



S J B Institute of Technology

BGS Health & Education City, Dr. Vishnuvardhan Road, Kengeri, Bengaluru-560060

Affiliated to Visvesvaraya Technological University, Belagavi. Approved by AICTE, New Delhi.

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Department of Mathematics

Course Outcomes and CO-PO-PSO Articulation Matrix

Semester-I/II

Subject: Engg. Mathematics - II		Subject Code:15MAT21
Course Outcomes		
CO1	Understanding the method of solving higher order differential equations and to apply it to solve electrical circuits, forced oscillations of mass spring and elementary heat transfer.	
CO2	To able solve partial differential equations in fluid mechanics, electromagnetic theory and heat transfer.	
CO3	Evaluate double and triple integrals to find area, volume, mass and moment of inertia of plane and solid region.	
CO4	Evaluation of beta and gamma function and its application.	
CO5	Use Laplace transform to determine general or complete solutions to linear ODE.	

COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2													
CO2	3	3													
CO3	3	2													
CO4	3	3													
CO5	3	2													
Average	3	2.6													


HOD

Dr. Padmaja Venugopal, Ph.D.
Professor and Head
Department of Mathematics
S.J.B. Institute of Technology
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Uttarahalli Road, Kengeri, Bangalore-60.



I Jai Sri Gurudev II
Sri Adichunchanagiri Shikshana Trust ®

SJB Institute of Technology



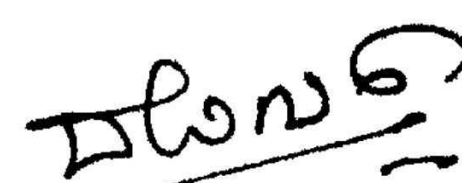
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BGS Health and Education City, Kengeri, Bangalore-560 060

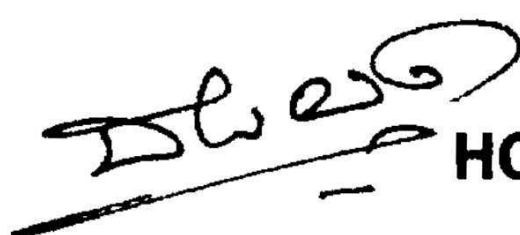
Course Outcomes and CO-PO-PSO Articulation Matrix

Semester-I/II

Subject: Engineering Physics										Subject Code:15PHY12/22					
Course Outcomes															
CO1	Gain Knowledge about Modern physics and quantum mechanics and will update the basic concepts to implement the skills in problem solving and technology.														
CO2	Study of material properties and their applications is the prime role to understand and use in engineering applications and studies to solve the problems.														
CO3	Study Lasers and Optical fibers and its applications to import knowledge and to develop skills and to use modern instruments in the engineering applications and to solve the problems..														
CO4	Understand Crystal structure and applications to boost the technical skills, its applications and to solve the problems.														
CO5	Expose shock waves concept and its applications to bring latest technology to the students at the at initial stages to develop research orientation programs and understand basic concepts of Nano science and technology to solve the engineering problems.														
CO-PO-PSO Mapping															
COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	2	2													
CO2	2	2													
CO3	2	2													
CO4	2	1													
CO5	2	1													
Average	2	1.6													


Head of the Department
Department of Physics
SJB Institute of Technology
BGS Health & Education City
Kengeri, Bangalore-560 060

Subject: Engineering Physics Lab												Subject Code: 15PHYL17/27			
Course Outcomes															
CO1	Develop skills to impart practical knowledge in real time solution.														
CO2	Understand principle, concept, working and application of new technology and comparison of results with theoretical calculations and Design new instruments with practical knowledge.														
CO3	Gain knowledge of new concept in the solution of practical oriented problems and to understand more deep knowledge about the solution to theoretical problems.														
CO4	Understand measurement technology, usage of new instruments and real time applications in engineering studies.														
CO-PO-PSO Mapping															
Cos	Pos												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3			2											
CO2	3			3											
CO3	3			3											
CO4	3			3											
Average	3			3											


