

220222913 Food Microbiology and Enzymology

Module Name	Food Microbiology and Enzymology
Module Level, if applicable	Intermediate
Code if Applicable	220222913
Subtitle, if applicable	-
Courses, if applicable	220222913 Food Microbiology and Enzymology
Semester(s) in which the module is taught	2 nd
Person responsible for the module	Sri Winarsih, S.TP., MP.
Lecturer	Sri Winarsih, S.TP., MP.
Language	Indonesian
Relation to curriculum	Compulsory Courses for undergraduate program in Departement of Food Technology, Faculty of Agriculture and Animal Science
Type of teaching	Lecture, Project
Workload	Lecture: 3 sks X 50 minutes X 16 weeks Project: 3 sks X 60 minutes X 16 weeks Independent learning: 3 sks X 60 minutes X 16 week
Credit points	3 SKS X 1.5 = 4.5 ECTS
Requirements according to the examination regulations	1. Registered in this course 2. Minimum 80% attendance in this course
Recommended prerequisites	Cell Biology
Module Objectives (Intended learning outcomes)	On successful completion of this course, student should be able to : <ul style="list-style-type: none"> ● Explain various types of microorganisms in food, both beneficial and harmful in the field of food. ● Apply beneficial microorganisms for food processing and control harmful microorganisms in the food sector. ● Explain about enzymes that play a role in the food sector and be able to explain the production of enzymes from microorganisms
Module Content	This course presents material on microorganisms present in food, sources and types of microorganisms in food, the impact of the growth of microorganisms in food and efforts to control them, and presents enzymes that play a role in the food industry, production of enzymes from microorganisms, and their immobilization to be applied in the food sector.

Study and examination requirements and forms of examination	Cognitive: Midterm exam, Final exam, Quizzes, Assignments Affective: Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, and language), (b) Being on time, (c) Effort.
Media employed	Classical teaching tools with white board and power point presentation
Recommended Literature	For Class A. Compulsory 1. Jay, J. M., Loessner, M. J., & Golden, D. A. (2008). <i>Modern food microbiology</i> . Springer Science & Business Media. 2. Adams, M. R., Moss, M. O., & Moss, M. O. (2000). <i>Food microbiology</i> . Royal society of chemistry. 3. Ray, B., & Bhunia, A. K. (2001). <i>Fundamental food microbiology</i> (Vol. 97). Boca Raton: CRC press. 4. Ray, R. C., & Rosell, C. M. (Eds.). (2017). <i>Microbial enzyme technology in food applications</i> . CRC Press. 5. Illanes, A. (2008). Enzyme biocatalysis. <i>Principles and Applications</i> . Editorial Springer-Verlag New York Inc., United States, 1-56. 6. Rastall, R. (Ed.). (2007). <i>Novel enzyme technology for food applications</i> . Elsevier B. Option 1. Videos from Youtube related to the Food Microbiology and Enzymology 2. National and international journals related to Food Microbiology and Enzymology
Date of Last Amendment	23 rd Augustus 2022