	*	*	*	*		*	*			*
	a1-9	*	*	*	*	*	*	*		*	*			*
	a1-10	*	*	*	*	*	*	*		*	*			*
Intellectual Skills	b2-1	*	*	*	*	*	*	*		*	*	*	*	
	b2-2	*	*	*	*	*	*	*		*	*	*	*	
	b2-3	*	*	*	*	*	*	*		*	*	*	*	
	b3-1	*	*	*	*	*	*	*		*	*	*	*	*
	b11-1	*		*	*	*	*	*		*		*	*	
b11-2	*		*	*	*	*	*		*		*	*		
Professional Skills	c1-1	*	*	*	*	*	*	*		*	*		*	
	c1-2	*	*	*	*	*	*	*		*	*		*	
	c1-3	*	*	*	*	*	*	*		*	*		*	
	c1-4	*	*	*	*	*	*	*		*	*		*	
	c1-5	*	*	*	*	*	*	*		*	*		*	
	c1-6	*	*	*	*	*	*	*		*	*		*	
General Skills	d3-1	*	*	*	*	*	*	*		*	*	*		

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)		Assessment Methods											
		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring
Knowledge & Understanding	a1-1	*	*	*			*	*	*	*	*	*	
	a1-2	*	*	*			*	*	*	*	*	*	
	a1-3	*	*	*			*	*	*	*	*	*	
	a1-4	*	*	*			*	*	*	*	*	*	
	a1-5	*	*	*			*	*	*	*	*	*	
	a1-6	*	*	*			*	*	*	*	*	*	
	a1-7	*	*	*			*	*	*	*	*	*	
	a1-8	*	*	*			*	*	*	*	*	*	
	a1-9	*	*	*			*	*	*	*	*	*	
	a1-10	*	*	*			*	*	*	*	*	*	
Intellectual Skills	B2-1	*		*	*	*	*	*		*		*	
	B2-2	*		*	*	*	*	*		*		*	
	B2-3	*		*	*	*	*	*		*		*	
	B3-1	*	*	*	*	*	*	*	*	*	*		
Professional Skills	c1-1	*	*	*	*		*	*	*	*	*	*	
	c1-2	*	*	*	*		*	*	*	*	*	*	
	c1-3	*	*	*	*		*	*	*	*	*	*	
	c1-4	*	*	*	*		*	*	*	*	*	*	
	c1-5	*	*	*	*		*	*	*	*	*	*	
	c1-6	*	*	*	*		*	*	*	*	*	*	
General Skills	d3-1	*	*	*	*		*	*	*	*	*	*	

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	140	70%	30th
Mid-Term Examination of First Term (Written)	20	10%	8th
Term work (Tutorial and report assessment)	20	10%	Weekly
Mid-Term Examination of Second Term (Written)	20	10%	23th
Total	200	100%	

11- Facilities required for teaching and learning:

11-1laboratory Usage:

Computer Laboratory is used to help the students for using graphic Software.

11-2Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

R. C. Hibbeler; "Engineering mechanics, statics" Prentice Hall, 2004

Course coordinator

Head of the Department

Dr. Isalm Mohamed Desoki

Prof. Dr. Gamal Ibrahim Mohamed

Course Contents

Basic Engineering Science. Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 1st
Academic level: Preparatory

Course Specification

A-Basic Information

Title: Physics(1-A)

Code Symbol: BES012

Element of program: Major

Date of specification approval: 2011

Department offering the course: Basic Engineering Science. Dept.

By law 2006

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
3	----	2	5

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
-----	60%	20%	-----	-----	20%	-----	100%

B-Professional Information

2- Course Aims:

- The aim of this course is to ensure that all students have a basic knowledge and understanding of elementary physics that is not covered in other courses
- also to provide them with basic cognitive and practical skills required for future study.
- Study of physics not only contributes to students understanding of the physical environment,
- it also develops their abilities to reason analytically and to test hypotheses.
- These abilities are useful in many fields other than physics

3- Course Objectives:

- Introduce the students to the basic concepts of units, gravitation and the properties of matter and their engineering applications.
- Give knowledge of fundamentals of mechanical properties of matter and properties of fluids.
- Develop a good understanding of topics of temperature, heat and thermodynamics and their engineering applications.
- Derive the fundamental laws of the properties of matters, heat and thermodynamics and their engineering applications.
- Provide the concepts of acoustic Phenomena.

4- Relationship between the course and the program

Field	National Academic Reference Standard(NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A1,A3	B2,B3	C1	D3

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A1) Demonstrate understanding of Concepts and theories of mathematics and sciences, appropriate to electrical engineering.	a1-1) List the importance of units, dimensions and gravitation . a1-2) Compare similarities and differences between fluid statics and fluid dynamics and their engineering applications . a1-3) Report the mechanical properties of matter and coustic phenomena . a1-4) Recognize the basic principales of the properties of matter, heat, thermodynamics, and their engineering applications.
	A3) Demonstrate Characteristics of engineering materials related to electrical engineering.	a3-1) Demonstrate the origin of elastic properties of material .
Intellectual skills	B2) Select appropriate solutions for engineering problems based on analytical thinking.	b2-1) Show the validity of all the used equations using the unites and dimensional analysis. b2-2) Analyze the basic laws of the properties of matters, heat, acoustics and thermodynamics and apply them in the engineering applications.
	B3) Think in a creative and innovative way in problem solving and design	b3-1) Thinking about new application of fluid dynamics . b3-2) Discuss scintific problems in field of properties of matters, gravitation, heat and thermodynamics and solve them.
Professional skills	C1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems.	c1-1) Check the unites and dimensions of all studied physical quantities . c1-2) Verify exprementally the basic laws of the properties of matters and gravitation. c1-3) Examine the basic concepts of heat and thermodynamics and their engineering applications. c1-4) Construct and examine some of experiments in the field of the properties of matters, heat, acoustics and thermodynamics in physics Laboratory .
General skills	D3) Communicate effectively.	d3-1) Collect data and scientific materials from text book . d3-2) Work in team to conduct an experiment in physics laboratory . d3-3) Communicate effectively and deals with others. d3-4) Seek learning opportunities outside the classroom environment. d3-5) Improve the engineering profession and thinking..

6- Course Topics.

Topic No.	General Topics	Weeks
1st	Units and Dimensions .	1
2nd	Gravitation, Newton's law, kepler's laws.	2
3rd	Elastic properties of solid, Hook's law, elasticity modulus and its types .	3
4th	Fluid mechanics, pressure, fluid statics, Fluid dynamics, Bernoulli's equitation and its application .	4-6
5th	Zero law of thermodynamics, Temperatures, Thermal expansion .	7

Course Contents

6th	Heat and heat transfer .	9
7th	Kinetic theory of gases .	10
8 th	First law of thermodynamics and its application.	11-12
9 th	Heat engines, Entropy and second law of thermodynamics .	13
10th	Geometrical optics	14-15

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	Units and Dimensions .	5	3	--	2	a1-1, b3-1, c1-1, d3-1
WEEK-2	Gravitation, Newton's law,.	5	3	--	2	a1-2,b2-1, b3-2, c1-2
WEEK-3	kepler's law, gravitational force.	5	3	--	2	a3-1, b5-1,b5-2, c1-1
WEEK-4	Elastic properties of solid, Hook's law, elasticity modulus and its types .	5	3	--	2	a1-3, a3-1, b2-1, b3-2, c1-2, d3-2
WEEK-5	Fluid mechanics, pressure, Fluid dynamics.	5	3	--	2	a1-2, b2-2, b3-2, c1-4
WEEK-6	Bernoulli's equitation and its a application .	5	3	--	2	a1-2, b2-2, b3-2, c1-4
WEEK-7	Zero law of thermodynamics, Temperatures, Thermal expansion .	5	3	--	2	a1-4, b2-1, b3-2, c1-3, c1-4, d3-2, d3-3, d3-4
WEEK-8	Midterm of first Term (written examination)					
WEEK-9	Heat and heat transfer .	5	3	--	2	a1-4, b2-2, b3-2, c1-4, d3-2, d3-3, d3-4
WEEK-10	Kinetic theory of gases.	5	3	--	2	a1-3,a1-4,b2-2,b3-2, c1-3,d3-1,d3-2,d3-3
WEEK-11	First law of thermodynamics	5	3	--	2	a1-3,a1-4,b2-1,b2-2, c1-3, d3-4,d3-5
WEEK-12	Applications of first law of thermodynamics.	5	3	--	2	a1-3, a1-4, b5-1, b5-2, c1-5, c1-6, c1-9, d7-1, d7-2,d7-3
WEEK-13	Heat engines, Entropy and second law of thermodynamics .	5	3	--	2	a1-3,a1-4,b2-2,b3-2, c1-3, c1-4,d3-1,d3-2
WEEK-14	Geometrical optics (Part I).	5	3	--	2	a1-3,a1-4,b2-2,b3-2, c1-3,c1-4,d3-4,d3-5
WEEK-15	Geometrical optics (Part II).	5	3	--	2	A1-3,a1-4,b2-2,b3-2, c1-3,c1-4,d3-4,d3-5

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Working	Discovering	Simulation and Modelling	Lab. Experiments
Knowledge & understanding	a1-1	*	*	*	*	*	*	*		*	*			*
	a1-2	*	*	*	*	*	*	*		*	*			*
	a1-3	*	*	*	*	*	*	*		*	*			*
	a1-4	*	*	*	*	*	*	*		*	*			*
	a3-1	*		*	*	*				*	*		*	
Intellectual Skills	b2-1	*	*	*	*	*		*		*	*		*	*
	b2-2	*	*	*	*	*		*		*	*		*	*
	b3-1	*	*	*	*	*	*	*		*	*	*	*	*
	b3-2	*	*	*	*	*	*	*		*	*	*	*	*
Professional Skills	c1-1	*	*	*	*	*	*	*	*	*	*		*	
	c1-2	*	*	*	*	*	*	*	*	*	*		*	
	c1-3	*	*	*	*	*	*	*	*	*	*		*	
	c1-4	*	*	*	*	*	*	*	*	*	*		*	
General Skills	d3-1	*	*	*	*	*	*	*	*	*	*			
	d3-2	*	*	*	*	*	*	*	*	*	*			
	d3-3	*	*	*	*	*	*	*	*	*	*			
	d3-4	*	*	*	*	*	*	*	*	*	*			
	d3-5	*	*	*	*	*	*	*	*	*	*			

