

# **SIES College of Arts, Science and Commerce, Autonomous, Sion west, Mumbai**

## **Name of the Programme: BACHELOR OF SCIENCE (B.Sc.) (Three years Integrated Degree Programme)**

### **The B.Sc. Programme Outcomes**

SIES offers a three years integrated degree programme in Science-B.Sc. with specialization in various domains.

The Programme outcomes (POs) are skills and competencies that a learner is expected to attain on completion of the program. The B.Sc. POs include domain-dependent skills, subject knowledge and global skills and competencies that prepare learners for progression to higher studies, employability and citizenship. A student of the B.Sc. programme should be able to demonstrate the attainment of these skills for the award of the qualifying degree.

The POs are well aligned with the Institutional Vision and Mission. They are framed to ensure that the learning levels and academic standards of B.Sc. programmes are comparable with that of the other higher education institutes across the nation and globe. The teaching methodologies focus on instruction delivery in a learner-centric environment to fulfil the institutional learning objectives and groom a well-integrated personality in its learners.

**Table I: Program Outcomes of the B.Sc. Program**

On completion of the B.Sc. Program, our graduate is expected to have attained following skills, attitudes and competencies.

#### **PO1. Solving Complex Problems**

Apply the knowledge gained in breaking down complex problems into simple components; and to design processes required for problem solving.

#### **PO2. Critical Thinking and Reasoning Ability**

Cultivate critical thinking to identify assumptions, verify the accuracy and validity of assumptions. Instil the ability of logical reasoning to analyse the rationale behind concepts, ideas, perspectives to draw logical conclusions and make decisions.

#### **PO3. Research Aptitude**

Utilize and integrate research-based knowledge in an interdisciplinary framework; apply research tools for analysis and interpretation of data; understand and comply with research ethics.

#### **PO4. Effective Communication skill:**

Demonstrate the ability to listen and to clearly express ideas verbally. Equip to write reports and make presentations effectively.

#### **PO5. Information and Digital Literacy:**

Equip to use appropriate tools and techniques inclusive of internet and electronic media for acquiring, assessing and analysing data from diverse resources.

**PO6. Social Interactive Skills and team work:** Exhibit networking and social interactive skills; function effectively as an individual and as a member in diverse groups; demonstrate leadership quality useful for employability.



**PO7. Self-directed and Lifelong Learning:**

Ability to explore and gain knowledge in independent and self-reliant ways. Demonstrate ability to adapt and upgrade with the global, social and technological changes.

**PO8. Awareness towards Environment and Sustainable Development:** Exhibit awareness and a concern for environmental issues; understand and realize the significance of cohabitation and co-evolution in attaining the needs of sustainable development.

**PO9. Gender Sensitization and Civic Engagement**

Respect gender sensitivity, gender equity and gender justice; encourage mutual understanding and express empathetic social concern towards different value systems and different strata of society with respect to civic duties.

**Structure of the B.Sc. Programme:**

The B.Sc. Program is structured in 6 semesters and is offered with the following specializations.

*For detailed Syllabus, please refer to Academics-Courses and Syllabus.*

**A) B.Sc. - Single Major (Aided Programs)**

**Group 1**

1. B.Sc. Botany
2. B.Sc. Microbiology
3. B.Sc. Zoology
4. B.Sc. Chemistry

**Group 2**

5. B.Sc. Mathematics
6. B.Sc. Physics
7. B.Sc. Statistics

**B) B.Sc. - Double Major**

1. B.Sc. Biochemistry and Botany
2. B.Sc. Biochemistry and Zoology
3. B.Sc. Biochemistry and Microbiology
4. B.Sc. Biochemistry and Chemistry

**C) B.Sc. - Self-Financed Programs**

1. B.Sc. Biotechnology
2. B.Sc. Computer Science
3. B.Sc. Information Technology




**Table 2: Structure of the B.Sc. Programme**

Program	First Year B.Sc. Semester1 and 2	Second Year B.Sc. Semester3 and 4	Third Year B.Sc. Semester5 and 6
B.Sc. Single	7 theory courses and 3 practical courses in each	7 theory courses and 2 practical courses in each	5 theory courses and 3 practical courses in each

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Major Aided	semester. (Any 3 subjects of choice from the 7 subjects listed in A) above and One compulsory subject - Foundation Course.)	semester. (Any two subjects of choice from subjects studied in First Year and One compulsory subject - Foundation Course)	semester. (Any one subject of choice from subjects studied in Second Year, and One course in Applied component)
B.Sc. Double Major Aided	7 theory courses and 3 practical courses in each semester. (Any 3 subjects of choice from the 7 subjects listed in A) above including at least one subject from Group1 and one compulsory subject - Foundation Course)	7 theory courses and 2 practical courses in each semester. (Any two subjects of choice from subjects studied in First Year, including at least one subject from Group1 and One compulsory subject - Foundation Course)	5 theory courses and 3 practical courses in each semester. (Subject1: Biochemistry, Subject2: Any one subject from the Group 1 that was studied in Second Year, and One course in Applied component)
BSc. Self Financed	<b>BT and CS</b> 7 theory courses and 3 practical courses as mentioned in the syllabus in each semester. <b>IT</b> 5 theory courses and practical courses as mentioned in the syllabus in each semester.	<b>BT and CS</b> 7 theory courses and 3 practical courses as mentioned in the syllabus in each semester. <b>IT</b> 5 theory courses and practical courses as mentioned in the syllabus in each semester.	<b>BT and CS</b> 5 theory courses and 3 practical courses as mentioned in the syllabus in each semester. <b>IT</b> 5 theory courses and practical courses as mentioned in the syllabus in each semester.



  
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