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Head of the Department
Department of Physics
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BGS Health & Education City, Dr. Vishnuvardhan Road, Kengeri, Bengaluru-560060
Department of Chemistry

Course Outcomes and CO-PO-PSO Articulation Matrix

Semester-I/II

Subject: Engg. Chemistry										Subject Code:15CHE12/22					
Course Outcomes															
CO1	Electrochemical and concentration cells. Classical & modern batteries and fuel cells.														
CO2	Causes & effects of corrosion of metals and control of corrosion. Modification of surface properties of metals to develop resistance to corrosion, wear, tear, impact etc. by electroplating and electro less plating.														
CO3	Production & consumption of energy for industrialization of country and living standards of people. Utilization of solar energy for different useful forms of energy.														
CO4	Replacement of conventional materials by polymers for various applications.														
CO5	Boiler troubles; sewage treatment and desalination of sea water. Over viewing of synthesis, properties and applications of Nanomaterials.														
CO-PO-PSO Mapping															
COs	POs														
	1	2	3	4	5	6	7	8	9	10	11	12			
CO1	3														
CO2	3														
CO3	1														
CO4	2														
CO5							2								
Average	1.8						2								

Subject: Engineering Chemistry Lab										Subject Code:15CHEL17/27						
Course Outcomes																
CO1	Will have the knowledge in, Handling different types of instruments for analysis of materials using small quantities of materials involved for quick and accurate results															
CO2	Analyze and Carrying out different types of titrations for estimation of concerned in materials using comparatively more quantities of materials involved for good results															
CO-PO-PSO Mapping																
COs	POs															
	1	2	3	4	5	6	7	8	9	10	11	12				
CO1	2			1												
CO2	2			1												
Average	2			1												

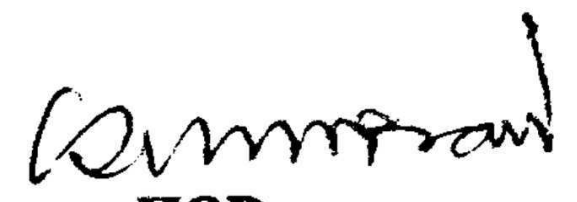

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BGS Health & Education City
Kengeri, Bangalore - 560 060

CO-PO-PSO Mapping															
Cos	Pos												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	1					1	2					1			
CO2	1					1	2					1			
CO3						1	2					1			
CO4	1					1	2					1			
Average	1					1	2					2			

Subject: Constitution of India, Professional Ethics & Human Rights	Subject Code: 15CPH28 / 28
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Course Outcomes															
CO1	Extend the general knowledge and legal literacy and thereby to take up competitive examinations														
CO2	Outline the state and central policies, fundamental duties														
CO3	Explain the Electoral Process & Special provisions														
CO4	Outline the powers and functions of Municipalities, Panchayats and Co-operative Societies														
CO5	Extend the knowledge of Engineering ethics and responsibilities of Engineers														
CO6	Explain about basic human rights in India														
CO-PO-PSO Mapping															
Cos	Pos												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1						2						1			
CO2						2						1			
CO3						2						1			
CO4						2						1			
CO5						2		2				1			
CO6						2						1			
Average						2		2				1			


HOD
 Head of Department
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Semester-I/II

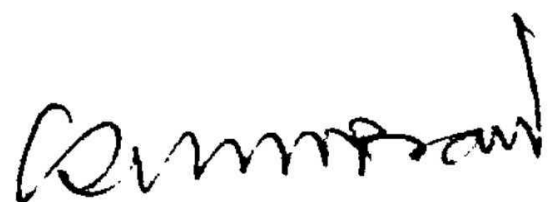
Subject: Environmental Studies		Subject Code: 15CIV18 / 28
Course Outcomes		
CO1	Explain the principles of ecology and environmental issues that apply to air, land, and water issues on a global scale	
CO2	Analyze environmental related problems through critical thinking & observational skills.	
CO3	Evaluating a relationship between biotic & abiotic components	
CO4	Apply their ecological knowledge to illustrate and graph a problem and describe the realities that managers face when dealing with complex issues	