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)		Assessment Methods											
		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring
Knowledge & Understanding	a1-1	*	*				*	*	*	*	*	*	
	a 1-2	*	*				*	*	*	*	*	*	
	a1-3	*	*				*	*	*	*	*	*	
	a1-4	*	*				*	*	*	*	*	*	
	a3-1	*	*				*	*		*	*		
Intellectual Skills	b3-1	*	*		*	*	*	*		*	*		
	b3-2	*	*		*	*	*	*		*	*		
	b3-1	*	*				*	*		*	*		
	b3-2	*	*				*	*		*	*		
Professional Skills	c1-1	*	*		*		*	*	*	*	*	*	
	c1-2	*	*		*		*	*	*	*	*	*	
	c1-3	*	*		*		*	*	*	*	*	*	
	c1-4	*	*		*		*	*	*	*	*	*	
General Skills	d3-1	*			*		*	*	*	*		*	
	d3-2	*			*		*	*	*	*		*	
	d3-3	*			*		*	*	*	*		*	
	d3-4	*			*		*	*	*	*		*	
	d3-5	*			*		*	*	*	*		*	

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	75	60%	16th
Mid-Term Examination(Written)	20	16%	8th
Term Laboratory Assessment	20	16%	15th
Term work (Quizzes, Tutorial and report assessment)	10	8%	Every weeks
Total	100	100%	

11- Facilities required for teaching and learning:

11-1laboratory Usage:

INTERNET Laboratory is used to help the students for searching of all information about Sciences, Technology and Engineering.

11-2Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

- 1-Serway Jewett; "Physics for scientists and engineers";6th edition, 2004.
- 2- Halliday and Resnick, "Introduction to Physics", 6th edition, 2001.
- 3- M.N.Avadhanulu and P.G.Kshirsagar, Engineering physics , 2010.
- 4- George shortly& Dudley Williams, "Elements of physics", 4th edition, 1965.
- 5- F. W Sears. M. W. Zemansky and H. D Young, University physics , 6th edition, 1982.
- 6- Frederick J. Bueche, Introduction to physics for scientists and Engineers , 4th edition, 1980.
- 7- Douglas C. **Giancoli** ,Physics for scientists and Engineers with modern physics, 2nd edition, 2000.

Course coordinator

Head of the Department

Dr.Kasim El Sayed Rady

Prof. Dr. Kamel Mohamed El-Shokrofy

Prof. Dr. Gamal Ibrahim Mohamed Ali

Basic Engineering Science. Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 1st Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: *Chemistry*

Code Symbol: *BES013*

Element of program: *Major*

Date of specification approval: *2011*

Department offering the course: *Basic Engineering Science. Dept.*

By law *2006*

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
<i>2</i>	<i>----</i>	<i>2</i>	<i>4</i>

1- Course Subject Area:

<i>Humanities and Social Science</i>	<i>Math. and Basic Sciences</i>	<i>Basic Eng. Science</i>	<i>Applied Eng. and Design</i>	<i>Computer application and ICT</i>	<i>Projects and practice</i>	<i>Discretionary subjects</i>	<i>Total</i>
<i>-----</i>	<i>20%</i>	<i>20%</i>	<i>40%</i>	<i>-----</i>	<i>20%</i>	<i>-----</i>	<i>100%</i>

B-Professional Information

2- Course Aims:

The aims of this course are to provide the students, full understanding regarding the chemical phenomena such as the ideal gases and its applications in the real life, the basic concepts of the electrochemistry. Attain the knowledge of the solutions and how it is formed and its presence in nature. In addition, give an introduction to structure of metals and alloys in the solid state. Moreover, presenting types of pollution such as water and air pollution and their effects on the environment besides the methods of combating them. It is also aimed to study of the building materials industry systems, such as cement, glass and bricks manufacturing and study the petrochemicals and polymers. Understand the basics of dynamic equilibrium in chemical engineering.

3- Course Objectives:

- Demonstrate of the knowledge and understanding of choosing specific fuel and its nature and quality.
- Definition of the corrosion and how to protect the metals from corrosion.
- Realizing of the different types of alloys and its formation.
- Evaluation of water and air quality and its different types of pollution.
- Review of the fundamental of dynamic equilibrium.
- Record the types of bricks, glass and cement as structural materials.
- Analysis the main types of synthetic polymers, their uses in our life.

4- Relationship between the course and the program

<i>Field</i>	<i>National Academic Reference Standard(NARS)</i>			
	<i>Knowledge & Understanding</i>	<i>Intellectual Skills</i>	<i>Professional Skills</i>	<i>General Skills</i>
<i>Program Academic Standards that the course contribute in achieving</i>	<i>A1,A3,A5,A11</i>	<i>B2,B9</i>	<i>C5,C8,C12</i>	<i>D9</i>

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A1) Demonstrate understanding of Concepts and theories of mathematics and sciences, appropriate to electrical engineering.	a1-1) Describe the princibale of ideal gases, solutions and dynamic equilibrium. a1-2)Recognize the reasons of corrosion and electrochemistry. a1-3)Identify the raw materials of constructing materials.
	A3) Demonstrate Characteristics of engineering materials related to electrical engineering.	a3-1)Demonstrate basic charateristics of solutions.
	A5) Illustrate Methodologies of solving engineering problems, data collection and interpretation.	a5-1)Identify the different types of alloys preparation. a5-2)Identify the protection requirement for metals from corrosion. a5-3)Recognize the main sources of air and water pollution.
	A11) Recognise Professional ethics and impacts of engineering solutions on society and environment	a11-1)Define the problems of air and water pollution and differential protection schemes. a11-2)Recognize the solutions and types.
Intellectual skills	B2) Select appropriate solutions for engineering problems based on analytical thinking.	b2-1) Select the suitable protective sheme for different environmental pollution. b2-2)Analyze the corrosion sources and protection ways.
	B9) Judge engineering decisions considering balanced costs, benefits, safety, quality, reliability, and environmental impact.	b9-1)Select the structral materials which suits definite cases. b9-2)Investigate the protections ways from corrosion. b9-3)Think for innovative ways to protect from water and air pollution.
Professional skills	C5) Use computational facilities and techniques, measuring instruments, workshops and laboratory equipment to design experiments, collect, analyze and interpret results.	c5-1) Use computational facilities and techniques, measuring instruments, workshops and laboratory equipment to design experiments related to corrosion, electrochemistry, alloys, Manufacture material, petrochemicals and Dynamic Equilibrium in Chemical Engineering.
	C8) Apply safe systems at work and observe the appropriate steps to manage risks.	c8-1) Practice and analyze problems on fuel and combustion. c8-2)Analyze the problems concerning cement industry.
	C12) Prepare and present technical reports.	c12-1) Prepare and present technical reports of heaters and cooling curves in dynamic equilibrium, and methods drawing alloys cooling curves.
General skills	D9) Refer to relevant literatures.	d9-1) Refer to standard methods for examination waster and wastewater. d9-2)refer to an introduction to metallic corrosion.

6- Course Topics.

Topic No.	General Topics	Weeks
1st	Ideal gases, fuel and comustion.	1-2
2nd	Solutions.	3-4
3rd	Electrochemistry and Corrosion .	5-6
4th	Alloys .	7
5th	Air Pollution and water treatment .	9
6th	Manufacture materials and petrochemicals.	10
7th	Dynamic Equilibrium in Chemical Engineering .	11-15

Course Contents

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	The State of mater, gases equation, Charts equation, Gorham equation, Dalton's equation for parial pressure, relative humidity, air conditioning.	4	2	--	2	a1-1
WEEK-2	Kinetic theory of gases, Boil's law, Avogadro assumption, fuel and combustion.	4	2	--	2	a1-1,c8-1
WEEK-3	Types of solutions, basic characteristics of solutions.	4	2	--	2	a3-1, a11-2
WEEK-4	Galavanic cells, electode potential, Nernst equation, concentration cells, electrolytic cells, decomposition potential and its applications .	4	2	--	2	a1-2,b2-2
WEEK-5	Technical electrochemical processes, corrosion, factors affecting on corrosion.	4	2	--	2	a1-2,b2-2, c5-1
WEEK-6	Basics of corrosion, methods of protecting metals from corrosion.	4	2	--	2	a1-2,a5-2,b9-2, c5-1
WEEK-7	Alloys and its composition, methods of alloys analysis, methods drawing alloys cooling curves.	4	2	--	2	a5-1, c12-1, c5-1
WEEK-8	Midterm of first Term (written examination)					
WEEK-9	Air Pollution types, sources.	4	2	--	2	a5-3,a11-1,b2-1, b9-3
WEEK-10	Sources of water hardness, types of water hardness, impurities in water	4	2	--	2	a5-3, d9-1
WEEK-11	Qualification of water used in boilers, types of water treatment.	4	2	--	2	a5-3, d9-3
WEEK-12	Water softening, outside boilers treatment, inside boiler water treatment, advanced water treatment methods, problems of water treatment. .	4	2	--	2	a1-3,a11-1,b2-1, c5-1
WEEK-13	Cement industry, brick manufacture, glass industry.	4	2	--	2	a1-3,b9-1,c8-2
WEEK-14	Petrochemicals, polymers and its manufacture .	4	2	--	2	a1-3, c5-1
WEEK-15	Heaters and cooling curves in dynamic equilibrium, phase rule, equilibrium equations, hydrolysis buffer solutions .	4	2	--	2	a1-1, c5-1, c12-1

