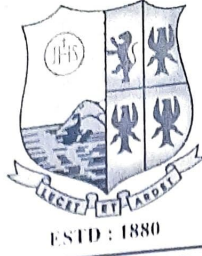


ಸಂತ ಅಲೋಷಿಯಸ್ ಕಾಲೇಜು (ಸ್ವಾಯತ್ತ)
ಮಂಗಳೂರು- 575 003
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Re-accredited by NAAC with 'A' Grade with CGPA 3.62/4
Recognised by UGC as "College with Potential for Excellence"
Conferred "College with "STAR STATUS" by DBT, Government of India.
Centre for Research Capacity Building under UGC-STRIDE

Date: 17-08-2022

NOTIFICATION

Sub: Syllabus of **B.Sc. MATHEMATICS** 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: 6.21(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. MATHEMATICS** 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.

S. S. S. S.
PRINCIPAL



M. S. S.
REGISTRAR

To:

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

Board of Studies meeting held on 20th November 2021 chaired by Ms Priya Monteiro, Head of the Department.

Members present:

1. Dr Adelaide Saldanha, HOD, Department of Mathematics, St Agnes College (Autonomous), Mangaluru.
2. Mr Udaya K, HOD of Mathematics, St Philomena College, Puttur.
3. Dr John Edward Dsilva
4. Ms Melvita Leema Baretto
5. Ms Rollin Preetha Vaz
6. Ms Shaila Priya Rodrigues

Programme Outcomes (PO):

By the end of the program it is expected that the students will be benefited by the following:

PO 1	Disciplinary Knowledge: Bachelor degree in Mathematics is the culmination of in-depth knowledge of Algebra, Calculus, Geometry, differential equations and several other branches of pure and applied mathematics. This also leads to study the related areas such as computer science and other allied subjects
PO 2	Communication Skills: Ability to communicate various mathematical concepts effectively using examples and their geometrical visualization. The skills and knowledge gained in this program will lead to the proficiency in analytical reasoning which can be used for modeling and solving of real life problems.
PO 3	Critical thinking and analytical reasoning: The students undergoing the programme acquire ability of critical thinking and logical reasoning and capability of recognizing and distinguishing the various aspects of real life problems.
PO 4	Problem Solving: The Mathematical knowledge gained by the students through the programme develop an ability to analyze the problems, identify and define appropriate computing requirements for its solutions. This

Assessment

Weightage for the Assessments (in percentage)

Type of Course	Formative Assessment/ I.A.	Summative Assessment (S.A.)
Theory	40%	60 %
Practical	50%	50 %
Projects	40%	60 %
Experiential Learning (Internship etc.)	--	--

Structure under NEP

Course Code	Title of course	Category of course	Teaching hours per week	SEE	CIE	Total Marks	Credits
SEMESTER I							
G 503 DC1.1	Number Theory - I, Algebra - I and Calculus - I	DSC	4	60	40	100	4
G 503 DC2.1P	Theory based practicals on Number Theory – I, Algebra - I and Calculus - I	DSC	4	25	25	50	2
G 503 OE1.1	Mathematics - I	OEC	3	60	40	100	3
Total credit							9
SEMESTER II							
G 503 DC1.2	Number Theory - II, Algebra - II and Calculus - II	DSC	4	60	40	100	4
G 503 DC2.2P	Theory based practicals on Number Theory – II, Algebra - II and Calculus - II	DSC	4	25	25	50	2
G 503 OE1.2	Mathematics - II	OEC	3	60	40	100	3
Total credit							9



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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



REGISTRAR

To:

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

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

