ST FRANCIS DE SALES COLLEGE

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SYLLABUS FOR BRIDGE COURSE IN PHYSICS 2021-22

UNITS AND MEASUREMENTS: Unit of measurement - System of units - SI units - Fundamental and derived units - Length, mass and time measurements.

MOTION IN A STRAIGHT LINE: Understanding graphs, Position-time graph - Velocity-time graph:

LAWS OF MOTION: Aristotle's fallacy - Newton's first law of motion: Concept of inertia and force – Concept of momentum - Newton's second law of motion: Newton's third law of motion: Identification of action and reaction pairs with examples in everyday life.

THERMODYNAMICS: Thermal equilibrium – Zeroth law of Thermodynamics: Statement and explanation. - Heat, internal energy and work - First law of thermodynamics: Statement and explanation -Isothermal process.

Atoms: Rutherford's model of an atom, Bohr model of hydrogen atom, atomic spectra: Spectral series of hydrogen.

SEMICONDUCTOR ELECTRONICS Energy bands in solids: Valance band, conduction band and energy gap - Classification of solids on the basis of energy bands. Semiconductors: Intrinsic semiconductors - Extrinsic semiconductors (p-type and n-type); p-n junction: p-n junction formation. Semiconductor diode: Forward and reverse bias - I-V characteristics - Definitions of cut-in-voltage, breakdown voltage and reverse saturation current.

DUAL NATURE OF RADIATION AND MATTER: Wave nature of matter: de-Broglie hypothesis - Mention of de-Broglie relation   Mention of expression for de-Broglie wavelength in terms of kinetic energy and acceleration potential.

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Mathematics syllabus for Bridge course 2021-22

BSc

1. Important, basic and frequently used Mathematical formulas.
2. Sign Operations
3. Basic Algebraic operations
4. Matrices(definition,types,operations)
5. Differentiation –important formulas and application
6. Integration - important formulas and application
7. Basic trigonometric identities.

BCA

1. Theory of Numbers: Prime Numbers , composite Numbers , GCD LCM
2. Matrices : basics , addition subtraction , multiplication.
3. Basics of probability: permutation combination.

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syllabus –Electronics

➤ Familarization of electronic components

➤ Introduction to Logic gates,Register, Flip flop,counters

➤ **Difference** between combinational and sequential circuits

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BRIDGE COURSE -- SYLLABUS OF COMPUTER SCIENCE
BSc.

INTRODUCTION AND NUMBER SYSTEM : Historical evolution of computers, Classification of computers, Block Diagram along its components and characteristics, Usefulness of Computers. Human being Vs computer, Computer as a tool, Applications of computers. Definition of Number system, necessity of binary number system, decimal, octal and hexadecimal number system, interconversion of numbers, Binary arithmetic.   -1 (SP)

Input/Output Devices: Keyboards, mouse, joysticks, trackballs, digitizer, voice-recognition, optical-recognition, scanners. Hard-copy devices: Impact printers - DMPs, Daisy-wheel printers, Line-printers. Non-impact printers - Inkjet, Laser, Thermal, LED; Plotters. Soft-copy devices: Monitors, video- standards (VGA and SVGA). Memory & Mass Storage Devices: Characteristics of memory systems, types of memory, RAM, ROM, magnetic disks - floppy disk, hard-disk; optical disks - CD, CD-I, CD-ROM; Magnetic tapes; Concepts of Virtual and Cache memory. – (NKV)

Software Concepts- Introduction, types of software - System & Application software; Language translators - Compiler, Interpreter, Assembler. Briefing on cyber sprits activities - LCB

