

ಸಂಕ ಅಲೋಷಿಯಸ್ ಕಾಲೇಜು
(ಸ್ವಾಯತ್ತ)
ಮಂಗಳೂರು- 575 003



ST ALOYSIUS COLLEGE
(Autonomous)
P.B.No.720
MANGALURU- 575 003, INDIA
Phone:+91-0824 2449700,2449701
Fax: 0824-2449705
Email: principal_sac@yahoo.com
principal@staloyisius.edu.in
Website: www.staloyisius.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

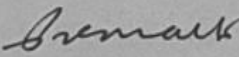
Date: 18-07-2019

NOTIFICATION

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

Ref: 1. Decision of the Academic Council meeting held on 02-05-2019 vide
Agenda No: 28(2019-20)
2. Office Notification dated 18-07-2019

Pursuant to the above, the Syllabus of **B.Sc. Biochemistry** 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**.


PRINCIPAL




REGISTRAR

To:

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

SCHEME OF CHOICE BASED CREDIT SYSTEM FOR B.SC. BIOCHEMISTRY

I Semester

Paper	Instruction Hours		Duration Exam. Hr	Marks		Total Mark	Credits
	Theory	Pract.		Exam.	Int Ass.		
G510.1 Bimolecules	4		3	70	30	100	2
G510.1E Protein Biochemistry	2	-	1.5	40	10	50	1
G510.1P		3	3	40	10	50	1

II Semester

Paper	Instr. Hours		Duration Exam. Hr	Marks		Total Mark	Credits
	Theory	Pract.		Exam.	Int. Ass.		
G510.2 Human Physiology & Nutrition	4	-	3	70	30	100	2
G510.2E Biochemistry of hormones	2	-	1.5	40	10	50	1
G510.2P	-	3	3	40	10	50	1

III Semester

Paper	Instr. Hours		Duration Exam. Hr	Marks		Total Mark	Credits
	Theory	Pract		Exam.	Int. Ass.		
G510.3 Enzymology	4		3	70	30	100	2
G510.3E Stem Cells	2		1.5	40	10	50	1
G510.3P		3	3	40	10	50	1

IV Semester

Paper	Instr. Hours		Duration Exam. Hr	Marks		Total Mark	Credits
	Theory	Pract.		Exam.	Int. Ass.		
G510.4 Metabolism	4		3	70	30	100	2
G510.4E Molecules of Life	2		1.5	40	10	50	1
G510.4P		3	3	40	10	50	1

V Semester

Paper	Instr. Hours		Duration Exam. Hr	Marks		Total Mark	Credits
	Theory	Pract		Exam.	Int. Ass.		
G510.5a Molecular Biology	3		3	70	30	100	2
G510.5b Genetic Engineering & Biotechnology	3		3	70	30	100	2
G510.5P		4	4	80	20	100	2

VI Semester

Paper	Instr. Hours		Duration Exam. Hr	Marks		Total Mark	Credits
	Theory	Pract.		Exam.	Int. Ass.		
G510.6a Microbiology & Immunology	3		3	70	30	100	2
G510.6b Clinical & Membrane Biochemistry	3		3	70	30	100	2
G510.6P		4	4	40	10	50	1
Project Or Extra Experiments		4	04	40	10	50	1
		4	04	40	10	50	1

ಶಾಲೆ ಅಧಿಕಾರಿಯರ ಕಛೇರಿ
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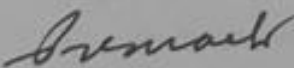
Date: 25-06-2020

NOTIFICATION

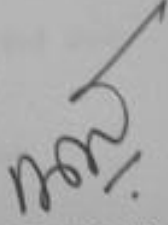
Sub: Syllabus of **B.Sc. Botany** under Choice Based Credit System.

- Ref: 1. Decision of the Academic Council meeting held on 09-06-2020 vide
Agenda No: 17(2020-21)
2. Office Notification dated 25-06-2020

Pursuant to the above, the Syllabus of **B.Sc. Botany** 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.


PRINCIPAL




REGISTRAR

To:

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

PREAMBLE

St Aloysius College is named after St Aloysius Gonzaga. It is a Jesuit premier institute in Mangaluru, Karnataka, known for its rich heritage and quality education with a history of 140 years. The institution over the years has trained thousands of young men and women preparing them for life and presenting them to the nation. The institution has been able to redefine and reinforce the purpose of various innovations that have been initiated every year. The College has set high expectations and goal for all its learners and then tries in every possible way to help them to reach those goals. The College affiliated to Mangaluru University, was granted Autonomous status in the year 2007-2008.

In the field of Biological sciences, at the undergraduate level, the optional Botany has carved a niche from times immemorial. Many subjects like Biotechnology, Pharmacognosy, Microbiology, and Biochemistry have got their contributions and share from the traditional subject Botany. Botany with its strong fundamentals can only make the allied combinations more meaningful, fruitful and complete. In this context St Aloysius College has designed the course content of Botany to meet the needs of the present day students and enable them to join jobs, higher studies and research.

