# Payyanur College, Payyanur (Affiliated to Kannur University)

**Programme Outcomes (POs)** 

# **BSc DEGREE PROGRAMME (FOR SCIENCE)**

## **PROGRAMME OUTCOMES (PO)**

**PO1:** Critical Thinking and Problem-Solving - Apply critical thinking skills to analyse information and develop effective problem-solving strategies for tackling complex challenges.

**PO2:** Effective Communication and Social Interaction - Proficiently express ideas and engage in collaborative practices, fostering effective interpersonal connections.

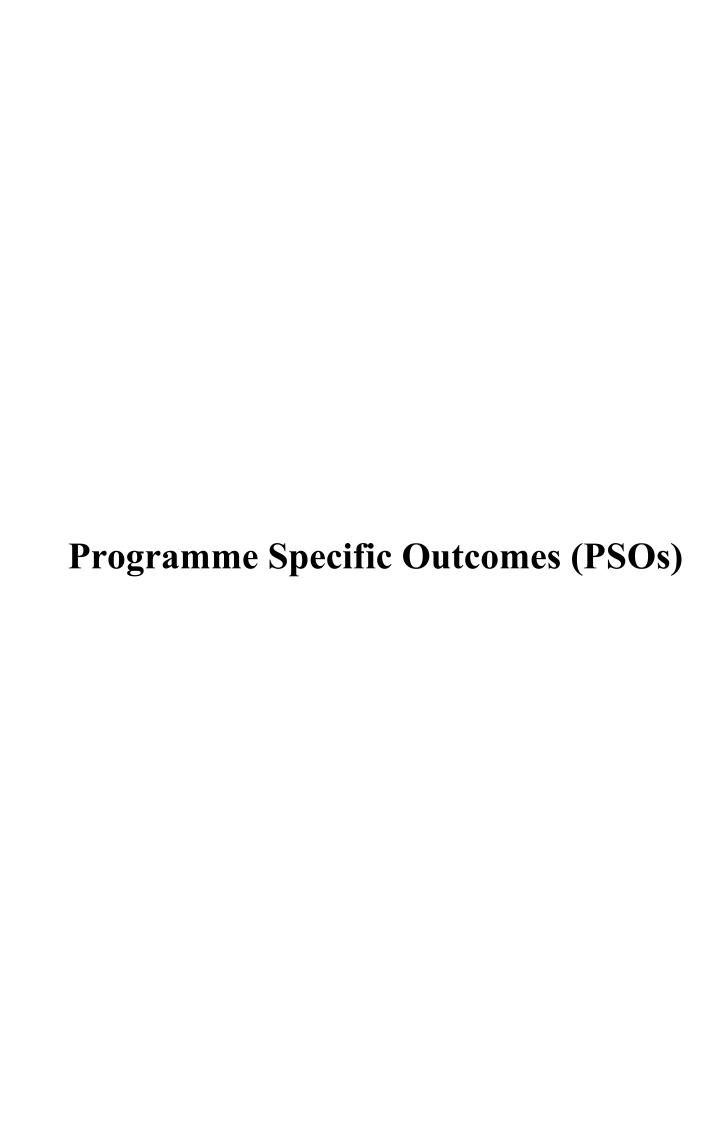
**PO3:** Holistic Understanding - Demonstrate a multidisciplinary approach by integrating knowledge across various domains for a comprehensive understanding of complex issues.

**PO4:** Citizenship and Leadership - Exhibit a sense of responsibility, actively contribute to the community, and showcase leadership qualities to shape a just and inclusive society.

**PO5:** Global Perspective - Develop a broad awareness of global issues and an understanding of diverse perspectives, preparing for active participation in a globalized world.

**PO6: Ethics, Integrity and Environmental Sustainability -** Uphold high ethical standards in academic and professional endeavours, demonstrating integrity and ethical decision-making. Also acquire an understanding of environmental issues and sustainable practices, promoting responsibility towards ecological well-being.

**PO7:** Lifelong Learning and Adaptability - Cultivate a commitment to continuous self-directed learning, adapting to evolving challenges, and acquiring knowledge throughout life.



Name of the Programme: **BSc CHEMISTRY** 

### PROGRAMME SPECIFIC OUTCOMES (PSOs)

#### PSO<sub>1</sub>

Demonstrate a comprehensive understanding of the fundamental principles and theories in various domains of chemistry.