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Working	Discovering	Simulation and Modelling	Lab. Experiments
Knowledge & understanding	a1-1	*				*								
	a1-2	*				*								
	a1-3	*												
	a3-1	*		*		*				*	*		*	
	a5-1	*				*								
	a5-2	*				*				*				
	a5-3	*												
	a11-1	*												
	a11-2	*												
Intellectual Skills	b2-1	*				*								
	b2-2									*				
	b9-1	*												
	b9-2	*												
	b9-3									*		*		
Professional Skills	c5-1	*		*		*	*	*	*	*	*		*	*
	c8-1	*				*								
	c8-2	*	*							*	*			
	c12-1	*	*	*		*	*	*	*	*	*			*
General Skills	d9-1	*	*							*	*			
	d9-2	*	*							*	*			

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring
Knowledge & Understanding	a1-1	*											
	a1-2	*											
	a1-3	*	*		*			*			*	*	
	a3-1	*	*				*	*		*	*		
	a5-1	*				*							
	a5-2	*			*						*		
	a5-3	*	*		*	*	*				*		*
	a11-1	*											
a11-2	*			*	*					*			
Intellectual Skills	b2-1	*	*				*	*	*	*			
	b2-2	*					*		*	*			
	b9-1	*											
	b9-2	*	*										
	b9-3	*					*						
Professional Skills	c5-1	*	*		*		*		*	*	*		
	c8-1	*											
	c8-2	*				*							
	c12-1	*	*		*		*	*	*	*	*		
General Skills	d9-1	*	*				*						
	d9-2	*											

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	60	60%	16th
End of Term assessment (oral)	10	10%	8th
End of term Laboratory examination	10	10%	16th
Mid-Term Examination(Written)	10	10%	8th
Quizzes	5	5%	Every two weeks
Homework and report (Term work)	5	5%	weekly
Total	100	100%	

11- Facilities required for teaching and learning:

11-1laboratory Usage:

Students are expected to prepare and conduct some laboratory experiments relating to the analytical chemistry..

11-2Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

- 1- Alph Awwa Wef, "Standard methods for examination of water and wastewater", 18th ed., 1992.
- 2- J.M. Coulson, J.F.Richardson, Coulson & Richardson's chemical engineering, Volume 1, 6th ed., Elsevier, 1999
- 3-P.N.Cheremisinoff, "Handbook and wastewater treatment technology", 103-117, Marcel Dekker Inc., New York, 1995
- 4-G. Kiely, "Environmental engineering", 437-493, McFraw-Hill Publisher, 1997
- 5-Ulick R. Evans, "An introduction to Metallic Corrosion", Edward Arnold, London, UK, 1948.

Course coordinator

Dr. Reda Ali Abo-Elazem
Dr.Shehrazad Youssef Ezzeldeen

Head of the Department

Prof. Dr. Gamal Ibrahim Mohamed Ali

Production and Mech. Eng. Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 1st and 2nd Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: Engineering Drawing&Projection

Code Symbol: PRE001

Element of program: Major

Date of specification approval: 2011

Department offering the course: Production and Mech. Eng. Dept.

By law 2006

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
2	4	----	6

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
-----	16.66%	50%	16.66%	-----	16.66%	-----	100%

B-Professional Information

2- Course Aims:

This course integrates the basic theories in the Engineering drawing and projection .

3- Course Objectives:

- To give the student a correct understanding of the fundamentals of engineering drawing
- To give the student the ability of thinking in three dimensions.
- To give the student the ability of visualize quickly and accurately to build a clear mental image about objects.
- To give the student the ability of preparing engineering drawings for different designed objects.

4- Relationship between the course and the program

Field	National Academic Reference Standard(NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A1,A4	B3	C12	D3

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge& Understanding	A1) Demonstrate understanding of Concepts and theories of mathematics and sciences, appropriate to electrical engineering.	a1-1) Know and Understand Geometric constructions . a1-2) Know and Understand Engineering projection . a1-3) Know and Understand Steel sections . a1-4) gain experience to draw .
	A4) Demonstrate Principles of design including elements design, process and/or a system related to electrical power engineering.	a4-1) gain experience to solve most of structural problems .
Intellectual skills	B3) Think in a creative and innovative way in problem solving and design.	b3-1) Drawing the machine parts by isometric and multi-views Projections b3-2) Drawing steel sections . b3-3) Projection of point, lines and intersection of shapes .
Professional skills	C12) Prepare and present technical reports.	c12-1) Access the internet and search for Help the engineers in general to draw any Parts or sections .
General skills	D3) Communicate effectively.	d3-1 Use information technologies effectively

6- Course Topics.

Topic No.	General Topics	Weeks
1st	Drawing Instruments	1
2nd	Geometric constructions	2
3rd	Introduction of Engineering drawing	3
4th	Geometrical constructions	4-5
5th	Orthographic projections of Eng. Bodies	6-7
6th	Isometric of bodies	9,11
7th	Mechanical joints	12-13
8th	Construction of Isometric from projection	14-15
9th	Assembly drawing and sectional projection	16-19
10th	Projection of point, lines and planes	20-22
11th	Steel structure and joints	24-25
12th	Orthographic or Multi-view projection	26
13th	Isometric projection	27-28
14th	Drawing the sections in parts	29
15th	Drawing steel sections	30

Course Contents

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	Drawing Instruments	6	2	4	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEK-2	Geometric constructions	6	2	4	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEK-3	Introduction of Engineering drawing	6	2	4	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEKS-4,5	Geometrical constructions	12	4	8	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEKS-6,7	Orthographic projections of Eng. Bodies	12	4	8	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEK-8	Midterm of first Term (written examination)					
WEEK-9-11	Isometric of bodies	18	6	12	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEKS-12-13	Mechanical joints	12	4	8	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEKS-14-15	Construction of Isometric from projection	12	4	8	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEKS-16-19	Assembly drawing and sectional projection	24	8	16	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEKS-20-22	Projection of point, lines and planes	18	6	12	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEK-23	MIDTERM OF SECOND TERM (WRITTEN EXAMINATION)					
WEEKS-24,25	Steel structure are joints	12	4	8	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEKS-26	Orthographic or Multi-view projection	6	2	4	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEKS-27-28	Isometric projection	12	4	8	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEK-29	Drawing the sections in parts	6	2	4	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1
WEEK-30	Drawing steel sections	6	2	4	-	a1-1, a1-2, a1-3, a1-4, b3-1, b3-2, b3-3, c12-1, d3-1

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Working	Discovering	Simulation and Modelling	Lab. Experiments
Knowledge & understanding	a1-1	*	*	*	*	*	*	*		*	*			*
	a1-2	*	*	*	*	*	*	*		*	*			*
	a1-3	*	*	*	*	*	*	*		*	*			*
	a1-4	*	*	*	*	*	*	*		*	*			*
Intellectual Skills	b3-1	*	*	*	*	*	*	*		*	*	*	*	*
	b3-2	*	*	*	*	*	*	*		*	*	*	*	*
	b3-3	*	*	*	*	*	*	*		*	*	*	*	*
Professional Skills	c12-1	*	*	*	*	*	*	*	*	*	*			*
General Skills	d3-1	*	*	*	*	*	*	*	*	*	*	*		

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)	Assessment Methods												
	Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring	
Knowledge & Understanding	a1-1	*		*			*	*	*	*		*	
	a1-2	*		*			*	*	*	*		*	
	a1-3	*		*			*	*	*	*		*	
	a1-4	*		*			*	*	*	*		*	
Intellectual Skills	b3-1	*		*	*	*	*	*	*	*			
	b3-2	*		*	*	*	*	*	*	*			
	b3-3	*		*	*	*	*	*	*	*			
Professional Skills	c12-1	*		*	*		*	*	*	*			

Course Contents

General Skills	d3-1	*		*	*		*	*	*	*		*	
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10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	180	60%	30th
Mid-Term Examination of First Term (Written)	40	13.33%	8th
Term work (Tutorial and report assessment)	40	13.33%	Weekly
Mid-Term Examination of Second Term (Written)	40	13.33%	23th
Total	300	100%	

11- Facilities required for teaching and learning:

11-1Laboratory Usage:

Computer Laboratory is used to help the students for programs such as Autocad, Graphics

11-2Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

1-Machine Drawing by P.S. Gill-Katson publishing House 1983

Course coordinator

Prof. Dr. Taha Ali El-Tawil

Head of the Department

Prof. Dr. Taha Ali El-Tawil

Basic Engineering Science. Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 1st and 2nd Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: English language

Code Symbol: BES004

Element of program: Major

Date of specification approval: 2011

Department offering the course: Production and Mech. Eng. Dept.

By law 2006

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
----	2	----	2

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
100%	-----	-----	-----	-----	-----	-----	100%

B-Professional Information

2- Course Aims:

To provide the knowledge and skills required to read, speak and write proper scientific English. Exploring the importance of figurative language, typical English writing errors, Effective reading skills, organizing written materials.

3- Course Objectives:

- To gain the knowledge about history, divisions and main subjects of Engineering
- To understand scientific English in a proper manner, with special reference to Engineering and other associated fields.

4- Relationship between the course and the program

Field	National Academic Reference Standard(NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A9,A10	B4	C12	D3,D9

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A9)Discuss Topics related to humanitarian interests and moral issues.	a9-1)Give oral presentations using a variety of visual aids
	A10)Write report with technical language	a10-1) demonstrate knowledge to Introduction to Scientific Statements. a10-2)Demonstrate knowledge and understanding of Dimensions and Properties Dimensions

Course Contents

Intellectual skills	B4) Combine, exchange, and assess different ideas, views, and knowledge from a range of sources.	b4-1) write and arrange scientific engineering materials. b4-2) Give oral presentations using a variety of visual aids
Professional skills	C12) Prepare and present technical reports.	c12-1) Read, prepare and write scientific reports. c12-2) Give oral presentations using a variety of visual aids
General skills	D3) Communicate effectively.	d3-1) Communicate effectively with colleagues and others, using both written and oral methods. d3-2) Working effectively as a member in a multi-disciplinary team. d3-3) Give oral presentations using a variety of visual aids.
	D9) Refer to relevant literatures.	d9-1) Retrieve information and organize data. d9-2) Collect data, draw, (block diagram, charts, curves) and interpret data.

6- Course Topics.

