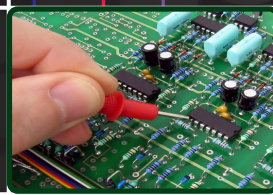


SANGAI INTERNATIONAL UNIVERSITY



Syllabus B.Sc. (Honors) Biochemistry

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Proposed syllabus and Scheme of Examination

for

B.Sc. (Honors) Biochemistry

Under

Choice Based Credit System

April 2015

Structure of B.Sc. (Hons) Biochemistry under CBCS

Core Course

- C-1: Molecules of Life
- C-2: Cell Biology
- C-3: Proteins
- C-4: Enzymes
- C-5: Metabolism of Carbohydrates and Lipids
- C-6: Membrane Biology and Bioenergetics
- C-7: Metabolism of Amino Acids and Nucleotides
- C-8: Human Physiology
- C-9: Gene Organization, Replication and Repair
- C-10: Hormone: Biochemistry and Function
- C-11: Concepts in Genetics
- C-12: Gene Expression and Regulation
- C-13: Genetic Engineering and Biotechnology
- C-14: Immunology

Discipline Specific Elective (*Any four*)

- DSE-1: Nutritional Biochemistry
- DSE-2: Basic Microbiology
- DSE-3: Molecular basis of non-infectious human diseases
- DSE-4: Molecular basis of infectious diseases
- DSE-5: Research Project
- DSE-6: Advanced cell biology
- DSE-7: Plant Biochemistry
- DSE-8 : Research Methodology

Generic Elective (*Any four*)

- GE-1: Biochemistry of Cell
- GE-2: Proteins and Enzymes
- GE-3: Intermediary Metabolism
- GE-4: Gene Organization, Expression and Regulation
- GE-5: Fundamentals of Cell Biology and Immunology
- GE-6: Fundamentals of Genetic Engineering
- GE-6: Biochemical Correlations in Diseases

Ability Enhancement Compulsory Course

- AECC-1: English communication
- AECC-2: Environmental science

Skill Enhancement Elective Course (*Any two*)

- SEC-1: Tools and Techniques in Biochemistry
- SEC-2: Protein Purification Techniques
- SEC-3: Clinical Biochemistry
- SEC-4: Bioinformatics
- SEC-5: Recombinant DNA Technology

SCHEME FOR CHOICE BASED CREDIT SYSTEM IN B.Sc. BIOCHEMISTRY HONOURS

Semester	Core Courses (14)	Ability Enhancement Compulsory Course (AECC) (2)	Skill Enhancement Course (SEC) (2)	Discipline specific elective (DSE) (4)	Generic Elective (GE) (4)
I	Molecules of Life	English communication			GE-1
	Cell Biology				
II	Proteins	Environmental Science			GE-2
	Enzymes				
III	Metabolism of Carbohydrates and Lipids		SEC-1		GE-3
	Membrane Biology and Bioenergetics				
	Metabolism of Amino Acids and Nucleotides				
IV	Human Physiology		SEC-2		GE-4
	Gene Organization, Replication and Repair				
	Hormone: Biochemistry and Function				
V	Concepts in Genetics			DSE-1	
	Gene Expression and Regulation			DSE-2	
VI	Genetic Engineering and Biotechnology			DSE-3	
	Immunology			DSE-4	

SEMESTER	COURSE OPTED	COURSE NAME	CREDITS
I	Ability Enhancement Compulsory Course – I	English communication / Environmental Science	2
	Core course – I	Molecules of Life	4
	Core course – I Practical	Molecules of Life	2
	Core course – II	Cell Biology	4
	Core course – II Practical	Cell Biology	2
	Genetic Elective – 1	GE – 1	4
	Generic Elective – 1 Practical	GE – 1	2
II	Ability Enhancement Compulsory Course – II	English communications/ Environmental Science	2
	Core course – III	Proteins	4
	Core course – III Practical	Proteins	2
	Core course – IV	Enzymes	4
	Core course – IV Practical	Enzymes	2
	Generic Elective – 2	GE-2	4
	Generic Elective – 2 Practical	GE-2	2
III	Core course – V	Metabolism of Carbohydrates and Lipids	4
	Core course – V Practical	Metabolism of Carbohydrates and Lipids	2
	Core course – VI	Membrane Biology and Bioenergetics	4
	Core course – VI Practical	Membrane Biology	2

		and Bioenergetics	
	Core course – VII	Metabolism of Amino Acids and Nucleotides	4
	Core course – VII Practical	Metabolism of Amino Acids and Nucleotides	2
	Skill Enhancement Course – 1	SEC-1	4
	Generic Elective – 3	GE-3	4
	Generic Elective – 3 Practical	GE-3	2
IV	Core course – VIII	Human Physiology	4
	Core course – VIII Practical	Human Physiology	2
	Core course – IX	Gene organization, replication and repair	4
	Core course – IX Practical	Gene organization, replication and repair	2
	Core course – X	Hormone: Biochemistry and Function	4
	Core course – X Practical	Hormone: Biochemistry and Function	2
	Skill Enhancement Course-2	SEC-2	4
	Generic Elective – 4	GE-4	4
	Generic Elective – 4 Practical	GE-4	2
V	Core course – XI	Concepts in Genetics	4
	Core course – XI Practical	Concepts in Genetics	2
	Core course – XII	Gene expression	4

		and regulation	
	Core course – XII Practical	Gene expression and regulation	2
	Discipline Specific Elective – 1	DSE-1	4
	Discipline Specific Elective – 1 Practical	DSE-1	2
	Discipline Specific Elective – 2	DSE-2	4
	Discipline Specific Elective – 2 Practical	DSE-2	2
VI	Core course – XIII	Genetic Engineering and Biotechnology	4
	Core course – XIII Practical	Genetic Engineering and Biotechnology	2
	Core course – XIV	Immunology	4
	Core course – XIV Practical	Immunology	2
	Discipline Specific Elective – 3	DSE-3	4
	Discipline Specific Elective – 3 Practical	DSE-3	2
	Discipline Specific Elective – 4	DSE-4	4
	Discipline Specific Elective – 4 Practical	DSE-4	2