CHANDIGARH ENGINEERING COLLEGE
CGC, LANDRAN, MOHALI
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CHANDIGARH ENGINEERING COLLEGE-CGC
LANDRAN (MOHALI)
Department of Applied Sciences

Course Outcomes for B.tech 1st Year (Common for all branches)	
After the completion of this course, students will be able to:	
Engineering Physics BTPH101-23:C101	
Course Code	**Course Outcomes**
C101.1	relate the origin of bands inside the solids with the help of crystallography.
C101.2	discuss the working, properties and characterization techniques of semiconductor materials and devices.
C101.3	explain the properties of Magnetic materials and Nanomaterials along with its synthesis.
C101.4	develop the knowledge about the Maxwell equation and Electromagnetic spectrum.
C101.5	appraise the need for quantum mechanics, wave particle duality, uncertainty principle etc. and their applications.
C101.6	examine the laser system, optical fibre in industries, laboratories and in communication
Engineering Physics (Lab) BTPH102-23: C102*	
Course Code	**Course Outcomes**
C102.1	demonstrate some of the theoretical concepts learnt in the theory courses.
C102.2	analyzing and applying precise measurements and handling sensitive equipment.
C102.3	propose the methods used for estimating and dealing with experimental uncertainties and systematic "errors."
C102.4	interpret conclusions from data and develop skills in experimental design
C102.5	create technical reports which communicate scientific information in a clear and concise manner.

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Mathematics -I BTAM101-23: C103	
Course Code	**Course Outcomes**
C103.1	examine the convergence and divergence of sequences and series.
C103.2	apply the concept of Proper integral to find length , surface area and volume of revolution of the curves and to deal with discontinuous functions using Improper integral.
C103.3	use the concepts of partial differentiation to expand , estimate and find the extreme values of Multivariable Functions .
C103.4	evaluate area and volume of the surfaces using the concept of double and triple integration

Basic Electrical Engineering BTEE101-18: C104	
Course Code	**Course Outcomes**
C104.1	categorize circuit elements, sources and mathematical analysis of DC circuits
C104.2	analyze the behavior of AC circuits.
C104.3	interpret the basic magnetic circuits and apply it to the working of electrical machines.
C104.4	classify the components of low voltage electrical installations.

Basic Electrical Engineering (Lab) BTEE102-18: C105*	
Course Code	**Course Outcomes**
C105.1	make use of common electrical measuring instruments and interpret the fundamentals of electrical engineering.
C105.2	construct electrical connections and measure power, power factor using appropriate equipment.
C105.3	utilize the knowledge of basic magnetism to understand working of transformers.
C105.4	demonstrate operation of electrical machines, components and their ratings.

Engineering Graphics & Design BTME 101-21: C106	
Course Code	**Course Outcomes**
C106.1	illustrate and prepare drawings.
C106.2	apply the principles of orthographic projections
C106.3	analyze and visualize of two and three dimensional planes and solids respectively.
C106.4	design and fabricate surfaces of different shapes.
C106.5	construct the objects in three dimensional appearances.

Chemistry-I BTCH101-23: C107	
Course Code	**Course Outcomes**
C107.1	interpret concepts related to atomic and molecular structure at orbital level as well as categorize various intermolecular forces.
C107.2	infer about thermodynamic functions, chemical equilibria, water chemistry and corrosion.
C107.3	interpretation of data by using different spectroscopic techniques and its daily life applications.
C107.4	explain and distinguish different periodic properties of elements such as ionization energy, electron affinity, electronegativity, oxidation state and polarizability.
C107.5	classify major organic chemical reactions used for the synthesis of molecules as well as drugs.
C107.6	Illustrate three dimensional arrangements and isomers possible for a molecule and their properties.

Chemistry-I (Lab) BTCH102-18: C108*	
Course Code	**Course Outcomes**
C108.1	rephrase interactions among molecules on the basis of surface tension, viscosity and Partition Coefficient.
C108.2	develop Polymer and drug molecule as well as analyze salt samples.
C108.3	estimate rate constants of chemical reactions as a function of time.