Topic No.	General Topics	Weeks
1st	Preview on the English Language First Principals	1
2nd	Principals on Writing the Effective Sentence and Check Its Grammars	2
3rd	Combinations and Reductions	3
4th	The Accuracy and Combinations	4
5th	Variability, Insist on the Meaning	5
6th	The Principal on Writing the Effective Paragraph	6
7th	Different Way for Interviewing between Persons	7
8th	Using some Verbs with Similar Meaning	9
9th	Sensitivity and Diplomatic in Request	10
10th	Easy Reading	11
11th	Writing and Arrange the Subject Form	12-13
12th	Review and Editing	14-15
13th	Introduction to Scientific Statements <i>Be</i> and <i>have</i> in scientific statements Statements requiring the Present Simple Exercises	16-17
14th	Dimensions and Properties Dimensions Properties 'Fronted' statements Qualified Statements of Dimensions Exercises	18-19
15th	Comparisons and Modals Simple statements of comparison Qualified comparative statements A note on modals in scientific English	20-22
16th	Impersonal Scientific Statements The Passive Form of the passive Use of the passive <i>By</i> and the agent <i>Must, should</i> , and the passive Passives and infinitives Passive and active	24,27
17th	Technical Readings Four different Engineering topics	28-30

Course Contents

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	Preview on the English Language First Principals	2	---	2	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEK-2	Geometric constructions	2	---	2	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEK-3	Introduction of Engineering drawing	2	---	2	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEKS-4	Principals on Writing the Effective Sentence and Check Its Grammars	2	---	2	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEKS-5	Combinations and Reductions	2	---	2	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEKS-6	The Accuracy and Combinations	2	---	2	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEKS-7	Variability, Insist on the Meaning	2	---	2	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEK-8	Midterm of first Term (written examination)					
WEEK-9	Using some Verbs with Similar Meaning	2	---	2	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEK-10	Sensitivity and Diplomatic in Request	2	---	2	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEK-11	Easy Reading	2	---	2	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEKS-12-13	Writing and Arrange the Subject Form	4	---	4	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEK-14-15	Review and Editing	4	---	4	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEKS-16,17	Introduction to Scientific Statements Be and have in scientific statements Statements requiring the Present Simple Exercises	4	---	4	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEKS-18-19	Dimensions and Properties (Dimensions, Properties, Fronted' statements, Qualified Statements of Dimensions, Exercises)	4	---	4	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2
WEEKS-20-22	Comparisons and Modals of Simple statements of comparison Qualified comparative statements A note on modals in scientific English	6	---	6	--	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3, d9-1, d9-2

Course Contents

WEEK-23	MIDTERM OF SECOND TERM (WRITTEN EXAMINATION)					
WEEKS-24-27	Impersonal Scientific Statements The Passive Form of the passive Use of the passive By and the agent Must, should, and the passive Passives and infinitives Passive and active	8	--	8	-	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3,d9-1,d9-2
WEEKS-28-30	Technical Readings Four different Engineering topics	6	--	6	-	a9-1, a10-1, a10-2, b4-1, b4-2, c12-1, c12-2, d3-1, d3-2, d3-3,d9-1,d9-2

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Working	Discovering	simulation and Modelling	Lab. Experiments
Knowledge & understanding	a9-1	*		*			*	*			*			
	a10-1	*	*	*	*		*	*	*	*	*			*
	a10-2	*	*	*	*		*	*	*	*	*			*
Intellectual Skills	b4-1	*	*	*	*	*	*	*		*	*	*	*	*
	b4-2	*	*	*	*	*	*	*		*	*	*	*	*
Professional Skills	c12-1	*	*	*	*	*	*	*	*	*	*			*
	c12-2	*	*	*	*	*	*	*	*	*	*			*
General Skills	d3-1	*	*	*	*	*	*	*	*	*	*	*		
	d3-2	*	*	*	*	*	*	*	*	*	*	*		
	d3-3	*	*	*	*	*	*	*	*	*	*	*		
	d9-1	*		*	*	*	*	*	*	*	*	*		
	d9-2	*		*	*	*	*	*	*	*	*	*		

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)		Assessment Methods											
		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring
Knowledge & Understanding	a9-1	*	*				*			*			
	a10-1	*	*	*			*	*	*	*	*		
	a10-2	*	*	*			*	*	*	*	*	*	
Intellectual Skills	b4-1	*	*	*	*	*	*	*	*	*	*	*	
	b4-2	*	*	*	*	*	*	*	*	*	*	*	
Professional Skills	c12-1	*	*	*	*		*	*	*	*	*	*	
	c12-2	*	*	*	*		*	*	*	*	*	*	
General Skills	d3-1	*	*	*	*		*	*	*	*	*	*	*
	d3-2	*	*	*	*		*	*	*	*	*	*	*
	d3-3	*	*	*	*		*	*	*	*	*	*	*
	d9-1	*	*	*	*	*	*	*	*	*	*	*	*
	d9-2	*	*	*	*	*	*	*	*	*	*	*	*

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	80	80%	24th
Mid-Term Examination of First Term (Written)	---	---	8th
Term work (Tutorial and report assessment)	20	20%	Weekly
Mid-Term Examination of Second Term (Written)	---	---	23th
Oral	---	---	Weekly
Total	100	100%	

11- Facilities required for teaching and learning:

11-1Laboratory Usage:

English Laboratory is used to help the students for Listen.

11-2Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

1- A textbook of English as a Foreign Language for students of Physical and Engineering Sciences

2-Web sites related to the studied topics

Course coordinator

Head of the Department

Prof. Dr. Gamal Ibrahim Mohamed

Prof. Dr. Gamal Ibrahim Mohamed

Basic Engineering Science. Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 1st Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: *History of Engineering Sciences*

Code Symbol: *BES014*

Element of program: *Major*

Date of specification approval: *2011*

Department offering the course: *Basic Engineering Science. Dept.*

By law *2006*

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
<i>2</i>	<i>1</i>	<i>----</i>	<i>3</i>

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
40%	-----	30%	-----	-----	-----	30%	100%

B-Professional Information

2- Course Aims:

- To provide the students with the basic knowledge of the engineering history as a dynamic process in Egypt and its relation to the state of independency of the country.
- To provide the basic concepts of science and technology and historical relation between them.
- Introduce the basic information about the faculty programs (Courses, specialization, fields of work—etc.)
- To provide students with the ability to write technical report.
- To provide students with an approach to evaluate two of the national problems: water and energy.

3- Course Objectives:

- Demonstrate of the knowledge and understanding of engineering education in Egypt as a dynamic process through the last two century
- Answering of the question: What are the reasons of diacrities of engineering education through the last four decades.
- Introducing the basic concepts of science and technology.
- Demonstrating the historical relation between science and technology, and identifying the historical emerging of engineering career.
- Demonstrate the basic knowledge of the faculty programs (Electrical power Eng., Mechanical power Eng., Production Eng., Civil Eng., Architecture Eng. and Electrical and Computer Eng.).
- Demonstrate the main information of two of our major national resources: Water and Energy, and using system theory approach to evaluate each of them.
- Develop skills of technical writing.

4- Relationship between the course and the program

Field	National Academic Reference Standard(NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A1,A3,A8, A9	B2	C12	D9

Course Contents

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A1) Demonstrate understanding of Concepts and theories of mathematics and sciences, appropriate to the discipline.	a1-1) Identify the main concepts of science and technology.
	A3) Demonstrate Characteristics of engineering materials related to the discipline.	a3-1) Demonstrate the main engineering disciplines.
	A8) Explain Current engineering technologies as related to the discipline.	a8-1) Describe the Current engineering technologies in Egypt.
	A9) Discuss Topics related to humanitarian interests and moral issues.	a9-1) Identify the water and energy problems in Egypt.
Intellectual skills	B2) Select appropriate solutions for engineering problems based on analytical thinking.	b2-1) Select of appropriate package for solving the main problems of water and energy.
Professional skills	C12) Prepare and present technical reports.	c12-1) Developing the technical writing skills.
General skills	D9) Refer to relevant literatures.	d9-1) Refer to Fouad Zakaria book of scientific thinking. d9-2) Refer to Fawzy Gergis book of Egypt History.

6- Course Topics.

Topic No.	General Topics	Weeks
1st	Introduction-science & technology concepts and relation – scientific thinking.	1-3
2nd	Recent history of Egypt – History of engineering education.	4-5
3rd	Water problem in Egypt – analysis of the water resources – water uses reduction in agriculture and industry.	6-7,9
4th	Energy situation in Egypt – Energy balance – Energy alternatives.	10
5th	Engineering programs: (Electrical power and Machine Eng., Mechanical Power Eng., Mechanical Design and Production Eng., Civil Eng., Architecture Eng.)	11-15

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	-Contents, aims and objectives of the course. -Methodology and evaluation of students. -Topics of technical reports. -References. -Usage of INTERNET.	3	2	1	-	a1-1

Course Contents

WEEK-2	-Concepts of science and technology. -Historical relation between science and technology. -Historical emerging of engineering career. -Selection of reports topics.	3	2	1	-	a3-1
WEEK-3	-Scientific thinking. -The scientific theory of knowledge. -Obstacles against scientific thinking. How to write a technical report?	3	2	1	-	a8-1
WEEK-4	History of egypt from Mohamed Ali untill now. -Identifying the main rising and diacritic periods. -The relation between national independency and education. -Conducting report writing.	3	2	1	-	a9-1
WEEK-5	-Engineering education in nineteen century. -Engineering education after the first college of engineering. -Engineering education now. -Conducting the report writing.	3	2	1	-	b2-1
WEEK-6	-Water problem in Egypt. -Water balance. -Aspects of the problem. -Conducting the reports writing.	3	2	1	-	a1-1
WEEK-7	-Can We increase our net water income for the next few years? -Situation of understanding water. -Situation of underground water. -Situation of Nile water. -Deasalination. -Rain water. -Wastwater treatment & reuse. -Conducting the reports writing.	3	2	1	-	a3-1
WEEK-8	Midterm of first Term (written examination)					
WEEK9	-Reduction of water in agriculture. -Reduction of water uses in industry. -Reduction of drinking water. -Reports evaluation.	3	2	1	-	c12-1
WEEK-10	Energy in Egypt. Energy balance. Role of natural gas & oil. Generation of Electricity in Egypt. Energy alternatives. Reports evaluation.	3	2	1	-	b2-1
WEEK11	Mechanical Power Engineering: (Program aims, Courses, Specialization, Work fields and report evaluation)	3	2	1	-	a9-1

