

ಸಂತ ಅಲೋಷಿಯಸ್ ಕಾಲೇಜು  
(ಸ್ವಾಯತ್ತ)  
ಮಂಗಳೂರು- 575 003



ST ALOYSIUS COLLEGE  
(Autonomous)

P.B.No.720

MANGALURU- 575 003, INDIA

Phone:+91-0824 2449700,2449701

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Email: [principal\\_sac@yahoo.com](mailto:principal_sac@yahoo.com)

[principal@staloyisius.edu.in](mailto:principal@staloyisius.edu.in)

Website: [www.staloyisius.edu.in](http://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

3<sup>rd</sup> Rank in "Swacch Campus" Scheme, by MHRD, Govt of India

No: SAC 40/Syllabus 2019-20

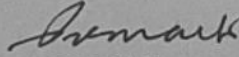
Date: 18-07-2019

### NOTIFICATION

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

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

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

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Date: 25-06-2020

### NOTIFICATION

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

- Ref: 1. Decision of the Academic Council meeting held on 09-06-2020 vide  
Agenda No: 19(2020-21)  
2. Office Notification dated 25-06-2020

Pursuant to the above, the incorporation of CBCS III & IV Semester to the Syllabus of **B.Sc. Chemistry** 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.

*Sremath*  
PRINCIPAL



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REGISTRAR

To:

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

**COURSE PATTERN**

Course No & Paper / Practical	Teaching Hours per week	Duration of Exam (Hours)	Marks			Credits
			I A	Exam	Total	
<b>FIRST SEMESTER</b>						
G502.1: Chemistry Paper I	4	3	20	80	100	2
G502.1P: Chemistry Practical I	3	3	10	40	50	1
G502.1E: Essentials of Practical Chemistry	2	2	10	40	50	1
<b>SECOND SEMESTER</b>						
G502.2: Chemistry Paper II	4	3	20	80	100	2
G502.2P: Chemistry Practical II	3	3	10	40	50	1
G502.2E: Food and Industrial Chemistry	2	2	10	40	50	1
<b>THIRD SEMESTER</b>						
G502.3: Chemistry Paper III	4	3	20	80	100	2
G502.3P: Chemistry Practical III	3	3	10	40	50	1
G502.3E: Environmental Chemistry	2	2	10	40	50	1
<b>FOURTH SEMESTER</b>						
G502.4: Chemistry Paper IV	4	3	20	80	100	2
G502.4P: Chemistry Practical IV	3	3	10	40	50	1
G502.4E: Chemistry in Everyday Life	2	2	10	40	50	1
<b>FIFTH SEMESTER</b>						
G502.5a : Chemistry Paper V	3	3	20	80	100	2
G502.5b: Chemistry Paper VI	3	3	20	80	100	2
G502.5P: Chemistry Practical V	4	4	20	80	100	2
<b>SIXTH SEMESTER</b>						
G502.6a: Chemistry Paper VII	3	3	20	80	100	2
G502.6b: Chemistry Paper VIII	3	3	20	80	100	2
G502.6P: Chemistry Practical VI	4	4	20	80	100	2

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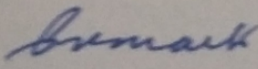
Date: 18-07-2019

### NOTIFICATION

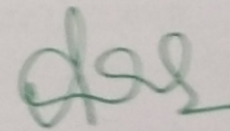
Sub: Syllabus of B.Sc. Microbiology under Choice Based Credit System.

- Ref: 1. Decision of the Academic Council meeting held on 02-05-2019 vide  
Agenda No: 29(2019-20)  
2. Office Notification dated 18-07-2019

Pursuant to the above, the Syllabus of B.Sc. Microbiology 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.

  
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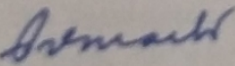
Date: 25-06-2020

## NOTIFICATION

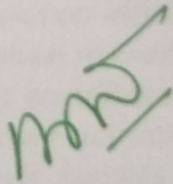
Sub: Syllabus of Microbiology under Choice Based Credit System.

