

220222913 Fermentation Technology

<b>Module Name</b>	<b>Fermentation Technology</b>
<b>Module Level, if applicable</b>	Advanced
<b>Code if Applicable</b>	220222913
<b>Subtitle, if applicable</b>	-
<b>Courses, if applicable</b>	220222913 Fermentation Technology
<b>Semester(s) in which the module is taught</b>	6 <sup>th</sup>
<b>Person responsible for the module</b>	Afifa Husna, STP., MTP., M.Sc
<b>Lecturer</b>	Sri Winarsih, S.TP., MP.
<b>Language</b>	Indonesian
<b>Relation to curriculum</b>	Elective Course for undergraduate program in Department of Food Technology, Faculty of Agriculture and Animal Science
<b>Type of teaching</b>	Lecture, project
<b>Workload</b>	<ul style="list-style-type: none"> <li>• Lecture: 2 SKS X 50 minutes X 16 weeks</li> <li>• Mini Project: 2 SKS X 60 minutes X 16 weeks</li> <li>• Independent learning: 2 SKS X 60 minutes X 16 weeks</li> </ul>
<b>Credit points</b>	2 SKS X 1.5 = 3 ECTS
<b>Requirements according to the examination regulations</b>	<ol style="list-style-type: none"> <li>1. Registered in this course</li> <li>2. Minimum 80% attendance in this course</li> </ol>
<b>Recommended prerequisites</b>	Cell Biology, Food Microbiology and Enzymology courses
<b>Module Objectives (Intended learning outcomes)</b>	<p>On successful completion of this course, student should be able to :</p> <ul style="list-style-type: none"> <li>• Understand the operation of the fermentation process.</li> <li>• Identify fermentation methods, materials and tools.</li> <li>• Understanding the operation of the fermentation process on solid or liquid media</li> </ul>

<b>Module Content</b>	This course learning about the development of fermentation technology, principles of fermentation, behavior and metabolism of microbiology in fermentation, methods and kinetics of fermentation, sterilization, characteristics and medium handling, inoculation, and the process of harvesting and purifying fermented products.
<b>Study and examination requirements and forms of examination</b>	<b>Cognitive:</b> Midterm exam, Final exam, Quizzes, Assignments <b>Affective:</b> Assessed from the element /variables achievement, namely (a) Contributions (attendance, active, role, initiative, and language), (b) Being on time, (c) Effort.
<b>Media employed</b>	Classical teaching tools with white board and powerpoint presentation
<b>Recommended Literature</b>	<p><b>A. Compulsory</b></p> <ol style="list-style-type: none"> <li>1. Hui, Y. H., Meunier-Goddik, L., Josephsen, J., Nip, W. K., &amp; Stanfield, P. S. (Eds.). 2004. <i>Handbook of food and beverage fermentation technology</i> (Vol. 134). CRC Press.</li> <li>2. Stanbury, P. F., Whitaker, A., &amp; Hall, S. J. 2013. <i>Principles of fermentation technology</i>. Elsevier.</li> <li>3. McNeil, B., &amp; Harvey, L. (Eds.). 2008. <i>Practical fermentation technology</i>. John Wiley &amp; Sons.</li> <li>4. Berenjian, A. (Ed.). 2019. <i>Essentials in fermentation technology</i>. Springer</li> </ol> <p><b>B. Option</b></p> <ol style="list-style-type: none"> <li>1. Videos from Youtube related to the fermentation process</li> <li>2. National and international journals related to fermentation</li> </ol>
<b>Date of Last Amendment</b>	22 <sup>nd</sup> April 2024