Course Contents

WEEK-12	Mechanical Design and Production Eng.: (Program aims, Courses, Specialization, Work fields and report evaluation)	3	2	1	-	a8-1
WEEK-13	Electrical Engineering: (Program aims, Courses, Specialization, Work fields and report evaluation)	3	2	1	-	c12-1
WEEK-14	Civil Eng.: (Program aims, Courses, Specialization, Work fields and report evaluation)	3	2	1	-	d9-1
WEEK-15	Architecture Engineering: (Program aims, Courses, Specialization, Work fields and report evaluation)	3	2	1	-	d9-2

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Working	Discovering	Simulation and Modelling	Lab. Experiments
Knowledge & understanding	a1-1	*			*	*								
	a3-1	*			*	*								
	a8-1	*			*	*								
	a9-1	*			*	*								
Intellectual Skills	b2-1	*			*	*								
Professional Skills	c12-1	*			*	*								
General Skills	d9-1		*							*	*			
	d9-2		*							*	*			

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment**10.1 Assessment Methods:**

Course Intended Learning Outcome (ILOs)		Assessment Methods											
		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring
Knowledge & Understanding	a1-1	*											
	a3-1	*			*								
	a8-1	*	*	*	*			*			*	*	
	a9-1	*			*	*							
Intellectual Skills	b2-1	*	*	*	*	*	*				*		*
Professional Skills	c12-1	*		*	*								
General Skills	d9-1						*		*	*			
	d9-2						*		*	*			

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	50	66.66%	16th
Mid-Term Examination (Written)	15	20%	8th
Term work (Tutorial and report assessment)	10	13.33%	Weekly
Total	75	100%	

11- Facilities required for teaching and learning:**11-1 Laboratory Usage:**

INTERNET Laboratory is used to help the students for searching of all information about Sciences, Technology and Engineering.

11-2 Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

1-History of Engineering and Technology: Prof. Dr. Atef Mohamed Alam Ud-Din, Vice-president of Suez Canal University, Port Said Branch, 2006.

2-History of Science and Engineering Technology: Dr. Ahmed Ali Al-Erian, 1996.

3-History of Science and Technology in the Ancient & Medieval Periods: Dr. Mustafa Mahmoud Sulaiman, 1995.

4-كتاب تاريخ العلوم والتكنولوجيا الهندسية، أ.د/أحمد العريان، 1996، عالم الكتب، مصر.

5-التفكير العلمي، أ.د/فؤاد زكريا، سلسلة عالم المعرفة الكويتية، 1978، الكويت.

6-دراسات في تاريخ مصر السياسي منذ العصر المملوكي، فوزى جرجس، مكتبة المصطفى الإلكترونية

www.mostafa.com

Course coordinator

Prof. Dr. Prof. Gamal Ibrahim Mohamed

Head of the Department

Prof. Dr. Prof. Gamal Ibrahim Mohamed

Basic Engineering Science. Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 2nd Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: Mathematics(1-B)

Code Symbol: BES021

Element of program: Major

Date of specification approval: 2011

Department offering the course: Basic Engineering Science. Dept.

By law 2006

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
4	2	----	6

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
-----	100%	-----	-----	-----	-----	-----	100%

B-Professional Information

2- Course Aims:

This course is designed to give the students a basic idea regarding the principle of Engineering Mathematics and its applications. This course is designed to provide students with the ability to understand analytical geometry. Also, Develop skills of students for solving engineering applications containing integration problem. This course also give students how to think creatively in order to find the proper method of calculation the integral of the function.

3- Course Objectives:

- Illustrate the philosophy of the integration and the importance of finding the integration of various type of functions as an essential part of the mathematical background of engineers.
- Demonstrate the basic definitions and principals of analytical geometry.
- Demonstrate understanding the concepts of conic sections and its importance in engineering.
- Demonstrate understanding of parabola, hyperbola, ellipse, circle and its standard forms commonly used in engineering problems.
- To understand indefinite integral, methods of integrations and definite integral and its applications.
- To give knowledge of fundamentals of trapezoidal rule to findthe area under curve.
- To give an understanding of impror integral..

4- Relationship between the course and the program

Field	National Academic Reference Standard(NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A1,A5	B3	C1	D9

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A1) Demonstrate understanding of Concepts and theories of mathematics and sciences, appropriate to electrical engineering.	a1-1)Classify the types of conic sections according to equation.. a1-2)Discuss different types of analytical geometry equations. a1-3)Derive main idea of trapezoidal method of finding area under curve. a1-4)Report the basic principes of mathematical induction.
	A5) Illustrate Methodologies of solving engineering problems, data collection and interpretation	a5-1) Illustrate Methodologies for solving Math problems, including integration of trigonometric functions. a5-2)Illustrate conic sections and its engineering applications . a5-3) Illustrate Methodologies of straight line equations.
Intellectual skills	B3) Think in a creative and innovative way in problem solving and design.	b3-1)Examin the solutions obtained by Trapezoidal rule.. b3-2)Solve problems serve to illustrate the studied equations. b3-3)Use the fundamentals of Integration in engineering applications.
Professional skills	C1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems..	c1-1) Build a mathematics models and solve problems in engineering applications.
General skills	D9) Refer to relevant literatures..	d9-1)Utilize the IT and literature base resources for Engineering. D9-2)Seek learning opportunities outside the classroom environment.

6- Course Topics.

Topic No.	General Topics (Algebra)	Weeks
1st	Transformation of coorinates	1-2
2nd	Conic sections	3
3rd	Equations of two straight lines	4-5
4th	Circle	6-7
5th	Parabola	9-11
6 th	Ellipse	12-13
7th	Hyberbola	14-15

Topic No.	General Topics (Calculus)	Weeks
1st	Basic definitions of integration	1
2nd	Basic rules of integration	2
3rd	Methods of integration	3-5
4th	Integraation of irrational functions	6-7
5th	Integraation of irrational algebraic functions	9-10
6 th	Integration of trigonometric functions.	11-12
7 th	Definite integral	13-15

Course Contents

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	-Traslation of origin -Integration basic definitions	6	4	2	-	a1-1,a1-2,
WEEK-2	-Changing sections classification -Basic rules of integration	6	4	2	-	a1-3
WEEK-3	-Conic sections classification -Integration by method of substitution	6	4	2	-	a1-4
WEEK-4	-Equation of two straight lines -Integration by parts	6	4	2	-	b3-1
WEEK-5	-Straight line applications -Integration by partial fractions	6	4	2	-	b3-2
WEEK-6	-Circle -Integration of irrational functions (Part I)	6	4	2	-	b3-1, d9-1
WEEK-7	-Equation of tangent to circle and applications. -Integration of irrational functions (Part II)	6	4	2	-	a5-1
WEEK-8	Midterm of first Term (written examination)					
WEEK-9	-Basics of parapola -Integration of irrational algebraic functions	6	4	2	-	a1-4
WEEK-10	-Polar and parametric of parabola -Integration of irrational functions (Part III)	6	4	2	-	a5-1
WEEK-11	-Application of parabola -Integration of inverse hyperbolic functions.	6	4	2	-	b3-1
WEEK-12	-Ellipse -Integration of trigonometric functions (Part I)	6	4	2	-	b3-1
WEEK-13	-Application on Ellipse. -Integration of trigonometric functions(Part II)	6	4	2	-	a5-3
WEEK-14	-Hyperbola -Definite Integral	6	4	2	-	b1-2, c1-1, d9-1
WEEK-15	-Applications of Hyerbola -Applications of definite integral	6	4	2	-	a5-2, b3-1, d9-2

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Working	Discovering	simulation and Modelling	Lab. Experiments
Knowledge & understanding	a1-1	*			*	*								
	a1-2	*			*	*								
	a1-3	*			*	*								
	a1-4	*			*	*								
	a5-1	*			*	*								
	a5-2	*			*	*								
	a5-3	*			*	*								
Intellectual Skills	b3-1	*			*	*								
	b3-2	*			*	*								
	b3-3	*			*	*								
Professional Skills	c1-1	*			*	*								
General Skills	d9-1		*							*	*			
	d9-2		*							*	*			

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)		Assessment Methods											
		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring
Knowledge & Understanding	a1-1	*											
	a1-2	*		*									
	a1-3	*		*	*	*		*				*	
	a1-4	*		*		*							
	a5-1	*		*	*								
	a5-2	*											
	a5-3	*											
Intellectual Skills	b3-1	*		*		*	*						*
	b3-2	*											
	b3-3	*							*				
Professional Skills	c1-1	*		*									
General Skills	d9-1						*	*	*	*			
	d9-2						*		*	*			

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	100	66.66%	16th
1 st Mid-Term Written Examination (Term Work)	20	13.33%	8th
2 nd Mid-Term Written Examination (Term Work)	20	13.33%	12th
Tutorial and report assessment (Term Work)	10	6.66%	Weekly
Total	150	100%	

11- Facilities required for teaching and learning:

11-1Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

- 1- Thomas and finney Addison, "Calculus and Analytic Geometry", Westey Publishing Company, U.S.A., 2006
- 2- LB Prasad, "A Text Book of Practical Mathematics (Two Volume)" , Khanna Publishers Delhi – India,1990 .
- 3-Hamdy A.Taha, "Operations research an iintroduction", 2003
- 4-Schaum's outlines series calculus, 1974
- 5-Th.Shifrin, "Multivariable Mathematics", wiley, 2005
- 6-J.H.Hubbard and B.B.Hubbard, "Vector Calculus, Linear Algebra, and differential Forms", (second edition), Prentice Hall, 2001.

Course coordinator

Head of the Department

Dr. Adel Mohamed Elrefay

Prof. Dr. Gamal Ibrahim Mohamed

Course Contents

Basic Engineering Science. Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 2nd Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: Physics(1-B)

Code Symbol: BES022

Element of program: Major

Date of specification approval: 2011

Department offering the course: Basic Engineering Science. Dept.