- Ref: 1. Decision of the Academic Council meeting held on 09-06-2020 vide  
Agenda No: 12(2020-21)  
2. Office Notification dated 25-06-2020

Pursuant to the above, the replacement of CBCS IV Semester subject of Syllabus of Microbiology 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.

  
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## 6. Structure of B.Sc. Microbiology course

Subjects	Paper	Instruction hours /week	Duration of Exam in hours	Marks			Credits
				IA	Exam	Total	
First Semester	Paper-G509.1 Fundamentals of Microbiology	4	3	20	80	100	2
Theory							
ELECTIVE	G509.1E TECHNIQUES IN MICROBIOLOGY	2	2	10	40	50	1
Practical	G509.1P	3	3	10	40	50	1
Second Semester	Paper-G509.2 Basic Microbiology	4	3	20	80	100	2
Theory							
ELECTIVE	G509.2E COMMON FUNGAL AND VIRAL DISEASASE IN HUMAN	2	2	10	40	50	1
Practical	G509.2P	3	3	10	40	50	1
Third Semester	Paper-G509.3 Microbial Physiology and Metabolism.	4	3	20	80	100	2
Theory							
ELECTIVE	G509.3E BASIC CONCEPTS OF FOOD SAFETY	2	2	10	40	50	1
Practical	G509.3P	3	3	10	40	50	1
Fourth Semester	Microbial Ecology and Environmental Microbiology Paper-G509.4	4	3	20	80	100	2
Theory							
ELECTIVE	G509.4E SOLID WASTE MANAGEMENT	2	2	10	40	50	1
Practical	G509.4P	3	3	10	40	50	1

**Scheme of Credit Based Semester System for the V and VI Semesters for B.Sc in  
Microbiology**

Subjects	Paper	Instruction hours /week	Duration of Exam	Marks			Credits
				IA	Exam	Total	
<b>Fifth Semester</b>	Paper-G509.5a Medical Microbiology and Immunology.	3	3	20	80	100	2
Theory							
Practical	G509.5P	4	4	20	80	100	2
Theory	Plant Microbiology and Bioremediation Paper-G509.5b	3	3	20	80	100	2
<b>Sixth Semester</b>	Principles of Bacterial Genetics, Genetic Engineering and Bioinformatics Paper-G509.6a	3	3	20	80	100	2
Theory							
Theory	Applied Microbiology-G509.6b	3	3	20	80	100	2
<b>COMPONENTS</b>	<b>PRACTICAL</b>						
A	Practical G509P	4	4	10	40	50	1
B	Project-G509			10	40	50	1
C	Independent Practical Skill Development (IPSD)-G509	4	4	10	40	50	1

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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**.

  
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## **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 <sup>st</sup> semester	G 508.1 Theory	Animal diversity (Non- Chordata)
		G 508.1P Practical	Animal diversity (Non-Chordata)
	2 <sup>nd</sup> Semester	G 508.2 Theory	Animal diversity (Chordata)
		G 508.2P Practical	Animal diversity (Chordata)
II year	3 <sup>rd</sup> semester	G 508.3 Theory	Cell and Molecular Biology, Immunology
		G 508.3P Practical	Cell and Molecular Biology, Immunology
	4 <sup>th</sup> semester	G 508.4 Theory	Biochemistry and Animal Physiology
		G 508.4P Practical	Biochemistry and Animal Physiology
III year	5 <sup>th</sup> 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 <sup>th</sup> 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 <sup>st</sup> semester	G 508.1E (Open Elective)	Aquarium maintenance and fish breeding techniques
I year	2 <sup>nd</sup> semester	G 508.2E (Open Elective)	Apiculture
II year	3 <sup>rd</sup> semester	G 508.3E (Open Elective)	Health and lifestyle diseases
II year	4 <sup>th</sup> semester	G 508.4E (Open Elective)	Nature and Wildlife photography