St Aloysius College (Autonomous)

Mangaluru

Re-accredited by NAAC "A" Grade

Course structure and syllabus of

B.Sc.

ELECTRONICS

Under NEP Regulations, 2021

(2021-22 Batch Onwards)

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(¸ÁéAiÀÄvÀÛ)
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www.staloysius.edu.in

ESTD : 1880

ST ALOYSIUS COLLEGE(AUTONOMOUS)
MANGALURU – 575 003
Phone: 0824-2449700, 2449701
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Re-accredited by NAAC with 'A' Grade with CGPA 3.62/4
Recognised by UGC as "College with Potential for Excellence"
Conferred "College with "STAR STATUS" by DBT, Government of India.
Centre for Research Capacity Building under UGC-STRIDE

Date: 17-08-2022

NOTIFICATION

Sub: Syllabus of **B.Sc. ELECTRONICS** under NEP Regulations, 2021.
(As per Mangalore University guidelines)

Ref: 1. Decision of the Academic Council meeting held on 09-07-2022 vide Agenda No: 14 (2022-23)
2. Office Notification dated 17-08-2022

Pursuant to the above, the Syllabus of **B.Sc. ELECTRONICS** under NEP Regulations, 2021 which was approved by the Academic Council at its meeting held on 09-07-2022 is hereby notified for implementation with effect from the academic year **2022-23**.

PRINCIPAL

ST ALOYSIUS COLLEGE MANGALORE 575 003 AUTONOMOUS

REGISTRAR

To:

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

Sl. No.	Semester	Title of thePaper	Teaching Hours	Hours /week		Examination PatternMax. Marks /Paper				Duration of Exam (hours)		Total Marks / paper	Theory Credits	Practical Credits
						Theory		Practical						
				Theory	Practical	Exam	IA	Exam	IA	Theory	Practical			
1	I	ELE-CT1: G 504 DC1.1 FUNDAMENTALS OF ANALOG AND DIGITAL	60	4	4	60	40	25	25	2.5	4	100+50	4	2
		ELE-OE 1.1 Basics of Electronic circuits and PCB Design	36	2	1	40	10	-	-	2	-	50	2	1
2	II	ELE-CT2: G 504 DC1.2 Discrete amplifiers, Operational amplifiers, Combinational circuits and Sequential Circuits	60	4	4	60	40	25	25	2.5	4	100+50	4	2
		ELE-OE 2.1: Renewable Energy and Energy harvesting	36	2	1	40	10	-	-	2*	-	50	2	1
3	III	ELE-CT3: G 504 DC1.3 Power control, Oscillators, wave shaping circuits, Principles of Radio Communication and Digital circuits	60	4	4	60	40	25	25	2.5	4	100+50	4	2
		ELE-OE3.1: Domestic Equipment Maintenance	36	2	1	40	10	--		2	---	50	2	1
4	IV	ELE-CT4: G 504 DC1.4 Power control, Oscillators, wave shaping circuits, Principles of Radio Communication and Digital circuits	60	4	4	60	40	25	25	2.5	4	100+50	4	2
5	V		60	4	4	60	40	2	2	2.5	4	100+50	4	2
			60	4	4	60	40	2	2	2.5	4	100+50	4	2

Semester	Code	Paper Title
I	G 504DC1.1	Fundamentals of analog and digital
	G 504DC2.1P	Practicals - I
	G 504OE1.1	Basics of Electronic circuits and PCB design
II	G 504DC1.2	Discrete amplifiers, Operational amplifiers, Combinational circuits and Sequential Circuits
	G 504DC2.2P	Practicals - II
	G 504OE1.2	Renewable Energy and Energy harvesting
III	G 504DC1.3	Power control , Oscillators, waves shaping circuits, Principles of Radio Communication and Digital circuits
	G 504DC2.3P	Practicals - III
	G 504OE1.3	ELE-OE3.1: Domestic Equipment Maintenance
IV	G 504DC1.4	
	G 504DC2.4P	Practicals - IV
V	G 504DC1.5	Power control , Oscillators, waves shaping circuits, Principles of Radio Communication and Digital circuits
	G 504DC2.5P	Practicals -
	G 504DC16.4	Power control , Oscillators, waves shaping circuits, Principles of Radio Communication and Digital circuits
	G 504DC2.4P	Practicals - VI