#### PSO<sub>2</sub>

Develop proficient laboratory skills to use laboratory techniques, equipment, perform experiments, analyze data, and interpret the result.

#### PSO<sub>3</sub>

Cultivate critical thinking skills and the ability to apply scientific principles and wisdom to solve complex problems in chemistry and related fields.

#### PSO<sub>4</sub>

Recognize and appreciate the interdisciplinary nature of chemistry with biological-physical science, environmental science and materials science.

#### PSO<sub>5</sub>

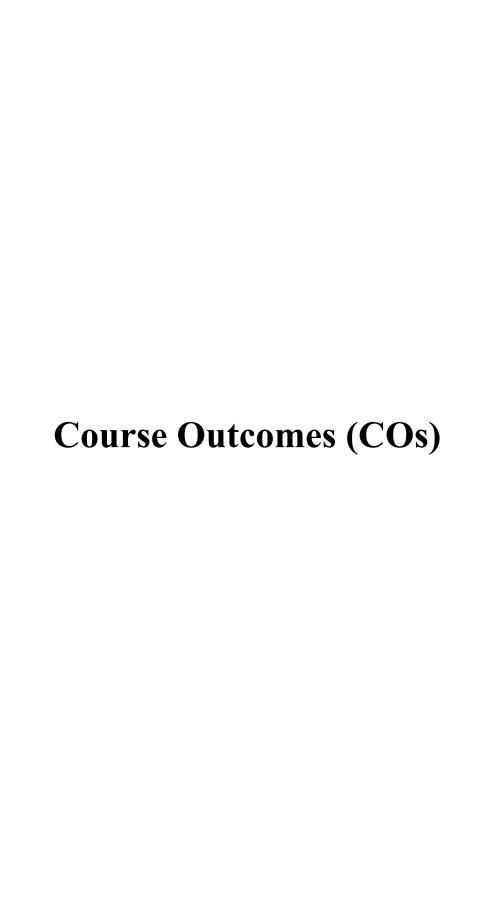
Gain proficiency in advanced concepts, modern technologies and software tools relevant to chemistry, including computational chemistry software, laboratory instrumentation and data analysis tools.

#### PSO<sub>6</sub>

Develop awareness on environmental and social impact of chemical processes and recognizes the importance of sustainable methods and green chemistry in various contexts.

#### PSO7

Develop the ability to conduct independent research and introduce a culture of scientific collaboration with peers in projects and laboratory work along with fostering teamwork and interpersonal skills.



# **COURSE OUTCOMES (COs)**

Sl. No	Name of the Course	Outcomes
	DISCIPI	LINE SPECIFIC COURSES
1.	KU1DSCCHE101: FUNDAMENTALS OF CHEMISTRY- I	CO1: Demonstrate a good understanding of the various theories on atomic structure and periodicity in the properties of elements.  CO2: Apply the acquired knowledge about periodicity to predict and explain the properties of elements.  CO3: Analyse and apply the rules in representing organic compounds with structural formulae and naming organic compounds  CO4: Develop skill in solving problems involving stoichiometric calculations  CO5: Develop skills in practical Chemistry and in using online resources  CO6: Demonstrate good laboratory practices.
2.	KU1DSCCHE114: BASIC CONCEPTS IN THEORETICAL AND ENVIRONMENTAL CHEMISTRY	CO1: Develop basic idea regarding atomic structure and atom models. CO2: Analyse the periodicity and predict properties of elements. CO3: Describe various theories of chemical bonding and explain the structure of simple molecules based on these theories. CO4: Comprehensive understanding on the various pollutants causing atmospheric pollution to minimise the global warming and carbon footprint. CO5: Acquire proficiency in analytical chemistry techniques and adhereto good laboratory practices, ensuring safety and precision in experimental procedures.
3.	KU1DSCCHE115: BASICS OF STRUCTURAL &ANALYTICAL CHEMISTRY	CO1: Attain basic information on atomic structure and theories associated with it and understand the periodic properties of elements.  CO2: Get insight about the concept of chemical bonding and theories to explain bonding in various molecules.  CO3: Get awareness about various types of molecules including coordination compounds and organic molecules.  CO4: Acquire proficiency in analytical chemistry techniques, they will also demonstrate knowledge of

qualitative and quantitative analysis methods and be
able to apply them in practical scenarios.
CO5: To provide practical experience on various
titrimetric analysis.