C108.4	discover acidity and chloride content present in water/oil sample.
C108.5	evaluate adsorption isotherm and extent of adsorption using TLC

Mathematics -II BTAM201-23: C109

Course Code	Course Outcomes
C109.1	determine the existence and uniqueness of the solution of system of linear equations using matrix algebra
C109.2	relate the concepts of Basis and Dimension of a vector space in linear transformation..
C109.3	utilize the acquired knowledge of eigen values and eigen vectors to diagonalize the matrix.
C109.4	solve ODE using different methods
C109.5	apply the concepts of ODE in RLC circuit, Deflection of beams, Simple harmonic motion, Simple population decay model, Orthogonal trajectories of a given family of curves.
C109.6	solve Partial Differential Equations using Lagrange's and Charpit's method

Programming for Problem Solving BTPS101-18: C110

Course Code	Course Outcomes
C110.1	demonstrate the knowledge and working of a computer with its parts.
C110.2	formulate simple algorithms and translate the algorithms to programs (in C language).
C110.3	evaluate conditional branching, iteration statements and recursion process.
C110.4	develop coding using arrays and implement various operations using 1D and 2D array (Matrix arithmetic operations).
C110.5	interpret the identified problems using functions and implementing searching and sorting algorithms on the given list as well as construct recursive functions.
C110.6	apply programming to design pointers, structures and file handling.

Programming for Problem Solving (Lab) BTPS102-18: C111*	
Course Code	**Course Outcomes**
C111.1	evaluate given algorithms for the development of correct program.
C111.2	identify syntax errors and logical errors at compile and run time for correction.
C111.3	develop iterative as well as recursive programs.
C111.4	formulate data in arrays, strings and structures and manipulate them through a program.
C111.5	create pointers of different types and implement them in defining self-referential structures.
C111.6	design coding to create, read and write to and from simple text files.

Workshop/Manufacturing Practices BTMP101-18: C112*	
Course Code	**Course Outcomes**
C112.1	interpret the different manufacturing processes which are commonly employed in the industry to fabricate components using different materials
C112.2	apply knowledge to construct different jobs with their own hands.
C112.3	interpret the dimensional accuracies and tolerances possible with different manufacturing processes.
C112.4	develop small devices of their interest.

English BTHU101-18: C113	
Course Code	**Course Outcomes**
C113.1	improve their vocabulary to use different words and phrases in formulating meaningful sentences.
C113.2	identify and ascertain knowledge about the basic grammatical aspects and sentence structures for developing effective communication.
C113.3	interpret the given text and employ effective writing techniques for organizing and producing clear and coherent forms of expression.
C113.4	identify and interpret the literal and contextual meaning of the given text to Compose their responses accordingly.

C113.5	apply their point of view effectively for developing and generating their ideas in creative written form.
C113.6	compose varied forms of business correspondence and professional documents for the purpose of informing, recognizing, analyzing and official reporting.

English (Lab) BTHU102-18: C114*

Course Code	Course Outcomes
C114.1	build their listening and speaking skills by acquiring new forms of expressions for lucid communications.
C114.2	formulate structured conversation and put forth their point of view fluently on a variety of topics.
C114.3	overcome their inhibition and feel confident while demonstrating their language skills to make the transitions clear.
C114.4	interpret, analyze and use correct language in general, academic and professional environment.
C114.5	understand and function as per the expectations of the industry to prepare themselves for future interviews.
C114.6	design presentation on a given topic, learn to modulate their voice along with exhibiting the right body language.

Mentoring & Professional Development MPD101-18: C115**

Course Code	Course Outcomes
C115.1	improve themselves by setting and working towards individual goals.
C115.2	demonstrate the importance of moral & ethical values that exemplify professionalism.
C115.3	develop physical fitness, wellness & sports to promote a healthy lifestyle.
C115.4	construct various analytical & training methods for their development.
C115.5	utilize physical activity as a tool to manage stress, pressure & work in life.

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Mentoring & Professional Development MPD201-18: C116**	
Course Code	**Course Outcomes**
C116.1	improve themselves by setting and working towards individual goals.
C116.2	demonstrate the importance of moral & ethical values that exemplify professionalism.
C116.3	develop physical fitness, wellness & sports to promote a healthy lifestyle.
C116.4	construct various analytical & training methods for their development.
C116.5	utilize physical activity as a tool to manage stress, pressure & work in life.

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