PROGRAMME SPECIFIC OUTCOMES:

On Completion of this Course students will be able to

- ❖ get an opportunity in further studies, research and employment in various areas of plant sciences.
- ❖ enhance their knowledge in the field of life sciences and are able to handle laboratory equipments and experimentation for higher education leading to research
- ❖ enhance the scope of employability by obtaining all-round knowledge in the allied subjects along with Botany.
- ❖ develop an awareness towards the environment, biodiversity, conservation and their significance.
- ❖ promote and popularize the study of Botany for its importance and its social relevance
- ❖ equip themselves for competitive examinations
- ❖ inculcate an interest for nature and the need to preserve the nature by maintaining green house, herbal gardens in the campus and environs

COURSE STRUCTURE

Scheme of Choice Based Credit System for B.Sc in Botany

Subjects	Paper	Instruction hours /week	Duration of Exam in hours	Marks			Cred
				IA	Exam	Total	
First Semester	G507.1 Virus, Bacteria & Algae	4	3	20	80	100	2
Theory							
Elective	G507.1 E Organic farming	2	2	10	40	50	1
Practical	G507.1P	3	3	10	40	50	1
Second Semester	G507.2 Fungi, Plant pathology, Bryophytes, and Plant Anatomy	4	3	20	80	100	2
Theory							
Elective	G507.2 E Plant Nutraceuticals	2	2	10	40	50	1
Practical	G507.2P	3	3	10	40	50	1
Third Semester	G507.3 Pteridophytes, Gymnosperms, Morphology and Embryology of Angiosperms	4	3	20	80	100	2
Theory							
Elective	G507.3E Medicinal Botany	2	2	10	40	50	1
Practical	G507.3P	3	3	10	40	50	1
Fourth Semester	G507.4 Plant Taxonomy, Ethnobotany and Economic Botany	4	3	20	80	100	2
Theory							
Elective	G507.4E Nursery Management and Gardening	2	2	10	40	50	1
Practical	G507.4P	3	3	10	40	50	1

Subjects	Paper	Instruction hours /week	Duration of Exam	Marks			Credits
				IA	Exam	Total	
Fifth Semester	G507.5a Plant Ecology & Sustainable Development	3	3	20	80	100	2
Theory							
Theory	G507.5b Cytogenetics & Molecular Biology	3	3	20	80	100	2
Practical	G507.5P	4	4	20	80	100	2
Sixth Semester	G507.6a Plant Physiology	3	3	20	80	100	2
Theory							
Theory	G507.6b Plant Biotechnology, Phytochemistry and Pharmacognosy	3	3	20	80	100	2
Practical Components							
A	Practical G507.6P	2	2	10	40	50	1
B	Project- G507.6 PR			10	40	50	1
C	Independent Practical Skill Development (IPSD)- G507.6P	2	2	10	40	50	1

Total Credits - 28

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Date: 16-02-2021

NOTIFICATION

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

- Ref: 1. Decision of the Academic Council meeting held on 12-12-2020 vide
Agenda No: 14(2021-22)
2. Office Notification dated 16-02-2021

Pursuant to the above, the Syllabus of **B.Sc. Zoology** under Choice Based Credit System which was approved by the Academic Council at its meeting held on 12-12-2020 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

BOARD OF STUDIES IN ZOOLOGY

1. Chairperson : Dr. Hemachandra, Associate Professor
2. Members from the department : Mr. Hariprasad Shetty, Assistant Professor.
Ms. Karen Trescilla D'Souza, Assistant Professor.
Mr. Kiran Vati K, Lecturer.
Dr. Rachana B, Assistant Professor.
Mr. Glavin Thomas Rodrigues, Lecturer.
Ms. Reena Kishore, Student Representative.
3. External Members:

Subject Experts

Dr Siby Philip
Head of Zoology
Nirmalagiri College
Kuthuparamba, Kannur, Kerala, 670701.

Dr. Shamprasad Varija Raghu
Ramalingaswami Fellow/Associate Professor,
Dept of Applied Zoology, Mangalore University.

Vice-Chancellor Nominee

Dr. Nagarathna K A
Department of Zoology
Mangalore University College, Mangaluru

Representative from Industry / Corporate Sector / Allied Area

Conrad Charles I P
Atlantis Aquaria, # 16-7-448
Muthu's Compound
Balmatta
Mangaluru-575002

Meritorious Alumnus

Dr Sudeep Ghate
Post Doc fellow, NUCSER, Paneer
Deralkatte.

Scheme of credit based semester system for B.Sc.