By law 2006

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
3	----	2	5

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
-----	60%	20%	-----	-----	20%	-----	100%

B-Professional Information

2- Course Aims:

- To provide knowledge and understanding of the basic principles of electricity, electric circuits, magnetism and magnetic materials and experimental observations.
- To provide a basis for creative careers in many areas of engineering and technology.
- To continuing attempt to understand how thing work.

3- Course Objectives:

- Develop a good understanding of a the basic concepts of electricity and magnetism and their engineering applications.
- Establish the idea that electricity and magnetism are related phenomena.
- Introduce the basic laws of electricity and magnetism and their engineering applications.
- Illustrate the electric field and electric potential associated with some charge distribution.
- Explain the basic idea of the capacitors and electric current and their electric circuit (a-c and d-c)
- Explain the basic laws of magnetism and sources of magnetic field.
- Show the properties of magnetic materials and their engineering applications.

4- Relationship between the course and the program

Field	National Academic Reference Standard(NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A1,A3	B2,B3	C1	D3

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A1) Demonstrate understanding of Concepts and theories of mathematics and sciences, appropriate to electrical engineering.	a1-1) List the basic concepts of physics in the field of electricity and magnetism and explain the electric and magnetic fields for several configurations of charges and current respectively . a1-2) Demonstrate the different applications of the fundamentals laws of electricity and magnetism . a1-3) Recognize the d-c and a-c electric currents and their components . a1-4) Describe the different types of magnetic materials, capacitors and their engineering applications .
Intellectual skills	B2) Select appropriate solutions for engineering problems based on analytical thinking.	b2-1) Analyze some of DC and AC circuits and their engineering applications. b2-2) Thinking about the similarities between electric and magnetic laws.
	B3) Think in a creative and innovative way in problem solving and design	b3-1) Discuss scientific problems in electricity, magnetism and solve them. b3-2) Use mathematical methods to derive expressions for the electric and magnetic fields for several configuration and their engineering applications.
Professional skills	C1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems.	c1-1) Apply the concepts of electricity and magnetism in different electric equipments. c1-2) Verify experimentally the electrical and magnetic laws and their engineering applications. c1-3) Construct and examine some of the electric and magnetic circuits in physics laboratory . c1-4) Build models for some selected electric circuits.
General skills	D3) Communicate effectively.	d3-1) Collect data and scientific materials from text book . d3-2) Work in team to conduct an experiment in physics laboratory . d3-3) Communicate effectively and deals with others. d3-4) Seek learning opportunities outside the classroom environment. d3-5) Improve the engineering profession and thinking..

6- Course Topics.

Topic No.	General Topics	Weeks
1st	Electric charges and columb's law .	1
2nd	Electric field intensity.	2-3
3rd	Electric flux, Gauss's law and its application	4-5
4th	Electric potential.	6
5th	Capacitance and dielectric.	7
6th	Electric current, resistance and Kirchhoff's law.	9-10
7th	Magnetic forces, and sources of magnetic field.	11-12
8 th	Farady's law, magnetic induction and a-c circuits .	13-14
9 th	Magnetism and magnetic materials	15

Course Contents

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	Electric charge and coulomb's law .	5	3	--	2	a1-1,a1-2,b3-1,b3-2, c1-1,c1-2, d3-2
WEEK-2	Electric field intensity (Part I) .	5	3	--	2	a1-2 ,c1-1, d3-2
WEEK-3	Electric field intensity (Part II) .	5	3	--	2	a1-2 ,c1-1, d3-2
WEEK-4	Electric flux, Gauss's law	5	3	--	2	a1-1,a1-2,b3-1,b3-2, c1-1,c1-2, d3-2
WEEK-5	Gauss law applications.	5	3	--	2	a1-1,a1-2,b3-1,b3-2, c1-1,c1-2, d3-2
WEEK-6	Electric potential.	5	3	--	2	a1-2, a1-3,c1-4, d3-2
WEEK-7	Capacitance and dielectric .	5	3	--	2	a1-2,c1-4, d3-1
WEEK-8	Midterm of first Term (written examination)					
WEEK-9	Electric current and Resistance.	5	3	--	2	a1-2, a1-3,b2-2,c1-3, c1-4
WEEK-10	Kirchhoff's law.	5	3	--	2	a1-2, a1-3,b2-2,c1-3, c1-4
WEEK-11	Magnetic force.	5	3	--	2	a1-2,c1-4, d3-3, d3-4, d3-5
WEEK-12	Sources of magnetic field.	5	3	--	2	a1-2,c1-4, d3-3, d3-4, d3-5
WEEK-13	Faraday's law, magnetic induction.	5	3	--	2	a1-4,b2-1,b3-2,c1-3, d3-5
WEEK-14	A-C Circuits .	5	3	--	2	a1-4,b2-1,b3-2,c1-3, d3-5
WEEK-15	Magnetism and magnetic materials	5	3	--	2	a3-1,c1-4, d3-2,d3-5

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOS)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Working	Discovering	Simulation and Modelling	Lab. Experiments
Knowledge & understanding	a1-1	*	*	*		*					*			*
	a1-2	*	*	*		*					*			*
	a1-3	*	*	*		*					*			*
	a1-4	*	*	*		*					*			*
Intellectual Skills	b2-1	*	*	*		*					*		*	*
	b2-2	*	*	*		*					*		*	*
	b3-1	*	*	*		*					*	*	*	*
	b3-2	*	*	*		*					*	*	*	*
Professional Skills	c1-1	*	*	*		*			*		*		*	
	c1-2	*	*	*		*			*		*		*	
	c1-3	*	*	*		*			*		*		*	
	c1-4	*	*	*		*			*		*		*	

Course Contents

General Skills	d3-1	*	*	*		*			*		*			
	d3-2	*	*	*		*			*		*			
	d3-3	*	*	*		*			*		*			
	d3-4	*	*	*		*			*		*			
	d3-5	*	*	*		*			*		*			

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)		Assessment Methods											
		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring
Knowledge & Understanding	a1-1	*	*				*	*		*	*	*	
	a1-2	*	*				*	*		*	*	*	
	a1-3	*	*				*	*		*	*	*	
	a1-4	*	*				*	*		*	*	*	
Intellectual Skills	b2-1	*	*		*	*	*	*		*	*		
	b2-2	*	*		*	*	*	*		*	*		
	b3-1	*	*				*	*		*	*		
	b3-2	*	*				*	*		*	*		
Professional Skills	c1-1	*	*		*		*	*		*	*	*	
	c1-2	*	*		*		*	*		*	*	*	
	c1-3	*	*		*		*	*		*	*	*	
	c1-4	*	*		*		*	*		*	*	*	
General Skills	d3-1	*			*		*	*		*		*	
	d3-2	*			*		*	*		*		*	
	d3-3	*			*		*	*		*		*	
	d3-4	*			*		*	*		*		*	
	d3-5	*			*		*	*		*		*	

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	75	60%	16th
Mid-Term Examination(Written)	20	16%	8th
Term Laboratory Assessment	20	16%	15th
Term work (Quizzes, Discussion and report assessment)	10	8%	Every weeks
Total	125	100%	

11- Facilities required for teaching and learning:

11-1Laboratory Usage:

INTERNET Laboratory is used to help the students for searching of all information about Sciences, Technology and Engineering.

11-2Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

- 1-Serway Jewett; "Physics for scientists and engineers"; 2004, 6th edition
- 2-Holliday and Resnick, "Introduction to Physics", 6th edition.
- 3-M.N.Avadhanulu and P.G.Kshirsagar, "Engineering physics"
- 4-Gerge Shortly and Dudley Williams, "Elements of physics"

Course coordinator

Head of the Department

Dr.Kasim El Sayed Rady
Prof. Dr. Kamel M El-Shokrofy

Prof. Dr. Gamal Ibrahim Mohamed Ali

Course Contents

Production Engineering and Mechanical Design Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 2nd Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: Production Engineering

Code Symbol: PRE011

Element of program: Major

Date of specification approval: 2011

Department offering the course: Production Engineering and Mechanical Design Dept. By law 2006

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
2	----	2	4

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
25%	----	25%	25%	-----	25%	-----	100%

B-Professional Information

2- Course Aims:

This Course provides the Student with Basic knowledge for both Manufacturing and Industrial engineering beside the information about engineering material , workshop safety and Bench work .

3- Course Objectives:

- To gain knowledge about different engineering materials & its properties
- To get experience about foundry process, metal formation and cutting,
- To acquire understanding and experience about metal forming and machining processes

4- Relationship between the course and the program

Field	National Academic Reference Standard(NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A3,A8	B3	C1,C8,C11	D2

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A3) Demonstrate Characteristics of engineering materials related to electrical engineering.	a3-1) Demonstrate understanding the basic consent about manufacturing and industrial engineering science
	A8) Explain current engineering technologies as related to electrical engineering	a8-1) Understanding basic mathematics, science and technologies relevant to modern power and machines.

Course Contents

Intellectual skills	B3) Think in a creative and innovative way in problem solving and design.	b3-1) State the difference between forming and cutting processes b3-2) Describe machine tool elements .
Professional skills	C1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems..	c1-1) State the differences between engineering materials.
	C8) Apply safe systems at work and observe the appropriate steps to manage risks.	C8-1) Apply workshop safety
	C11) Exchange knowledge and skills with engineering community and industry.	c11-1) DO(perform) work part on materials. c11-2)DO Some bench work Samples .
General skills	D2) Work in stressful environment and within constraints.	d2-1) Be aware with workshop safety and machine tool types and related operation.

6- Course Topics.

