



Course Code: B301

Course Name: B.Sc. (Gen.) - Physics, Chemistry & Maths

Course Structure under Choice Based Credit System (2016-17)

Details of Course: B.Sc. (Gen.) - Physics, Chemistry & Maths

Course Structure		Credits	
		Theory + Practical	Theory + Tutorial
I	Core Courses (12 Papers) (04 Courses from each of the 03 disciplines)	12 x 04 = 48	12 x 5 = 60
	Core Course Practicals (04 Courses from each of the 03 disciplines)	12 x 02 = 24	12 x 1 = 12
II	Elective Courses (6 Papers) (02 papers from each discipline of choice including paper of interdisciplinary nature.)	06 x 04 = 24	06 x 05 = 30
	Elective Course Practical/ Tutorials (02 papers from each discipline of choice including paper of interdisciplinary nature.)	06 x 02 = 12	06 x 01 = 06
III	Ability Enhancement Courses Ability Enhancement Courses Compulsory AECC (02 Papers of 02 credits each)	02 x 02 = 04	02 x 02 = 04
	Ability Enhancement Courses Electives AECE (Skill based) (04 Papers of 02 credits each)	04 x 02 = 08	04 x 02 = 08
Total Credits		= 120	120

PDM UNIVERSITY
FACULTY OF PHYSICAL SCIENCES
COURSE : B.Sc (General with Physics, Chemistry & Mathematics)
Scheme of course as per choice based credit system

SEMESTER	MODULE TYPE	MODULE NAME	CREDITS
I	AEC-I	ENGLISH COMMUNICATIONS	2
	CORE-I	MECHANICS	4
	CORE-I PRACTICAL	CORE-I LAB	2
	CORE-II	ATOMIC STRUCTURE, BONDING, GENERAL ORGANIC CHEMISTRY & ALIPHATIC HYDROCARBONS	4
	CORE-II PRACTICAL	CORE-II LAB	2
	CORE-III	DIFFERENTIAL CALCULUS & TUTORIAL	6
II	AEC-II	ENVIRONMENTAL SCIENCE	2
	CORE-IV	ELECTRICITY, MAGNETISM AND EMT	4
	CORE-IV PRACTICAL	CORE-IV LAB	2
	CORE-V	CHEMICAL ENERGETICS, EQUILIBRIA & FUNCTIONAL GROUP ORGANIC CHEMISTRY-I	4
	CORE-V PRACTICAL	CORE-V LAB	2
	CORE-VI	DIFFERENTIAL EQUATIONS & TUTORIAL	6
III	CORE-VII	THERMAL PHYSICS AND STATISTICAL MECHANICS	4
	CORE-VII PRACTICAL	CORE-VII LAB	2
	CORE-VIII	SOLUTIONS, PHASE EQUILIBRIA, CONDUCTANCE, ELECTROCHEMISTRY & FUNCTIONAL GROUP ORGANIC CHEMISTRY-II	4
	CORE-VIII PRACTICAL	CORE-VIII LAB	2
	CORE-IX	REAL ANALYSIS & TUTORIAL	6
	SEC-I	SKILL ENHANCEMENT COURSE-I	2
IV	CORE-X	WAVES AND OPTICS	4
	CORE-X PRACTICAL	CORE-X LAB	2
	CORE-XI	TRANSITION METAL & COORDINATION CHEMISTRY, STATES OF MATTER & CHEMICAL KINETICS	4
	CORE-XI PRACTICAL	CORE-XI LAB	2
	CORE-XII	ALGEBRA & TUTORIAL	6
	SEC-II	SKILL ENHANCEMENT COURSE-II	2
V	SEC-III	SKILL ENHANCEMENT COURSE-III	2
	DSE-I	DISCIPLINE SPECIFIC ELECTIVE-I	6
	DSE-II	DISCIPLINE SPECIFIC ELECTIVE-II	6
	DSE-III	DISCIPLINE SPECIFIC ELECTIVE-III	6
VI	SEC-IV	SKILL ENHANCEMENT COURSE-IV	2
	DSE-IV	DISCIPLINE SPECIFIC ELECTIVE-IV	6
	DSE-V	DISCIPLINE SPECIFIC ELECTIVE-V	6
	DSE-VI	DISCIPLINE SPECIFIC ELECTIVE-VI	6
Total Credits			120

List of Core modules (Each module consists 6 credits, Theory + Lab or Tutorial)

PHYS3001: Mechanics
 PHYS3002: Core-I Lab
 CHEM3001: Atomic Structure, Bonding, General Organic Chemistry & Aliphatic Hydrocarbons
 CHEM3002: Core-II Lab
 MATH3001 & MATH 3002: Differential Calculus & Tutorial
 PHYS3003: Electricity, Magnetism and EMT
 PHYS3004: Core-IV Lab

CHEM3003: Chemical Energetics, Equilibria & Functional Group Organic Chemistry-I
CHEM3004: Core-V Lab
MATH3003 & MATH 3004: Differential Equations & Tutorial
PHYS3005: Thermal Physics and Statistical Mechanics
PHYS3006: Core-VII Lab
CHEM3005: Solutions, Phase Equilibria, Conductance, Electrochemistry & Functional Group Organic Chemistry-II
CHEM3006: Core-VIII Lab
MATH3005 & MATH3006: Real Analysis & Tutorial
PHYS3007: Waves and Optics
PHYS3008: Core-X Lab
CHEM3007: Transition Metal & Coordination Chemistry, States of Matter & Chemical Kinetics
CHEM3008: Core-XI Lab
MATH3007 & MATH3008: Algebra & Tutorial

List of Discipline Specific Elective modules (Each module consists of 6 credits)

PHYSICS (DSE-I AND DSE-IV): CHOOSE ANY 2

PHYS3101 & PHYS3102: Digital, Analog and Instrumentation & Lab
PHYS3103 & PHYS3104: Elements of Modern Physics & Lab
PHYS3105 & PHYS3106: Mathematical Physics & Lab
PHYS3107 & PHYS3108: Solid State Physics & Lab

CHEMISTRY (DSE-II AND DSE-V) CHOOSE ANY 2

CHEM3101 & CHEM3102: Analytical Methods in Chemistry & Lab
CHEM3103 & CHEM3104: Novel Inorganic Solids & Lab
CHEM3105 & CHEM3106: Polymer Chemistry & Lab
CHEM3107 & CHEM3108: Green Chemistry & Lab

MATHEMATICS (DSE-III AND DSE-VI)

DSE-III (Choose one)

MATH3101 & MATH3102: Matrices & Tutorial
MATH3103 & MATH3104: Mechanics & Tutorial
MATH3105 & MATH3106: Linear Algebra & Tutorial

DSE-VI (Choose one)

MATH3107 & MATH3108: Numerical Methods & Tutorial
MATH3109 & MATH3110: Complex Analysis & Tutorial
MATH3111 & MATH3112: Linear Programming & Tutorial

List of Skill Enhancement Modules (SEC-I TO SEC-IV) Choose any 4

SKIL1001: Basics of Information Technology
SKIL1002: Competitive Examination Preparedness
SKIL1003: Business Communication & Creative Writing
SKIL1004: Finance & Accounting Skills
SKIL1005: New Venture Planning (Entrepreneurship)
SKIL1006: Personality Development
SKIL1007: Basic Workshop
SKIL1008: Electrical Circuits & Network
SKIL1009: Mobile Application Development
SKIL1010: E-Commerce (Principles & Practices)
SKIL1011: Leadership Strategy & Organizational Behavior