CO-PO-PSO Mapping															
Cos	Pos												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	1					1	2					1			
CO2	1					1	2					1			
CO3						1	2					1			
CO4	1					1	2					1			
Average	1					1	2					2			

Subject: Constitution of India, Professional Ethics & Human Rights	Subject Code: 15CPH28 / 28
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Course Outcomes	
CO1	Extend the general knowledge and legal literacy and thereby to take up competitive examinations
CO2	Outline the state and central policies, fundamental duties
CO3	Explain the Electoral Process & Special provisions
CO4	Outline the powers and functions of Municipalities, Panchayats and Co-operative Societies
CO5	Extend the knowledge of Engineering ethics and responsibilities of Engineers
CO6	Explain about basic human rights in India

CO-PO-PSO Mapping															
Cos	Pos												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1						2						1			
CO2						2						1			
CO3						2						1			
CO4						2						1			
CO5						2		2				1			
CO6						2						1			
Average						2		2				1			


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Department of Information Science and Engineering

Course Outcomes and CO-PO-PSO Articulation Matrix

Semester-I/II

Subject: Programming in C & Data Structures										Subject Code: 15PCD13/23					
Course Outcomes															
CO1	Achieve Knowledge on computers and basic concepts of networks.														
CO2	Apply the basic principles of design and development of C Programming.														
CO3	Design and development of modular programming skills.														
CO4	Demonstrate Arrays and Strings in C programming concepts.														
CO5	Illustrate the basic concepts of Structures, unions, Pointers and Preprocessor Directives.														
CO-PO-PSO Mapping															
Cos	Pos												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2	2										2	3	2
CO2	3	3	2	3									2	3	3
CO3	2	3	3	2	2								2	2	3
CO4	2	3	3	2									2	2	3
CO5	3	2	2	2									2	3	2
Average	2.6	2.6	2.6	2.25	2								2	2.6	2.6

Subject: Computer Programming Lab										Subject Code: 15CPL16/26					
Course Outcomes															
CO1	Understand the knowledge on simple applications in C using conditional statements and looping concepts														
CO2	Demonstrate and implement applications using arrays and strings														
CO3	Apply knowledge on functions, recursions, pointers and structures.														
CO-PO-PSO Mapping															
Cos	Pos												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2	2	2									3	3	2
CO2	3	3	2	2									3	3	3
CO3	3	3	3	3	1								3	3	3
Average	3.0	2.67	2.33	2.33	1.0								3	3.0	2.67


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Department of Computer Science and Engineering

Course Outcomes and CO-PO-PSO Articulation Matrix

Semester-I/II

Subject: Programming in C & Data Structures													Subject Code: 15PCD13/23		
Course Outcomes															
CO1	Achieve Knowledge on computers and basic concepts of networks.														
CO2	Apply the basic principles of design and development of C Programming.														
CO3	Design and development of modular programming skills.														
CO4	Demonstrate Arrays and Strings in C programming concepts.														
CO5	Illustrate the basic concepts of Structures, unions, Pointers and Pre-processor Directives.														
CO-PO-PSO Mapping															
Cos	Pos												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2	2										2	3	2
CO2	3	3	2	3									2	3	3
CO3	2	3	3	2	2								2	2	3
CO4	2	3	3	2									2	2	3
CO5	3	2	2	2									2	3	2
Average	2.6	2.6	2.6	2.25	2								2	2.6	2.6