Topic No.	General Topics	Weeks
1st	Workshop safety	1
2nd	Fundamentals of Engineering Materials	2
3rd	Casting processes	3-4
4th	Forming processes (Rolling – Drawing ,Extrusion , Spinning)	5-6
5th	Welding processes	7,9
6th	Bench work (Measurement , Filling ,Taping , Drilling , Sawing)	10-11
7th	Metal Machining principles (Turning – Milling – Shaping – Drilling – Grinding)	12-15

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	workshop safety	4	2	--	2	a3-1,a8-1,b3-1,b3-2, c1-1,c8-1,c11-1,c11-2, d2-1
WEEK-2	Fundamentals of Engineering Materials	4	2	--	2	a3-1,a8-1,b3-1,b3-2, c1-1,c8-1,c11-1,c11-2
WEEKS-3,4	Casting processes	8	4	--	4	a3-1,a8-1,b3-1,b3-2, c1-1,c8-1,c11-1,c11-2, d2-1
WEEKS-5,6	Forming processes (Rolling – Drawing , Extrusion , Spinning)	8	4	--	4	a3-1,a8-1,b3-1,b3-2, c1-1,c8-1,c11-1,c11-2, d2-1
WEEK-7	Welding processes	4	2	--	2	a3-1,a8-1,b3-1,b3-2, c1-1,c8-1,c11-1,c11-2, d2-1
WEEK-8	Midterm of first Term (written examination)					
WEEK-9	Welding processes	4	2	--	2	a3-1,a8-1,b3-1,b3-2, c1-1,c8-1,c11-1,c11-2, d2-1
WEEKS-10-11	Bench work (Measurement , Filling ,Taping , Drilling , Sawing)	8	4	--	4	a3-1,a8-1,b3-1,b3-2, c1-1,c8-1,c11-1,c11-2, d2-1
WEEKS-12-15	Metal Machining principles (Turning – Milling – Shaping – Drilling – Grinding)	16	8	--	8	a3-1,a8-1,b3-1,b3-2, c1-1,c8-1,c11-1,c11-2, d2-1

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Working	Discovering	simulation and Modelling	Lab. Experiments
Knowledge & understanding	a3-1	*		*		*				*	*		*	
	a8-1	*	*	*		*	*	*	*	*	*		*	*
Intellectual Skills	b3-1	*	*	*		*	*	*		*	*	*	*	*
	b3-2	*	*	*		*	*	*		*	*	*	*	*
Professional Skills	c1-1	*	*	*		*	*	*	*	*	*		*	
	c8-1	*	*	*				*	*	*	*	*		
	c11-1	*	*	*		*		*	*	*	*	*		
	c11-2	*	*	*		*		*	*	*	*	*		
General Skills	D2-1	*	*	*			*	*	*	*	*	*		

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)		Assessment Methods											
		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring
Knowledge & Understanding	a3-1	*	*				*	*		*	*		
	a8-1	*	*		*	*	*	*	*	*	*		
Intellectual Skills	b3-1	*	*		*	*	*	*	*	*	*		
	b3-2	*	*		*	*	*	*	*	*	*		
Professional	c1-1	*	*		*		*	*	*	*	*	*	

Course Contents

Skills	c8-1				*		*		*	*	*		
	c11-1	*			*		*	*	*	*		*	
	c11-2	*			*		*	*	*	*		*	
General Skills	d2-1	*						*	*	*	*		

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	60	60%	16th
Mid-Term Examination (Written)	10	10%	8th
Term work (Tutorial and report assessment)	10	10%	Weekly
Mid term laboratory assessment (<i>Oral</i>)	5	5%	8th
End of term laboratory examination (<i>Lab</i>)	5	5%	16th
Oral Examination	10	10%	15th
Total	100	100%	

11- Facilities required for teaching and learning:

11-1 Workshop Usage:

Workshop is used to help the students for implementing and solving different industrial applications.

11-2 Library

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

1 -An introduction into Production Technology Staff members , production engineering department Faculty of Engineering Minuofiya University

2-

ا.د / حسن حسين فهمى واخرون

ا.د / احمد سالم الصباغ واخرون

مؤسسة الاهرام المصرية

1- مدخل فى الهندسة الانتاج

2- مقدمة فى هندسة الانتاج

3- سلسلة الاسس التكنولوجية

3- Krar . et al . "Technology of machine Tools", Mc Graw Hill Book Company

4- D Maslov et al , "Engnineeing Manufacturing Processes", Mir Pubisher

5- S.Kalpakjian , " Manufacturing Processes Engineering Material", Addison Wesley

6- ALL about machine tools Gerling , Wiley Eastern Book Company

Course coordinator

Prof.Dr. Taha Ali El Tawel

Head of the Department

Prof.Dr. Taha Ali El Tawel

Electrical Engineering Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 2nd Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: Computer and Programming

Code Symbol: ELE021

Element of program: Major

Date of specification approval: 2011

Department offering the course: Basic Engineering Science. Dept.

By law 2006

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
2	-----	1	3

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
33.33%	-----	-----	-----	33.33%	33.33%	-----	100%

B-Professional Information

2- Course Aims:

This course introduces the student to basic knowledge and understanding of computers and programming. The course starts with a brief history about how computers were developed. The students learn the function of the main components and how computer works. Features of numbering systems and Software development are other objectives. The student also learn about computer algorithms, flow charts and how to develop computer programs

3- Course Objectives:

- To get knowledge about computers
- To understand and experience computer hardware & software
- To be knowledgeable about windows OS + Computer programming Languages
- To analyze any problem and find the appropriate algorithm.

4- Relationship between the course and the program

Field	National Academic Reference Standard (NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A2,A9	B1,B8	C1,C6,C7	D4

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A2) Demonstrate understanding of Basics of information and communication technology (ICT)	a2.1) Demonstrate understanding of Computer hardware and software a2.2) Explain development of computer algorithm, flow charts and programs

Course Contents

	A9) Discuss Topics related to humanitarian interests and moral issues.	a9-1)Recognize copyrights of software. a9-2)Discuss marketing using INTERNET
Intellectual skills	B1) Select appropriate mathematical and computer-based methods for modelling and analyzing problems	b1-1) Adopt suitable theoretical and computer-based techniques to use for the analysis of Engineering Problems.
	B8) Select and appraise appropriate ICT tools to a variety of engineering problems.	b8-1) Design computer algorithms, flow charts and program to solve small engineering problem
Professional skills	C1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems.	c1-1) Access the internet and search for information to obtain knowledge about a specific problem.
	C6) Use a wide range of analytical tools, techniques, equipment, and software packages pertaining to the discipline and develop required computer programs.	C6-1)Use computational tools and software packages
	C7)Apply numerical modelling methods to engineering problems.	c7-1) Use appropriate high level programming by applying numerical modelling methods to engineering problems.
General skills	D4) Demonstrate efficient IT capabilities.	d4-1 Use information technologies effectively

6- Course Topics.

Topic No.	General Topics	Weeks
1st	Introduction Types of computer and their features-classification of computers –computer generation-historical development of computers.	1
2nd	COMPUTER HARDWARE Hardware components – CPU – input devices(key board, mouse, ..etc) – output devices(Printer, scanner,. .etc) - Ports- units of measuring computer size	2
3rd	COMPUTER SOFTWARE Classification of software- Operating systems- Application software0 Software generation.	3
4th	DOS (Basic differences between command line interface and GUI – DOS commands – Error messages).	4-5
5th	NUMBERING SYSTEMS Basic features- Decimal NS – Binary N.S- Octal N.S. – Hexadecimal N. S. – Transformation between different numbering systems – direct transformation between binary and hexadecimal systems.	6
6th	ALGORITHMS AND FLOW CHARTS Development of algorithms- How problems can be solved- examples	7
7th	PROGRAMMING Introduction to programming – Input output statements- Examples	9-11
8th	Copyrights of Software and marketing using INTERNET.	12-15

Course Contents

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEK-1	Introduction Types of computer and their features- classification of computers –computer generation-historical development of computers.	2	--	1	-	a2-1,a2-2, b1-1, c1-1
WEEK-2	COMPUTER HARDWARE Hardware components – CPU – input devices(key board, mouse, ..etc) – output devices(Printer, scanner,. etc) - Ports- units of measuring computer size	2	--	1	-	a2-1,a2-2, b1-1, c1-1
WEEK-3	COMPUTER SOFTWARE Classification of software- Operating systems- Application software0 Software generation.	2	--	1	-	a2-1,a2-2, b1-1, c1-1
WEEKS-4,5	DOS (Basic differences between command line interface and GUI – DOS commands – Error messages).	2	--	1	-	a2-1,a2-2, b1-1, c1-1
WEEK-6	NUMBERING SYSTEMS Basic features- Decimal NS – Binary N.S- Octal N.S. – Hexadecimal N. S. – Transformation between different numbering systems – direct transformation between binary and hexadecimal systems.	2	--	1	-	a2-1,a2-2
WEEK-7	ALGORITHMS AND FLOW CHARTS Development of algorithms- How problems can be solved- examples	2	--	1	-	a2-1,a2-2, b1-1, b8-1 c1-1, c6-1, c7-1
WEEK-8	Midterm written examination					
WEEKS-9-11	PROGRAMMING Introduction to programming – Input output statements- Examples	4	---	2	-	a2-1,a2-2, b1-1, b8-1 c1-1, c6-1, c7-1
WEEKS-12-15	Copyrights of Software, role of information Technology in Education and marketing using INTERNET	12	--	6	-	a9-1,a9-2,c1-1, c6-1,d4-1

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Work/Assignments	Discovering	Simulation and Modelling	Lab. Experiments
		Knowledge & understanding	a2-1	*		*		*	*			*	*	
a2-2	*			*		*	*			*	*			*
a9-1	*			*		*	*			*	*			*
Intellectual Skills	b1-1	*	*	*		*	*	*	*	*	*		*	*
	b8-1	*	*	*		*	*	*	*	*	*			*
Professional Skills	c1-1	*	*	*		*	*	*	*	*	*		*	
	c6-1	*	*	*		*	*	*	*	*	*		*	*
	c7-1	*	*	*		*	*	*	*	*	*		*	*
General Skills	d4-1		*	*		*	*	*	*	*	*	*	*	*

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)		Assessment Methods											
		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam	Monitoring
Knowledge & Understanding	a2-1	*	*					*		*	*	*	
	a2-2	*	*					*		*	*	*	
	a9-1	*	*				*			*			
Intellectual Skills	b1-1	*				*	*	*		*		*	
	b8-1	*					*		*		*		
Professional Skills	c1-1	*	*		*		*	*	*	*	*	*	
	c6-1	*			*	*		*	*	*	*	*	
	c7-1	*			*	*	*		*	*	*		
General Skills	d3-1	*	*		*		*	*	*	*	*	*	
	d4-1	*	*		*	*	*	*	*	*	*	*	
	d4-2	*	*		*	*	*	*	*	*	*	*	

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	45	60%	16th
Mid-Term Examination (Written)	5	6.66%	8th
Term work (Tutorial and report assessment)	5	6.66%	Weekly
Mid term laboratory assessment (<i>Oral</i>)	5	6.66%	8th
End of term laboratory examination (<i>Lab</i>)	10	13.33%	16th
Oral Examination	5	6.66%	15th
Total	75	100%	

11- Facilities required for teaching and learning:

11-1Laboratory Usage:

Computer Laboratory is used to help the students for writing source programs then compiled them and obtain the results.