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DATE /DAY	Class/ Section	8.15 am – 9.10 am	9.10 am – 10.5 am	10.05am – 10.40 am	10.45am -11.40am	11.40 am – 12.30 pm	12.30 pm – 1.20 pm
7/10/21- THURSDAY	I Sem BSC PCM	Physics - MCV	KANNADA/HINDI + III Langauge (AC)	BREAK	Chemistry - RG	Mathematics - RN	Mathematics - RAK
	I Sem BSc MEC	Electronics - MM	KANNADA/HINDI + III Langauge (AC)	BREAK	Computer Science- LCB	Mathematics - RN	Mathematics - RAK
	I Sem BCA			BREAK	Mathematics - RAK		Mathematics - RN
8/10/21 - FRIDAY	I Sem BSC PCM	Chemistry - RG	ENGLISH	BREAK	Physics - Akshaya	Chemistry - N	Laboratory Principles- N
	I Sem BSc MEC	Computer Science - SP	ENGLISH	BREAK	Electronics - MM	Electronics - JS	Laboratory Principles- N
	I Sem BCA				Electronics - JS		
9/10/21 - SATURDAY	I Sem BSC PCM	ENGLISH	KANNADA/HINDI + III Langauge (AC)	BREAK	Physics - MCV	Mathematics - RAK	Mathematics - RN
	I Sem BSc MEC	ENGLISH	KANNADA/HINDI + III Langauge (AC)	BREAK	Computer Science-NKV	Mathematics - RAK	Mathematics - RN
	I Sem BCA			BREAK	Mathematics - RAK		

Subject	No of hours
Mathematics	4
Physics	3
Electronics	3
Chemistry	3
Computer Science	3
ENGLISH	2
KANNADA/HINDI + III Langauge (AC)	2
Laboratory Principles	1
Total Hrs (BSc MEC+ PCM)	21

Mathematics - RAK

Physics - MCV

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Title	Bridge Course 2021-22
Date& Time of Event(s)	07-09 August 2021
Department / Association	Department of Science
Venue	Respective Class Rooms (410, 411)
Number of Participants	23

Report

The Bridge Course for I semester bachelor students in science who has opted for physics, chemistry, electronics and mathematics was conducted by Department of Science from 7th August 2021 to 9th August 2021. Bridge course is conducted every year aimed to connect the preuniversity syllabus and the current course. The department identified the faculty members and framed a syllabus for the same. A time table was framed and classes were conducted accordingly. The classes were held in the respective class rooms allotted. The bridge course covered the basics of mathematics, physics, electronics, chemistry and computer Science which the students have taken as one of their main subjects. The computer science classes were conducted in collaboration with Department of Computer applications. The department offered bridge course in mathematics to computer science application students. A few classes were also allotted for English and other langauges (Hindi & Kannada). The classes were distributed as follows:

Subject	No of hours
Mathematics	4
Physics	3
Electronics	3
Chemistry	3
Computer Science	3
ENGLISH	2
KANNADA/HINDI + III Langauge (AC)	2
Laboratory Principles	2
Total Hrs	22

At the end of the course, an online test for 15 marks containing 5 questions each from the main subjects selected by the students was conducted along with feedback.

Electronics City P.O., Bengaluru - 560 100
Tel.: 080-27836065 / 27834611, Fax: 080-27832299, Email: principal@sfscollege.in
www.sfscollege.in

Desalite

BRIDGE COURSE ATTENDANCE SHEET

Academic Year 2021-22

Class: B.SC (PCM)- I SEM

Class Coordinator: Maruthi

Roll No	Name	07/10/21					08/10/21					09/10/21				
		1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th
								8/10/2021 Dr.Sheeba			9/10/21 Dr.Sheen		9/10/21 shanth raj Kannata	9/10/21 Maruthi physis	9/10/21 Roshin Matter	9/10/21 Reshma Maths
		Hly	KAN.	CHE	MAT	MAT	CHE	ENGLISH		CHEM	ENGLISH					
21PCM001	ABHIVYAKTHI		AB	P	P	P	AB	AB	AB	AB	AB	AB	AB.	AB	AB	AB
21PCM002	BHARGAVI L		P	P	P	P	P	P	P	P	P	P	P	P	P	P
21PCM003	KEERTHANA M		AB	AB	AB	AB	P	P	P	P	P	P	P	P	P	P
21PCM004	LAVANYA R		P	P	P	P	P	P	I	P	P	P	P	P	P	P
21PCM005	LIKHITHA		P	P	P	P	P	P	P	P	P	P	P	P	P	P