Optional subject: Zoology

I Semester

Paper	Instructions hours/ week		Duration of exam hours	Marks		Total Marks	Credits
	Theory	Practical		Exam	IA		
G 508.1 (Theory) Animal Diversity (Non-Chordata)	4	-	3	80	20	100	2
G 508.1P (Practical) Animal Diversity (Non-chordata)	-	3	3	40	10	50	1
G 508.1E (Open Elective) Aquarium Maintenance and Fish Breeding Techniques	2	-	2	40	10	50	1

II Semester

Paper	Instructions hours/ week		Duration of exam hour	Marks		Total Marks	Credits
	Theory	Practical		Exam	IA		
G 508.2 (Theory) Animal Diversity (Chordata)	4	-	3	80	20	100	2
G 508.2P (Practical) Animal Diversity (Chordata)	-	3	3	40	10	50	1
G 508.2E (Open Elective) Apiculture	2	-	2	40	10	50	1

III Semester

Paper	Instructions hours/ week		Duration of exam hour	Marks		Total Marks	Credits
	Theory	Practical		Exam	IA		
G508.3 (Theory): Cell and Molecular Biology, Immunology	4	-	3	80	20	100	2
G 508.3P (Practical) Cell and Molecular Biology, Immunology	-	3	3	40	10	50	1
G 508.3E (Open Elective) Health and Lifestyle Diseases	2	-	2	40	10	50	1

IV Semester

Paper	Instructions Hours/ week		Duration of exam hour	Marks		Total Marks	Credits
	Theory	Practical		Exam	IA		
G 508.4 (Theory) Biochemistry and Animal physiology	4	-	3	80	20	100	2
G 508.4P (Practical) Biochemistry and Animal physiology	-	3	3	40	10	50	1
G 508.4E (Open Elective) Nature and Wildlife Photography	2	-	2	40	10	50	1

V Semester

Paper	Instructions Hours/ week		Duration of exam hour	Marks		Total Marks	Credits
	Theory	Practical		Exam	IA		
G 508.5A (Theory) Histology, Reproductive and Developmental Biology	3	-	3	80	20	100	2
G 508.5B (Theory) Ecology, Biostatistics, Ethology and Wildlife Biology.	3	-	3	80	20	100	2
G 508.5P (Practical) Histology, Reproductive and Developmental Biology Ecology, Biostatistics, Ethology and Wildlife Biology	-	4	4	80	20	100	2

VI Semester

Paper	Instructions hours/ week		Duration of exam hour	Marks		Total Marks	Credits
	Theory	Practical		Exam	IA		
G508.6A (Theory) Genetics, Evolution and Palaeontology	3	-	3	80	20	100	2
G 508.6B (Theory) Applied Zoology, Parasitology, Toxicology and Cancer Biology	3	-	3	80	20	100	2
G 508.6P (Practical) PART A: Genetics, Evolution and Palaeontology Applied Zoology, Parasitology, Toxicology and Cancer Biology	-	4	4	40	10	50	1
PART B: Project OR Additional Experiments	-	-	-	40	10	50	1

Broad outline of the syllabus
Subject: Zoology (Three major systems)

Year	Semester	Subject Code No	Paper
I year	1 st semester	G 508.1 Theory	Animal diversity (Non- Chordata)
		G 508.1P Practical	Animal diversity (Non-Chordata)
	2 nd Semester	G 508.2 Theory	Animal diversity (Chordata)
		G 508.2P Practical	Animal diversity (Chordata)
II year	3 rd semester	G 508.3 Theory	Cell and Molecular Biology, Immunology
		G 508.3P Practical	Cell and Molecular Biology, Immunology
	4 th semester	G 508.4 Theory	Biochemistry and Animal Physiology
		G 508.4P Practical	Biochemistry and Animal Physiology
III year	5 th Semester	G 508.5A Theory	Histology, Reproductive and Developmental Biology
		G 508.5B Theory	Ecology, Biostatistics, Ethology and Wildlife Biology
		G 508.5P Practical	Histology, Reproductive and Developmental Biology Ecology, Biostatistics, Ethology and Wildlife Biology
	6 th semester	G 508.6A Theory	Genetics, Evolution and Palaeontology
		G 508.6B Theory	Applied Zoology, Parasitology, Toxicology and Cancer Biology
		G 508.6P Practical	Part A: Genetics, Evolution and Palaeontology Applied Zoology, Parasitology, Toxicology and Cancer Biology Part B: Project OR Additional Experiments

Broad outline of the CBCS syllabus

Year	Semester	Subject Code No	Paper
I year	1 st semester	G 508.1E (Open Elective)	Aquarium maintenance and fish breeding techniques
I year	2 nd semester	G 508.2E (Open Elective)	Apiculture
II year	3 rd semester	G 508.3E (Open Elective)	Health and lifestyle diseases
II year	4 th semester	G 508.4E (Open Elective)	Nature and Wildlife photography