

**KIET GROUP OF INSTITUTIONS. GHAZIABAD  
DEPARTMENT OF APPLIED SCIENCES**

2019-20 Odd Sem.

<b>Course Outcomes</b>		<b>BL</b>
<b>Course 1 - Physics: (KAS 101)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Students will be able to recall Newton's law of motion as well as explain and predict relativistic mechanics in real world applications, Einstein's postulates and their applicability in different applications.	1
2	Students will be able to identify Maxwell's equations in free space and non-conducting medium, properties of electromagnetic waves and applying the propagation mechanism of communication system through e-m waves.	3
3	Students will be able to differentiate classical mechanics and quantum mechanics, Summarize the basics of microscopic physics and use it to solve various quantum mechanical problems.	4
4	Students will be able to recall the concept of interference and diffraction, demonstrate the ability to evaluate wavelength of monochromatic source and white light using Newton's ring experiment & diffraction Grating.	1
5	Students will be able to compare and categorize the Laser and Fiber with losses, illustrate communication of signal with Optical fiber and application of LASER.	2

<b>Course Outcomes</b>		<b>BL</b>
<b>Course 2 - Chemistry: (KAS 102)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Understands and apply theoretical principles of bonding to analyse/infer molecular structures and properties.	1, 2, 3, 4
2	Acumen the fundamental concepts of various spectral techniques for organic compound/ molecular structure analysis.	1, 2, 3, 4
3	Understands and apply thermodynamic and electrochemical reactions in perspective of corrosion and Phase Rule.	1, 2, 3, 4
4	Insight knowledge, application and evaluation of water treatment techniques and fuel analysis.	1, 2, 3, 4, 5
5	Acquire fundamental knowledge of polymer Chemistry and Organometallic compounds to analyse/infer suitable methods for synthesis and industrial applications	1, 2, 3, 4

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<b>Course Outcomes</b>		BL
<b>Course 3 - Mathematics-I: (KAS 103)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Recall the concept of matrices , interpret it's rank and apply for solving linear simultaneous equations	1, 2, 3
2	Understand the concept of limit, continuity and differentiability and apply in the study of Rolle's , Lagrange's and Cauchy mean value theorem and Leibnitz theorems	2, 3
3	Associate the concept of partial differentiation for determining maxima, minima, expansion of series and Jacobians.	2, 3
4	Relate the multiple integral tools for Calculating area, volume, centre of mass and centre of gravity	2, 3
5	Remember the concept of vector and apply for directional derivatives, tangent and normal planes. Also for solving line, surface and volume integrals.	1, 3

<b>Course Outcomes</b>		BL
<b>Course 4 - Basic Electrical Engineering: (KEE 101)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Understand the concepts of electric circuit elements and network solutions with DC supply using various network theorems	2
2	Apply the concepts of single and three phase ac circuits for getting the network characteristics and solutions in terms of circuit elements, branch voltage and currents	3
3	Analyze the various aspects of performances and equivalent circuit design for transformers and Electrical machines	4
4	Illustrate the working principles of induction motor, synchronous machine as well as DC machine and employ them in different area of applications	3
5	Describe the components of low voltage electrical installations and perform elementary calculations for energy consumption.	1

<b>Course Outcomes</b>		BL
<b>Course 5 - Programming for Problem Solving: (KCS 101)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	To develop simple algorithms for arithmetic and logical problems.	1
2	To translate the algorithms to programs & execution (in C language).	2, 3
3	To implement conditional branching, iteration and recursion.	3, 4
4	To decompose a problem into functions and synthesize a complete program using divide and conquer approach.	3, 4, 5
5	To use arrays, pointers and structures to develop algorithms and programs.	5, 6

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<b>Course Outcomes</b>		BL
<b>Course 1 - Physics Lab: (KAS 151)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Learn about the Newton's ring experiment and apply it for different applications.	3
2	Learn about the diffraction pattern to study the spectrum for determining the wavelength of mercury light.	4
3	Understand the concept of Hall's effect and use it to find the physical parameters such as Hall's coefficient, carrier concentration, mobility of charge carriers etc.	2
4	Study about blackbody radiation and verify it from Stefan's law.	2
5	Understand the concept of optical rotation and use it to find the specific rotation of an optically active substance.	2

<b>Course Outcomes</b>		BL
<b>Course 2 - Chemistry Lab: (KAS 152)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	The student will be able to use different analytical instruments.	2, 3, 4
2	The student will be able to measure ion content like chloride content and iron content	2, 3, 4, 5
3	The student will be able to measure the alkalinity and hardness of water.	2, 3, 4, 5
4	To estimate physical properties of liquids such as Surface tension, Viscosity and Conductance of solution.	2, 3, 4, 5
5	The student will be able to synthesize Polymers used in daily life.	2, 3, 4, 5

