

Undergraduate Programme in Biology

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MODULE HANDBOOK

Module Name	Food Microbiology		
Module level, if applicable	Bachelor		
Code, if applicable	BIO425070		
Subtitle, if applicable	-		
Courses, if applicable	-		
Semester(s) in which the module is taught	6 th (sixth)		
Person responsible for the module	Agessty Ika Nurlita, M.Si		
Lecturer(s)	Agessty Ika Nurulita, M.Si; Dr. Arifah Khusnuryani		
Language	Indonesia		
Relation to curriculum	Elective course in the fourth year (7 th semester) Bachelor Degree		
Type of teaching, contact hours	150 minutes lectures, 180 minutes structured activities, 180 minutes self-learning and 170 minutes practical lab per week.		
Workload	Total workload = 136 hours/semester (total for 16 weeks/semester, including mid-term and final term) Lectures = 150 minutes/week Structured activities. = 180 minutes/week Self-learning. = 180 minutes/week Practical lab. = 170 minutes/week		
Credit points	3 credits (4,5 ECTS)		
Requirements according to the examination regulations	Minimal attendance 75%;		
Recommended prerequisites	No prerequisites stated on		
Module objectives/intended learning outcomes	After completing this course, the students: 1. able to describe urgency of food microbiology, microbial growth in food and their factors 2. able to describe microbial spoilage and their factors and how to control microbial growth 3. able to create food through fermentation process and analyse roles of microbes in life		
Content	• The urgency of food microbiology; history and scope of study • Microbial growth in food, extrinsic and intrinsic factors, detection microbe methode • Microbial spoilage and how to control microbial growth • Food fermentation		
Study and examination requirements and forms of examination	The final mark will be weighted as follows:		
	NO	Assessment methods (components, activities)	Weight (percentage)
	1	Final Examination	35%
	2	Mid-Term Examination	30%

	3	Class Activities : Quiz, Homework, etc.				35%																																								
	The final assessment is expressed in the form of a letter value converted from a number value with the following categories:																																													
	<table><tr><th>NO</th><th>Number Value</th><th>Letter Value</th><th>NO</th><th>Number Value</th><th>Letter Value</th></tr><tr><td>1</td><td>≥ 95</td><td>A</td><td>7</td><td>65-69.99</td><td>B/C</td></tr><tr><td>2</td><td>90-94.99</td><td>A-</td><td>8</td><td>60-64.99</td><td>C+</td></tr><tr><td>3</td><td>85-89.99</td><td>A/B</td><td>9</td><td>55-59.99</td><td>C</td></tr><tr><td>4</td><td>80-84.99</td><td>B+</td><td>10</td><td>50-54.99</td><td>C-</td></tr><tr><td>5</td><td>75-79.99</td><td>B</td><td>11</td><td>55-34.99</td><td>D</td></tr><tr><td>6</td><td>70-74.99</td><td>B-</td><td>12</td><td><35</td><td>E</td></tr></table>					NO	Number Value	Letter Value	NO	Number Value	Letter Value	1	≥ 95	A	7	65-69.99	B/C	2	90-94.99	A-	8	60-64.99	C+	3	85-89.99	A/B	9	55-59.99	C	4	80-84.99	B+	10	50-54.99	C-	5	75-79.99	B	11	55-34.99	D	6	70-74.99	B-	12	<35
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Media employed	White-board, LCD Projector, e-learning (https://daring.uin-suka.ac.id/)																																													
Reading list	1. Michael T. Madigan, Kelly S. Bender, Daniel HB., Matthew Sattley, David, A.Stahl. 2019. Brock Biology of Microorganisms. 15th edition. Pearson Education. London. 2. Cappuccino James G, Welsh C. 2018. Microbiology A Laboratory Manual. Pearson Education. London 3. James, M. Jay, Martin J. Loessner, David A. Golden.2003. Modern Food Microbiology.USA: Aspen Publisher Inc 4. Bibek Ray, Arun Bhunia. 2013. Fundamental Food Microbiology. USA: CRC Press																																													

PLO and CO Mapping

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11
CO 1				√	√						
CO 2						√			√		
CO 3						√			√		