ಸಂತ ಅಲೋಶಿಯಸ್ ಕಾಲೇಜು (ಸ್ವಾಯತ್ತ)
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Date: 17-08-2022

NOTIFICATION

Sub: Syllabus of **B.Sc. COMPUTER SCIENCE** under NEP Regulations, 2021. (As per Mangalore University guidelines)

Ref: 1. Decision of the Academic Council meeting held on 18-12-2021 vide Agenda No: 6.25(2021-22)
2. Decision of the Academic Council meeting held on 09-07-2022 vide Agenda No: 14
3. Office Notification dated 21-02-2022
4. Office Notification dated 17-08-2022

Pursuant to the above, the Syllabus of **B.Sc. COMPUTER SCIENCE** under NEP Regulations, 2021 which was approved by the Academic Council at its meeting held on 18-12-2021 & 09-07-2022 is hereby notified for implementation with effect from the academic year **2021-22.**

PRINCIPAL

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REGISTRAR

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Syllabus Structure of Computer Science Paper as one of the major papers and open elective papers for BSc (Computer Science).

Subject Code	sem	subject	Theory hours/week	Practical hours/week	Duration of exams	Marks and credits			
						IA	Exam	Total	Credits
G505DC1.1	I	Computer Fundamentals and Programming in C	4		03	40	60	100	4
G505DC1.1P	I	C Programming Lab		4	02	25	25	50	2
G505OE1.1	I	Office Automation	3		03	40	60	100	3
G505DC2.2	II	Data Structures using C	4		03	40	60	100	4
G505DC2.2P	II	Data Structures Lab		4	03	25	25	50	2
G505OE2.2	II	Web Designing	3		03	40	60	100	3

Curriculum Structure

Program: B.Sc. (Basic and Honors) Subject: Computer Science

Sem	Discipline Specific Core Courses (DSC)	Hours/Week		Discipline Specific Elective Courses (DSE)/ Vocational Courses (VC)	Hours/ Week
		Theory	Lab		
1	DSC-1: Computer Fundamentals and Programming in C DSC-1Lab: C Programming Lab	4	 4		
2	DSC-2: Data Structures using C DSC-2Lab: Data structures Lab	4	 4		
3	DSC-3: Object Oriented Programming Concepts and Programming in JAVA DSC-3Lab: JAVA Lab	4	 4		
4	DSC-4: Database Management Systems DSC-4Lab: DBMS Lab	4	 4		
5	DSC-5: Programming in PYTHON DSC-6: Operating System Concepts DSC-5Lab: PYTHON Programming lab DSC-6Lab: Operating System lab	3 3	 4 4	VC-1: Any one from Vocational Courses, Group – 1*	3
6	DSC-7: Internet Technologies DSC-8: Computer Networks DSC-7Lab: JAVA Script, HTML, CSS Lab DSC-8Lab: Computer Networks Lab	3 3	 4 4	VC-2: Any one from Vocational Courses, Group – 2* Internship:	3
7	DSC-9: Computer Graphics and Visualization DSC-10: Design and Analysis of Algorithms DSC-11: Software Engineering DSC-9Lab: Computer Graphics and Visualization Lab DSC-10Lab: Algorithms Lab	3 3 3	 4 4	DSE-1: Any one from Discipline Specific Elective Courses, Group – 1** DSE-2: Any one from Discipline Specific Elective Courses, Group – 2** Research Methodology:	3 3 3
8	DSC-12: Artificial Intelligence and Applications DSC-13: Computer Organization and Architecture DSC-14: Data Warehousing and Data Mining	3 3 3		DSE-3: DSE-4: Any two from Discipline Specific Elective Courses, Group – 3 Research Project:	3 3 6

* Vocational Courses

Group-1
• DTP, CAD and Multimedia • Hardware and Server Maintenance • Web Content Management Systems • E-Commerce • Web Designing
Group-2
• Health Care Technologies • Digital Marketing • Office Automation • Multimedia Processing • Accounting Package

** Discipline Specific Elective Courses

Group-1
• IoT • Cyber Law and Cyber Security • Web Programming - PHP and MySQL • Clouds, Grids, and Clusters • Software Testing
Group-2
• Information and Network Security • Data Compression • Discrete Structures • Open source Programming • Multimedia Computing • Big Data
Group-3
• Data Analytics • Storage Area Networks • Pattern Recognition • Digital Image Processing • Parallel Programming • Digital Signal Processing