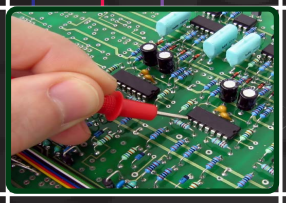
SANGAI INTERNATIONAL UNIVERSITY

Syllabus B.Sc. with Mathematics and Computer



SyllabusB.Sc. with Mathematics and Computer

Proposed Syllabus and Scheme of Examination

for

B.Sc. with Mathematics and Computer Applications

submitted to

University Grants Commission
New Delhi

under the

Choice Based Credit System

May 2015

Proposed Scheme for Choice Based Credit System in

B.Sc. with Mathematics and Computer Applications

Semester	Core Course (12)	Ability Enhancement Compulsory Course (AECC) (2)	Skill Enhancement Course (SEC) (2)	Discipline Specific Elective (DSE) (6)
1	Differential Calculus	AECC1		
	Object Oriented Programming in C++			
	C3A			
2	Differential Equations	AECC2		
	Data Structures and File Processing			
	C3B			
3	Real Analysis		SEC1	
	Numerical Computing			
	C3C			
4	Algebra		SEC2	
	Design and Analysis of Algorithms			
	C3D			
5			SEC3	DSE1A
				DSE2A
				DSE3A
6			SEC4	DSE1B
				DSE2B
				DSE3B

Skill Enhancement Course (SEC)

SEC 1 (choose one)

1. Logic and Sets
2. Analytical Geometry
3. Number Theory

SEC 2 (choose one)

1. Vector Calculus
2. Transportation and Game Theory
3. Probability and Statistics

SEC 3 (choose one)

1. Computer Graphics
2. Electronic Commerce
3. Combinatorial Optimization

SEC 4 (choose one)

1. Modeling and Simulation
2. Graph Theory
3. Boolean Algebra

Discipline Specific Electives (DSE)

DSE 1A (choose one)

1. Matrices
2. Integral Calculus
3. Linear Algebra

DSE 2A (choose one)

1. Operating Systems
2. Data Mining
3. Cryptography

DSE 1B (choose one)

1. Difference Equations
2. Complex Analysis
3. Linear Programming

DSE 2B (choose one)

1. Information Security
2. Database Applications
3. Computer Networks

Details of Courses under B.Sc. with Mathematics and Computer Applications

Course	***Credits**	
	Theory + Practical	Theory + Tutorials
I. Core Course (12 Papers) 04 Courses from each of the 03 disciplines of choice	12×4 = 48	12×5 = 60
Core Course Practical / Tutorial* **(12 Practical/ Tutorials*)** 04 Courses from each of the 03 Disciplines of choice	12×2 = 24	12 × 1 = 12
II. Elective Course **(6 Papers)** Two papers from each discipline of choice including paper of interdisciplinary nature.	6×4 = 24	6×5 = 30
Elective Course Practical / Tutorials* 6×2 = 12 **(6 Practical / Tutorials*)** Two Papers from each discipline of choice including paper of interdisciplinary nature		6×1 = 6

• Optional Dissertation or project work in place of one Discipline elective paper (6 credits) in 6th Semester

III. Ability Enhancement Courses

1.**Ability Enhancement Compulsory** (2 Papers of 2 credits each) **Environmental Science** **English/MIL Communication**	2×2 = 4	2×2 = 4

2. **Skill Enhancement Course (Skill Based) (4 Papers of 2 credits each)**	4×2 = 8	4×2 = 8
	Total credit = 120	**Total credit = 120**

Institute should evolve a system/ policy about ECA/ General Interest/ Hobby/ Sports/ NCC/ NSS/ related courses on its own.

***wherever there is practical there will be no tutorials and vice -versa**