<b>Course Outcomes</b>		BL
<b>Course 3 - Basic Electrical Engineering Lab: (KEE 151)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Conduct experiments illustrating the application of KVL/KCL and network theorems to DC electrical circuits	
2	Demonstrate the behavior of AC circuits connected to single phase AC supply and measure power in single phase as well as three phase electrical circuits.	
3	Three phase system (star & delta), including line and phase voltage/current relations, three phase power and its measurement.	
4	Calculate efficiency of a single phase transformer and DC machine.	
5	Perform experiments on speed measurement and reversal of direction of three phase induction motor and Identify the type of DC and AC machines based on their construction	

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<b>Course Outcomes</b>		BL
<b>Course 4 - Programming for Problem Solving Lab: (KCS 151)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	To write programs for arithmetic and logical problems.	1
2	To translate the algorithms to programs & execution (in C language).	2, 3
3	To write programs for conditional branching, iteration and recursion.	3, 4
4	To write programs using functions and synthesize a complete program using divide and conquer approach.	3, 4, 5
5	To write programs using arrays, pointers and structures.	5, 6

<b>Course Outcomes</b>		BL
<b>Course 5 - Engineering Graphics &amp; Design Lab: (KCE 151)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Understanding of the visual aspects of engineering design.	2
2	Applying engineering tools necessary for engineering practice.	3
3	Analysis of Isometric views.	4
4	Understanding of engineering graphics standards and effective communication through graphics.	2
5	Applying computer-aided geometric design, solid modelling and creating working drawings.	3, 6

<b>Course Outcomes</b>		BL
<b>Course 6 - Workshop Lab: (KWS 101)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	To understand and analyze different types of operations on woods (such as sawing, Joint making etc).	2, 4
2	To analyse and apply various Fitting operations.	4, 5
3	To be able to analyse and apply Forming operations (such as bending, upsetting and drawing).	4, 5
4	To get familiarized and able to analyze Electric arc welding and Oxyacetylene gas welding.	2, 4
5	To be able to analyse and apply various sheet metal operations.	4, 5
6	To understand and able to create different machine components using Lathe machine and various machining operations.	2, 6
7	To get familiarized and able to discuss with various foundry techniques.	2

**KIET GROUP OF INSTITUTIONS. GHAZIABAD  
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2019-20 Even Sem.

<b>Course Outcomes</b>		BL
<b>Course 1 - Physics: (KAS 201)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Students will be able to recall Newton's law of motion as well as explain and predict relativistic mechanics in real world applications, Einstein's postulates and their applicability in different applications.	1
2	Students will be able to identify Maxwell's equations in free space and non-conducting medium, properties of electromagnetic waves and applying the propagation mechanism of communication system through e-m waves.	3
3	Students will be able to differentiate classical mechanics and quantum mechanics, Summarize the basics of microscopic physics and use it to solve various quantum mechanical problems.	4
4	Students will be able to recall the concept of interference and diffraction, demonstrate the ability to evaluate wavelength of monochromatic source and white light using Newton's ring experiment & diffraction Grating.	1
5	Students will be able to compare and categorize the Laser and Fiber with losses, illustrate communication of signal with Optical fiber and application of LASER.	2

<b>Course Outcomes</b>		BL
<b>Course 2 - Chemistry: (KAS 202)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Understands and apply theoretical principles of bonding to analyse/infer molecular structures and properties.	1, 2, 3, 4
2	Acumen the fundamental concepts of various spectral techniques for organic compound/ molecular structure analysis.	1, 2, 3, 4
3	Understands and apply thermodynamic and electrochemical reactions in perspective of corrosion and Phase Rule.	1, 2, 3, 4
4	Insight knowledge, application and evaluation of water treatment techniques and fuel analysis.	1, 2, 3, 4, 5
5	Acquire fundamental knowledge of polymer Chemistry and Organometallic compounds to analyse/infer suitable methods for synthesis and industrial applications	1, 2, 3, 4

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<b>Course Outcomes</b>		BL
<b>Course 3 - Mathematics-II: (KAS 203)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Understand the tools to solve differential equations and apply in Engineering problems	2, 3
2	Remember the concept of definite integral , Beta & Gamma function and apply for calculating surface areas and volumes.	1, 3
3	Understand the concept of convergence of sequence and series and compute Fourier series	2, 3
4	Illustrate the working methods of complex functions and bilinear transformation and apply in finding analytic functions and conformal mapping.	2, 3
5	Extend the concepts of complex functions for calculating Taylor's series, Laurent's series and definite integrals	2, 3