Subject: Computer Programming Lab										Subject Code: 15CPL16/26					
Course Outcomes															
CO1	Understand the knowledge on simple applications in C using conditional statements and looping concepts														
CO2	Demonstrate and implement applications using arrays and strings														
CO3	Apply knowledge on functions, recursions, pointers and structures.														
CO-PO-PSO Mapping															
Cos	Pos												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2	2	2									3	3	2
CO2	3	3	2	2									3	3	3
CO3	3	3	3	3	1								3	3	3
Average	3.0	2.67	2.33	2.33	1.0								3	3.0	2.67

Abhijeet
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Department of Mechanical Engineering

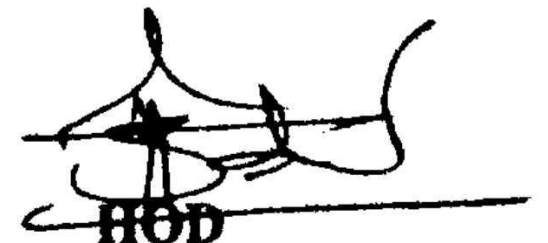
Course Outcomes and CO-PO-PSO Articulation Matrix

Semester-I/II

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CO3			3		3							1			
CO4					3							1			
CO5					3							1			
Average	3	3	3		3							1			

Subject: Workshop Practice										Subject Code: 15WSL16/26					
Course Outcomes															
CO1	Demonstrate and produce different types of fitting models.														
CO2	Gain knowledge of development of sheet metal models with an understanding of their applications.														
CO3	Perform soldering and welding of different sheet metal & welded joints.														
CO4	Understand the Basics of Workshop practices.														
CO-PO-PSO Mapping															
COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	2	2											3		
CO2	3			2									3		
CO3	3	2										2	3		
CO4	3	2											3		
Average	3	2		2								2	3		



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Department of Mechanical Engineering
SJB Institute of Technology
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SJB Institute of Technology

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Department of Electrical & Electronics Engineering

Course Outcomes and CO-PO-PSO Articulation Matrix

Semester-I/II (Aca. Year 2015-16)

Subject: Basic Electrical Engineering										Subject Code:15ELE15/25					
Course Outcomes															
CO1	Understand the basic concepts of DC circuits and Magnetic circuits and also able to solve problems related to DC and magnetic circuits.														
CO2	Analysis of Single Phase and three phase AC Circuits and the representation of alternating quantities and also determining the power and other parameters in these circuits														
CO3	Explain the construction, basic principle of operation, applications and also determine performance parameters of electrical Machines.														
CO4	Practice Electrical Safety Rules & standards and types of electrical wiring and domestic earthing.														
CO-PO-PSO Mapping															
COs	POs												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	3	2													
CO2	3	2				2									
CO3	3	2				2									
CO4	2					2		2							
Average	2.75	2				2		2							


Co-ordinator
Mr. Kubera U


HOD
Dr. Babu N V

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Department of Electronics and Communication Engineering

Course Outcomes and CO-PO-PSO Articulation Matrix

Semester-I/II

Subject: Basic Electronics										Subject Code: 15ELN15/25					
Course Outcomes															
CO1	Ability to apply the applications of diode in rectifiers, filter circuits and BJT														
CO2	Ability to analyse the biasing of BJT. Design simple circuits like amplifiers (inverting and non inverting), comparators, adders, integrator and differentiator using OPAMPS														
CO3	Understand the basic concepts of number systems .Design different building blocks in digital electronics using logic gates and implement simple logic function using basic universal gates														
CO4	Analyse the functioning of flip-flops. Describe the architecture and interfacing of microcontroller														
CO5	Understand the functioning of a communication system ,analyse different modulation technologies. Understand the basic principles of different types of Transducers.														
CO-PO-PSO Mapping															
Cos	Pos												PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
CO1	2	2											2		
CO2	2	2	2										2		
CO3	2	2	2										2		
CO4	2	2											2		
CO5	2	2											2		
Average	2	2	2										2		


HOD
Head

Dept. of Electronics & Communication Engg
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