ಸಂತ ಅಲೋಶಿಯಸ್ ಕಾಲೇಜು
(ಸ್ವಾಯತ್ತ)
ಮಂಗಳೂರು- 575 003

ST ALOYSIUS COLLEGE
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P.B.No.720
MANGALURU- 575 003, INDIA
Phone:+91-0824 2449700,2449701
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Website: www.staloysius.edu.in

Re-accredited by NAAC with 'A' Grade - CGPA 3.62
Recognised by UGC as "College with Potential for Excellence"
College with 'STAR STATUS' conferred by DBT, Government of India
3rd Rank in "Swacch Campus" Scheme, by MHRD, Govt of India

No: SAC 40/Syllabus 2019-20

Date: 18-07-2019

NOTIFICATION

Sub: Syllabus of **B.Sc. Physics** under Choice Based Credit System.

Ref: 1. Decision of the Academic Council meeting held on 02-05-2019 vide Agenda No: 23(2019-20)
2. Office Notification dated 18-07-2019

Pursuant to the above, the Syllabus of **B.Sc. Physics** under Choice Based Credit System which was approved by the Academic Council at its meeting held on 02-05-2019 is hereby notified for implementation with effect from the academic year **2019-20**.

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PRINCIPAL

REGISTRAR

To:

1. The Chairman/Dean/HOD.
2. The Registrar Office
3. Library

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Date: 25-06-2020

NOTIFICATION

Sub: Syllabus of **B.Sc. Physics** under Choice Based Credit System.

Ref: 1. Decision of the Academic Council meeting held on 09-06-2020 vide Agenda No: 15(2020-21)
2. Office Notification dated 25-06-2020

Pursuant to the above, the replacement of CBCS IV Semester to Syllabus of **B.Sc. Physics** under Choice Based Credit System which was approved by the Academic Council at its meeting held on 09-06-2020 is hereby notified for implementation with effect from the academic year **2020-21**.

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Objectives:

The goal of this course in physics is to provide the student with a flavor of the physical principles of this science, to empower them to think critically and to provide insights to students in the physical sciences inorder to enhance their career opportunities.

COURSE STRUCTURE

Semester & Course Code	Lecture/ Practical per week (Hr)	Duration of Exam (Hr)	Max. Marks			Credits
			Internal assessment	End Semester Exam	Total	
I Sem G501.1 (Theory)	4	3	20	80	100	2
G501.1P (Practical)	3	3	10	40	50	1
G501.1E (Open Elective)	2	2	10	40	50	1
II Sem G501.2 (Theory)	4	3	20	80	100	2
G501.2P (Practical)	3	3	10	40	50	1
G501.2E (Open Elective)	2	2	10	40	50	1
III Sem G501.3 (Theory)	4	3	20	80	100	2
G501.3P (Practical)	3	3	10	40	50	1
G501.3E (Open Elective)	2	2	10	40	50	1
IV Sem G501.4 (Theory)	4	3	20	80	100	2
G501.4P (Practical)	3	3	10	40	50	1
G501.4E (Open Elective)	2	2	10	40	50	1
V Sem G501.5a (Theory)	3	3	20	80	100	2
G501.5b (Theory)	3	3	20	80	100	2
G501.5P (Practical)	4	3	20	80	100	2
VI Sem G501.6a (Theory)	3	3	20	80	100	2
G501.6b (Theory)	3	3	20	80	100	2
G501.6P (Practical)	4	3	20	80	100	2

Title of the papers with Code:

Semesters	Code	Paper Title
I	G501.1	Properties of matter, Thermal Physics and Electricity I
	G501.1P	Practical I
	G501.1E	**ELECTRICAL CIRCUITS AND NETWORK SKILLS**
II	G501.2	Mechanics, Relativity and Photonics
	G501.2P	Practical II
	G501.2E	**PHYSICS WORKSHOP SKILLS**
III	G501.3	Acoustics, Optics and Networks
	G501.3P	Practical III
	G501.3E	**BASIC INSTRUMENTATION SKILLS**
IV	G501.4	Electromagnetism, Electricity II and Electronics I
	G501.4P	Practical IV
	G501.4E	**RENEWABLE ENERGY AND ENERGY HARVESTING**
V	G501.5a	Atomic Physics
	G501.5b	Solid State Physics
	G501.5P	Practical V
VI	G501.6a	Nuclear Physics and Analog Electronics
	G501.6b	Communication and Digital Electronics, Special properties of materials
	G501.6P	Practical VI

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Date: 25-06-2020

NOTIFICATION

Sub: Syllabus of **B.Sc. Computer Science** under Choice Based Credit System.

Ref: 1. Decision of the Academic Council meeting held on 09-06-2020 vide Agenda No: 23(2020-21)
2. Office Notification dated 25-06-2020

Pursuant to the above, the Syllabus of **B.Sc. Computer Science** under Choice Based Credit System which was approved by the Academic Council at its meeting held on 09-06-2020 is hereby notified for implementation with effect from the academic year **2020-21**.

