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| <b>Subject Code:</b> 2SC1000221         | <b>Subject Title: BIOCOMPUTING</b> |
| <b>Course Type:</b> Subjective Elective |                                    |

**Course Objective:**

This elective will make students to understand the basics of computer and roll of computer in scientific educations well as in daily life. Understanding its applications and components will enhance students' knowledge and interest to deal with many aspects of computer based learning like ICT, report writing, research writing etc.

| Teaching scheme (hours) per week |           | Credit |           |       | Theory Marks    |                  | Practical Marks |                  | Total |
|----------------------------------|-----------|--------|-----------|-------|-----------------|------------------|-----------------|------------------|-------|
| Theory                           | Practical | Theory | Practical | Total | Uni. Assessment | Cont. Assessment | Uni. Assessment | Cont. Assessment |       |
| 2                                | --        | 2      | --        | 2     | 35              | 15               | --              | --               | 50    |

**A. Subjective Elective Theory:**

| Unit | Content                                                                                                                                                                                                                                                                                                                                          | Lectures | Weight (%) |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|
| 1    | <b>History, development and types of computers:</b> General awareness of computer systems –<br>✓ hardware and software (CPU and other peripheral devices, computer arithmetic, computer logic<br>✓ Programming languages – machine language, assembly language, higher level languages<br>✓ graphics, statistical packages – MINITAB, MATLAB etc | 20       | 60         |
| 2    | ✓ Concepts of internet.<br>✓ Applications of internet in society<br>✓ Concept of HTML, HTTP, URL, Domain, Search engine<br>✓ Computer and Internet in Biotechnology                                                                                                                                                                              | 10       | 40         |

**Learning Outcome:**

By learning this subject students will understand history of computer its hardware components and software components. As well students will learn about internet concept, its components and its application in education.

**Reference book:**

1. Computers Today: D. H. Sanders
2. Developing Bioinformatics Computer Skills C. Gibas and P. Jamback.