AJEENKYA D Y PATIL UNIVERSITY
THE INNOVATION UNIVERSITY
School of Engineering

Department of Biotechnology

Innovative Teaching Learning (Pedagogy) Report

Name of the Faculty	Dr. Anand Khandwekar
Class	(V Semeseter 3rd year)
Courses Taught	Nutraceuticals Functional Foods Nutrigenomics (**FT300E)**
Academic year	2024-2025
Title of Padagogy	Bridging Traditional and Modern Nutraceutical Education: A Multimodal, Case-Based, and Interdisciplinary Teaching Approach
Objective	To introduce students to the fundamentals and applications of nutraceuticals, functional foods, and nutrigenomics, enabling them to understand key concepts, health benefits, and regulatory frameworks.
Methodology	**Lecture-Based Concept Delivery:** Key theories and principles of nutraceuticals and functional foods were introduced through structured classroom lectures. **Case Study Discussion:** Selected case studies and real-world product examples (e.g., fortified foods, probiotic supplements) were discussed to relate concepts to industry practices. **Presentation-Based Learning:** Students were encouraged to prepare short presentations on emerging trends and scientific findings related to nutrigenomics and bioactive components. **Group Activities and Peer Discussions:** Interactive group tasks promoted collaborative learning and helped students exchange ideas on health benefits and mechanisms of nutraceuticals. **Application-Oriented Assignments:** Assignments and class tasks involved analyzing food labels, market-based nutraceutical formulations, or proposing dietary interventions based on scientific rationale.
Outcome	**Conceptual Clarity:** Students will be able to define and differentiate between nutraceuticals, functional foods, and bioactive components using appropriate scientific terminology. **Mechanism Interpretation:** Students will demonstrate the ability to interpret the mode of action and health benefits of nutraceutical ingredients through case-based examples. **Application Skills:** Students will analyze and apply nutraceutical knowledge to real-life products and dietary solutions relevant to current health trends and issues. **Critical Thinking and Integration:** Students will evaluate the interdisciplinary aspects of nutrigenomics by integrating principles from nutrition, microbiology, and biotechnology. **Communication Proficiency:** Students will effectively communicate scientific findings and product evaluations through presentations, discussions, or report submissions.
Glimpses	Students discussed ancient probiotics, traced nutrient pathways, presented fortified food labels, and evaluated global nutraceutical practices through engaging classroom activities.