Program Learning Outcomes of the Department of Food Engineering

KNOWLEDGE (Theoretical and Factual Knowledge)

PLO1. Has a sound understanding of theoretical and applied knowledge in mathematics, natural sciences, basic engineering principles, and food science; effectively uses this knowledge in food engineering applications and applies it to problem-solving processes.

PLO2. Possesses knowledge of food quality and safety principles, hygiene and sanitation practices, quality assurance and control systems, as well as relevant standards and legislation; applies these systems and contributes to their improvement.

PLO3. Has practical competence in industrial processes such as food production lines, process control, unit operations, occupational health and safety, quality management, and production planning, and optimizes these processes.

SKILLS (Cognitive and Practical Skills)

PLO4. Identifies, analyzes, and solves complex problems encountered in food engineering applications by selecting and applying appropriate modeling, evaluation, and solution methods.

PLO5. Designs processes, products, or systems by considering realistic technical, environmental, economic, and sustainability constraints; incorporates scientific and technological advancements into design decisions.

PLO6. Selects and effectively uses modern tools, analytical techniques, laboratory equipment, and computer technologies employed in food engineering applications, and evaluates their limitations.

PLO7. Conducts scientific literature reviews; designs and carries out experiments and projects; collects data and analyzes results using statistical methods to generate scientifically grounded outcomes; applies and contributes to risk management, innovation, and entrepreneurship processes.

COMPETENCES – Ability to Work Independently and Take Responsibility

PLO8. Effectively works independently or as a member of intra- and interdisciplinary teams; assumes leadership when necessary and ensures task allocation and coordination in line with project objectives.

PLO9. Analyzes the impacts of food engineering activities in terms of ethics, economics, social life, public health, environmental protection, and sustainability, and acts with a strong sense of professional responsibility.

COMPETENCES – Learning Competence

PLO10. Develops learning strategies for professional development; follows scientific and technological innovations and continuously updates professional knowledge.

COMPETENCES – Communication and Social Competence

PLO11. Communicates effectively in written and oral forms in Turkish and at least one foreign language; prepares professional reports, delivers presentations, and follows developments in the field.

COMPETENCES – Field-Specific Competence

PLO12. Acts in accordance with professional ethical principles; is aware of scientific and professional responsibilities and applies ethical decision-making processes.

PLO13. Evaluates food production processes in line with sustainability principles; optimizes resource utilization and develops and implements engineering approaches that consider environmental protection and social benefit.