

ಸಂಕ 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
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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

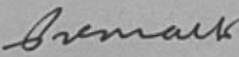
Date: 18-07-2019

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 |

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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**.



Remark
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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
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To:

1. The Chairman/Dean/HOD.
2. The Registrar Office
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COURSE PATTERN

| Course No & Paper / Practical | Teaching Hours per week | Duration of Exam (Hours) | Marks | | | Credits |
|--|-------------------------|--------------------------|-------|------|-------|---------|
| | | | I A | Exam | Total | |
| FIRST SEMESTER | | | | | | |
| 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 |
| SECOND SEMESTER | | | | | | |
| 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 |
| THIRD SEMESTER | | | | | | |
| 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 |
| FOURTH SEMESTER | | | | | | |
| 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 |
| FIFTH SEMESTER | | | | | | |
| 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 |
| SIXTH SEMESTER | | | | | | |
| 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 |

ಶಾಲೆ ಅಧಿಕಾರಿಯರ ಕಛೇರಿ
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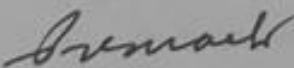
Date: 25-06-2020

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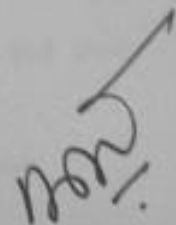
Sub: Syllabus of **B.Sc. Botany** under Choice Based Credit System.

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.


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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 | | | Cre |
|-----------------|--|-------------------------|---------------------------|-------|------|-------|-----|
| | | | | 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