Hindi |7/10/21

1. ShakTHI shaline
2. ~~SHALINI~~ Nishand A·S
3. Priya

	7/10	9/10 Hindi 9/10/21
	P	P
	P	A
	A	P

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BRIDGE COURSE ATTENDANCE SHEET

Academic Year 2021-22

Class: B.SC (MEC)- I SEM

Class Coordinator: Maya Mathew

Roll No	Name	07/10/21					08/10/21					09/10/21				
		1st	2nd	3rd	4th	5th	1st	2nd 8/10/21 Dr. SHEEBA	3rd	4th	5th 9/10/21 Dr. SHEEBA	1st	2nd	3rd	4th	5th
			KAN	CSC	MATH	MATH	CSC	ENGLISH	ELEC	ELEC	ENGLISH	KAN	Computer	Maths	Maths	Maths
		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
		P	P	P	P	P	P	P	A	AB	P	P	P	P	P	P
		P	P	P	P	P	P	P	P	P	P	P	P	P	P	AB
21MEC006	PURUSOTHAMAN M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC007	RAJESH D	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC008	ROSHAN KUMAR S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC009	SAI CHANDRA KIRAN B M	AB	AB	AB	AB	AB	P	P	P	P	P	P	P	P	P	P
21MEC010	SHRAVAN KARTHIK	P	P	P	P	P	AB	AB	AB	AB	P	P	P	P	P	AB
21MEC011	SIDESH P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC012	SIMHADRI S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC013	SUMAN KUMAR B S	AB		P	P	P	P	P	P	P	P					

BRIDGE COURSE ATTENDANCE SHEET

Academic Year 2021-22

Class: B.SC (PCM)- I SEM

Class Coordinator: Maruthi C.V.

Roll No	Name	11/10/21					12/10/21					13/10/21				
		1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th
		LTM	LTM				Dr. SREEPA Dr. SHAN- TARAJU	LTM	Maruthi Regional	LTM	LTM	workshop				
		Jenifer	Jenifer				ENGLISH LAN	JENIFER	physics GGreag Jenifer Abhishek			Phop				
		A	A	A	A	A	P	P	P	P	P	P	P	P	P	P
		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
		P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
		P	P	P	P	P	P	P	P	P	P	P	P	P	P	
	Bharath	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
	Sankalpa.R	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
	Praveenkumar	P	P	P	P	P	P	P	P	P	P	P				
	Sinta Lakshmi	P	P	P	P	P	P	P	P							
	Teja															

BRIDGE COURSE ATTENDANCE SHEET

Academic Year 2021-22

Class. B.SC (MEC) - I SEM

Class Coordinator: _Maya Mathew_

Roll No	Name	11/10/21					12/10/21					13/10/21				
		1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th	1st	2nd	3rd	4th	5th
							Dr. Sheeba ENGLISH	Dr. Shah TA RAJU ICAN	Jenima LOM	MM	REginal G.Garg	LMT Jerfi	LRAT Akshaya B	Workshop Computer Sci		MT Jerfi
21MEC001	HARSHA V	P	P	P	P	P	AB	AB	AB	AB	AB	P	P	P	P	
21MEC002	JOSWIN D SOUZA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC003	STETHANA PRIYA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC004	NISHANDAS	P	P	P	P	P	AB	AB	AB	AB	AB	P	P	P	P	P
21MEC005	A TRINI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC006	PURUSOTHAMAN M	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC007	RAJESH D	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC008	ROSHAN KUMAR S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC009	SAI CHANDRA KIRAN BA	P	P	P	P	P	P	P	P	P	P	AB	AB	P	P	P
21MEC010	SHRAVAN KARTHIK	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC011	SIDHIN	P	P	P	P	P	P	P	P	P	P	AB	AB	P	P	AB
21MEC012	VIMHADR S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21MEC013	SUMAN KUMAR B S	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P

	1st	2nd	3rd	4th		12/10/21						13/10/21				
						1st	2nd	3rd	4th	5th		1st	2nd	3rd	4th	5th
Rajesh	P	P	P	P		P	P	P	P			P	P	P	P	P
Bharath	P	P	A	A	A	P	P	P	P	P	P					

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