<b>Course Outcomes</b>		BL
<b>Course 4 - Basic Electrical Engineering: (KEE 201)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Understand the concepts of electric circuit elements and network solutions with DC supply using various network theorems	2
2	Apply the concepts of single and three phase ac circuits for getting the network characteristics and solutions in terms of circuit elements, branch voltage and currents	3
3	Analyze the various aspects of performances and equivalent circuit design for transformers and Electrical machines	4
4	Illustrate the working principles of induction motor, synchronous machine as well as DC machine and employ them in different area of applications	3
5	Describe the components of low voltage electrical installations and perform elementary calculations for energy consumption.	1

<b>Course Outcomes</b>		BL
<b>Course 5 - Programming for Problem Solving: (KCS 201)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	To develop simple algorithms for arithmetic and logical problems.	1
2	To translate the algorithms to programs & execution (in C language).	2, 3
3	To implement conditional branching, iteration and recursion.	3, 4
4	To decompose a problem into functions and synthesize a complete program using divide and conquer approach.	3, 4, 5
5	To use arrays, pointers and structures to develop algorithms and programs.	5, 6

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<b>Course Outcomes</b>		BL
<b>Course 6 - Professional English: (KAS 204)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Students will be enabled to understand and remember the basic objectives of the course by being acquainted with specific dimensions of communication skills i.e. Reading, Writing, Listening, Thinking and Speaking.	2, 1
2	Students would be able to create substantial base by the formation of strong professional vocabulary for its application at different platforms and through numerous modes as Comprehension, reading, writing, and speaking etc.	6
3	Students will apply it at their workplace for writing purposes such as Presentation/official drafting/administrative communication and use it for creating document/project/report/research paper writing.	3, 6
4	Students will be made to evaluate the correct & error-free writing by being well versed in rules of English grammar & cultivate relevant technical style of communication & presentation at their workplace & also for academic uses.	5
5	Students will analyze and apply it for practical and oral presentation purposes by being honed up in presentation skills and voice-dynamics. They will apply techniques for developing interpersonal communication skills and positive attitude leading to their professional competence.	4, 3

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<b>Course Outcomes</b>		BL
<b>Course 1 - Physics Lab: (KAS 151)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Learn about the Newton's ring experiment and apply it for different applications.	3
2	Learn about the diffraction pattern to study the spectrum for determining the wavelength of mercury light.	4
3	Understand the concept of Hall's effect and use it to find the physical parameters such as Hall's coefficient, carrier concentration, mobility of charge carriers etc.	2
4	Study about blackbody radiation and verify it from Stefan's law.	2
5	Understand the concept of optical rotation and use it to find the specific rotation of an optically active substance.	2

<b>Course Outcomes</b>		BL
<b>Course 2 - Chemistry Lab: (KAS 252)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	The student will be able to use different analytical instruments.	2, 3, 4
2	The student will be able to measure ion content like chloride content and iron content	2, 3, 4, 5
3	The student will be able to measure the alkalinity and hardness of water.	2, 3, 4, 5
4	To estimate physical properties of liquids such as Surface tension, Viscosity and Conductance of solution.	2, 3, 4, 5
5	The student will be able to synthesize Polymers used in daily life.	2, 3, 4, 5

<b>Course Outcomes</b>		BL
<b>Course 4 - Programming for Problem Solving Lab: (KCS 251)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	To write programs for arithmetic and logical problems.	1
2	To translate the algorithms to programs & execution (in C language).	2, 3
3	To write programs for conditional branching, iteration and recursion.	3, 4
4	To write programs using functions and synthesize a complete program using divide and conquer approach.	3, 4, 5
5	To write programs using arrays, pointers and structures.	5, 6

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<b>Course Outcomes</b>		BL
<b>Course 5 - Engineering Graphics &amp; Design Lab: (KCE 251)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	Understanding of the visual aspects of engineering design.	2
2	Applying engineering tools necessary for engineering practice.	3
3	Analysis of Isometric views.	4
4	Understanding of engineering graphics standards and effective communication through graphics.	2
5	Applying computer-aided geometric design, solid modelling and creating working drawings.	3, 6

<b>Course Outcomes</b>		BL
<b>Course 6 - Workshop Lab: (KWS 201)</b>		
<b>S. No.</b>	<b>Course Outcome/ Unit</b>	
<b>Student will be able to:</b>		
1	To understand and analyze different types of operations on woods (such as sawing, Joint making etc).	2, 4
2	To analyse and apply various Fitting operations.	4, 5
3	To be able to analyse and apply Forming operations (such as bending, upsetting and drawing).	4, 5
4	To get familiarized and able to analyze Electric arc welding and Oxyacetylene gas welding.	2, 4
5	To be able to analyse and apply various sheet metal operations.	4, 5
6	To understand and able to create different machine components using Lathe machine and various machining operations.	2, 6
7	To get familiarized and able to discuss with various foundry techniques.	2