11-2Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

- 1-David Reed, "A Balanced Introduction to Computer Science", Prentice Hall , ISBN :013046709X, 2004.
- 2-Max Hailperin, Barbara Kaiser, and Karl Knight Paperback, "An Introduction to Computer Science Using Scheme" ISBN0-534-95211-9, 1999
- 3-Robert L. Read , "How to be a Programmer: A Short, Comprehensive, and Personal Summary", 2003
- 4-Introduction to Computers and Programming , [http:// citeseerx.ist.psu.edu/viewdoc/ download? doi=10.1.1.184...](http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.184...)
- 5- ICDL materials,

Course coordinator

Head of the Department

Prof. Dr. Shaban Mabrouk Osheba

Prof.Dr. Gamal Abdel-Wahab Morsy

Basic Engineering Science. Dept.
Faculty of Engineering
Minoufiya University

Academic year: 2011-2012
Academic term: 2nd Term
Academic level: Preparatory

Course Specification

A-Basic Information

Title: Human Rights

Code Symbol: BES000

Element of program: Major

Date of specification approval: 2011

Department offering the course: Basic Engineering Science. Dept.

By law 2006

<i>Lecture</i>	<i>Tutorial</i>	<i>Laboratory</i>	<i>Total</i>
2	---	----	2

1- Course Subject Area:

Humanities and Social Science	Math. and Basic Sciences	Basic Eng. Science	Applied Eng. and Design	Computer application and ICT	Projects and practice	Discretionary subjects	Total
100%	-----	-----	-----	-----	-----	-----	100%

B-Professional Information

2- Course Aims:

This course introduces students to the development of universal human rights norms in the international system; efforts to implement these at the national, regional and international levels; and contemporary debates concerning the universal implementation of human rights. The course explores human rights in the context of contemporary challenges to an international system organized on the principle of 'state sovereignty'; and to foreign policy making based on particular conceptions of 'national interest'.

3- Course Objectives:

- To understand the basics concept of human rights.

4- Relationship between the course and the program

Field	National Academic Reference Standard(NARS)			
	Knowledge & Understanding	Intellectual Skills	Professional Skills	General Skills
Program Academic Standards that the course contribute in achieving	A9	B4	C8	D1,D3

5- Course Intended Learning Outcomes (ILOs)

Field	Program ILOs that the course contribute in achieving	Course ILOs
Knowledge & Understanding	A9) Discuss Topics related to humanitarian interests and moral issues.	a9-1) Explain the development of human rights in the international system, and how this has culminated in current international treaties and covenants. a9-2) Examine international, regional and national mechanisms that have been developed to implement human rights norms. a9-3) Explore the policy dimensions of human rights in terms of contemporary debates concerning their universal implementation.
Intellectual Skills	B4) Combine, exchange, and assess different ideas, views, and knowledge from a range of sources.	b4-1) Combine, exchange, and assess different ideas, views, and knowledge from a range of sources.
Practical and Professional Skills	C8) Apply safe systems at work and observe the appropriate steps to manage risks.	c8-1) To provide students with elements of social sciences and humanities studies so that they understand the necessities for professionalism, ethical responsibilities.
General skills	D1) Collaborate effectively within multidisciplinary team.	d1-1) Function professionally as an individual and within a team.
	D3) Communicate effectively.	d3-1) Communicate effectively with clear, critical thinking and skills.
	D7) Search for information and engage in life-long self learning discipline.	d7-1) Search for information and engage in life-long self learning discipline.

6- Course Topics.

Topic No.	General Topics	Weeks
1st	Introduction: The Development of Human Rights	1-2
2nd	Human Rights & International Law	3-4
3rd	The UN System - Non-treaty Based Mechanisms	5-6
4th	The UN System -Treaty Based Mechanisms	7
5th	Regional Implementation of International Human Rights Standards - The Americas	9
6th	Regional Implementation of International Human Rights Standards - Europe & Africa	10
7th	The Role of Non-Government Organizations	11
8th	National Implementation of International Human Rights Standards	12
9th	International War Crimes & Criminal Tribunals	13
10th	Minority Rights and the Right to Self-Determination	14-15

Course Contents

7- Course Topics/hours/ILOS

WEEK NO.	SUB. TOPICS	TOTAL HOURS	CONTACT HRS			COURSE ILOS COVERED (BY NO.)
			Lec.	Tut.	Lab.	
WEEKS-1,2	Introduction: The Development of Human Rights	4	4	-	-	a9-1
WEEKS-3,4	Human Rights & International Law	4	4	-	-	a9-1,a9-2,a9-3,b4-1, c8-1,d1-1,d3-1, d7-1
WEEKS-5,6	The UN System - Non-treaty Based Mechanisms	4	4	-	-	a9-1,a9-2,a9-3,b4-1, c8-1,d1-1,d3-1, d7-1
WEEK-7	The UN System -Treaty Based Mechanisms	2	2	--	-	a9-1,a9-2,a9-3,b4-1, c8-1,d1-1,d3-1, d7-1
WEEK-8	Midterm of first Term (written examination)					
WEEK-9	Regional Implementation of International Human Rights Standards - The Americas	2	2	--	-	a9-1,a9-2,a9-3,b4-1, c8-1,d1-1,d3-1, d7-1
WEEK-10	Regional Implementation of International Human Rights Standards - Europe & Africa	2	2	--	-	a9-1,a9-2,a9-3,b4-1, c8-1,d1-1,d3-1, d7-1
WEEK-11	The Role of Non-Government Organizations	2	2	--	-	a9-1,a9-2,a9-3,b4-1, c8-1,d1-1,d3-1, d7-1
WEEK-12	National Implementation of International Human Rights Standards	2	2	--	-	a9-1,a9-2,a9-3,b4-1, c8-1,d1-1,d3-1, d7-1
WEEK-13	International War Crimes & Criminal Tribunals	2	2	--	-	a9-1,a9-2,a9-3,b4-1, c8-1,d1-1,d3-1, d7-1
WEEKS-14-15	Minority Rights and the Right to Self-Determination	4	4	-	-	a9-1,a9-2,a9-3,b4-1, c8-1,d1-1,d3-1, d7-1

8- Teaching and Learning Method:

Course Intended learning outcomes (ILOs)		Lecture	Presentation and Movies	Discussion	Tutorial	Problem solving	Brain storming	Projects	Site visits	Research and Reporting	Group Working	Discovering	simulation and Modelling	Lab. Experiments
Knowledge & understanding	a9-1	*		*			*				*			
	a9-2	*		*			*				*			
	a9-3	*		*			*				*			
Intellectual Skills	b4-1	*		*							*			
Professional Skills	C8-1	*	*	*							*	*		
General Skills	d1-1	*	*	*		*	*				*	*		
	d3-1	*	*	*		*	*				*	*		
	d7-1	*		*			*					*		

9- Teaching and Learning Methods for Low Capacity and Outstanding Students:

For low capacity students	Assign a portion of the office hours for those students.
	Give them specific tasks.
	Repeat the explanation of some of the material and tutorials.
	Assign a teaching assistance to follow up the performance of this group of students.
For outstanding Students	Hand out project assignments to those students.
	Give them some research topics to be searched using the internet and conduct presentation.
	Encourage them to take parts in the running research projects.

10- Assessment

10.1 Assessment Methods:

Course Intended Learning Outcome (ILOs)		Assessment Methods										
		Written Exam	Oral Exam	Tutorial Assessment	Project Assessment	Modelling	Research & Report	Quizzes	Presentation	Discussion	Laboratory Test	Home Exam
Knowledge & Understanding	a9-1	*	*						*			
	a9-2	*	*						*			
	a9-3	*	*						*			
Intellectual Skills	b4-1	*						*	*		*	
Professional Skills	C8-1							*	*			
General Skills	d1-1	*	*			*		*	*			
	d3-1	*	*					*	*	*	*	
	d7-1	*	*					*	*	*		

10.2 Assessment Weight, Schedule and Grades Distribution:

Assessment Method	Mark	Percentage	week
Final-Term Examination	50	100%	16th
Mid-Term Examination (Written)	---	---	---
Term work (Tutorial and report assessment)	---	---	---
Total	50	100%	

11- Facilities required for teaching and learning:

11-1 Laboratory Usage:

INTERNET Laboratory is used to help the students for searching of all information about Human rights Internationally.

11-2 Library Usage:

Students should be encouraged to use library technical resources in the preparation of laboratory reports and oral presentation. At least one oral presentation should involve a significant component of library research to encourage this component of study.

12- List of references:

- 1-Henry Steiner and Phillip Alston, *International Human Rights in Context: Law, Politics, Morals* (Oxford: Clarendon Press, 1996)
- 2-Jack Donnelly, *International Human Rights*, 2nd ed. (Westview Press, 1998)
- 3-R.P. Claude & B.H. Weston, eds. *Human Rights in the World Community*. 2nd ed. (Philadelphia: University of Pennsylvania Press, 1992)
- 4-Hurst Hannum, *Guide to International Human Rights Practice*, 2nd ed. (University of Pennsylvania Press, 1992)
- Scott Davidson, *Human Rights* (London: Open University Press, 1993)

Course coordinator

Head of the Department

Prof. Dr. Gamal Ibrahim Mohamed

Prof. Dr. Gamal Ibrahim Mohamed