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SYLLABUS STRUCTURE OF COMPUTER SCIENCE PAPER AS ONE OF THE OPTIONAL SUBJECT FOR B.Sc. THREE YEAR DEGREE PROGRAMME

Subject Code	Sem	Subject	Theory Hours/ Week	Practical Hours/ Week	Duration of Exams (Hours)	Marks and Credits			
						IA	Exam	Total	Credits
G505.1	I	**Problem solving using C**	4	-	3	20	80	100	2
G505.1P	I	**C Programming Lab**	-	2+2	3	10	40	50	1
G505.1E(i&ii)	**I**	Introduction to computers/Computer System Architecture	**2**	-	**2**	**10**	**40**	**50**	**1**
G505.2	II	**Data Structure Using C**	4	-	3	20	80	100	2
G505.2P	II	**Data Structure Lab using C**	-	4	3	10	40	50	1
G505.2E(i&ii)	II	Introduction to Data science/Cyber Security	2	-	2	10	40	50	1
G505.3	III	**Java Programming**	4	-	3	20	80	100	2
G505.3P	III	**Java Programming Lab**	-	3	3	10	40	50	1
G505.3(i)E	III	**Basics of Android Programming**	1	1	2	10	40	50	1
G505.3(ii)E		**Computer Hardware and Maintenance**	2	-	2	10	40	50	1
G505.4	IV	**Relational Data Base Management System Using ORACLE/MySQL**	4	-	3	20	80	100	2
G505.4P	IV	**RDBMS Lab**	-	3	3	10	40	50	1
G505.4E	IV	**Office Automation**	1	1	2	10	40	50	1
G505.5A1/ G505.5A2	V	**Operating System and Linux/ Principles of TCP/IP**	3	-	3	20	80	100	2
G505.5B1/ G505.5B2 Elective Paper	V	**Python Programming/ J2EE**	3	-	3	20	80	100	2
G505.5AP & G505.5BP	V	**Shell Programming using LINUX/ Principles of TCP/IP Lab& Python Lab/J2EE lab**	-	2+2	2+2	20	80	100	2
G505.6A1/ G505.6A2	VI	**Data Analytics / Software engineering and testing**	3	-	3	20	80	100	2
G505.6B1/ G505.6B2 Elective Paper	VI	**Web Programming using PHP/ Computer Networks**	3	-	3	20	80	100	2
G505.6AP & G505.6BP	VI	**Data Analytics lab/ Software Engineering Lab & PHP Lab/ Computer Networks lab**	-	2+2	2+2	20	80	100	2

Compulsory Bridge Course will be conducted for the new entrants without computer science background for 12 hours during the first two weeks –After Class Hours

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No: SAC 40/Syllabus 2019-20

Date: 18-07-2019

NOTIFICATION

Sub: Syllabus of **B.Sc. Mathematics** under Choice Based Credit System.

Ref: 1. Decision of the Academic Council meeting held on 02-05-2019 vide Agenda No: 21(2019-20)
2. Office Notification dated 18-07-2019

Pursuant to the above, the Syllabus of **B.Sc. Mathematics** under Choice Based Credit System which was approved by the Academic Council at its meeting held on 02-05-2019 is hereby notified for implementation with effect from the academic year **2019-20**.

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SCOPE OF THE SYLLABUS

This syllabus is framed in such a way that the students learn Calculus and Differential Equations and their applications, which help them to learn allied subjects like Physics, Computer Science, in a better way. Also, the students learn Number Theory and Algebra which can motivate the students to go for higher studies in Mathematics. A variety of optional papers are given so that the students can learn the subjects of their interest.

Course Pattern and Scheme of Examinations

Group II: Optional III B.Sc. Mathematics

Semester	Paper	Hours per week	Duration of the Exam(hrs)	Semester Exams	Marks Internal Assessment*	Total
I	Paper1	6	3	100	50	150
II	Paper2	6	3	100	50	150
III	Paper3	6	3	100	50	150
IV	Paper4	6	3	100	50	150
V	Paper5(a)	5	3	100	50	150
	Paper5(b) Elective*	5	3	100	50	150
VI	Paper6(a)	5	3	100	50	150
	Paper6(b) Elective*	5	3	100	50	150
					Total	1200

*For each paper Internal Assessment marks shall be awarded based on the marks scored in two te and projects/assignment/Surprise tests.

*During the V & VI semester, a student can opt for any one of the special papers offered in syllabus, except that a student studying statistics in B. Sc. cannot opt for the paper 'distribu theory'.

Semester	Paper	Paper Code	Title of the Paper
I	Paper1	G 503.1	Calculus
		G 503.1E	**Functions and Applications**
II	Paper 2	G 503.2	Calculus, Number Theory And Differential Equations
		G 503.2E	**Vector Calculus**
III	Paper 3	G 503.3	Number Theory, Group Theory & Multivariate Calculus
		G 503.3E	**Applications of Basic Arithematic**
IV	Paper 4	G 503.4	Functions Of A Complex Variable, Number Theory, Group Theory And Real Analysis
		G 503.4E	**Skill Development Techniques In Mathematics using Computer aided Tools**
V	Paper5(a)	G 503.5(a)	Differential Equations, Laplace transform and Algebra
	Paper5(b) Special Paper	G 503.5(b)i G 503.5(b)ii G 503.5(b)iii G 503.5(b)iv G 503.5(b)v G 503.5(b)vi	5(b)i Discrete Mathematics 5(b)ii Numerical Methods 5(b)iii Graph Theory 5(b)iv Linear programming 5(b)v Mathematical Modeling 5(b)vi Distribution Theory
VI	Paper6(a)	G 503.6(a)	Partial Differential Equations, Fourier Series and linear algebra.
	Paper6(b) Special Paper	G 503.6(b)i G 503.6(b)ii G 503.6(b)iii G 503.6(b)iv G 503.6(b)v G 503.6(b)vi	6(b)i Discrete Mathematics 6(b)ii Numerical Methods 6(b)iii Graph Theory 6(b)iv Linear programming 6(b)v Mathematical Modeling 6(b)vi Distribution Theory

A Student has to opt a special paper in paper 6(b) which is different from what was opted earlier in paper 5(b).