Subject Description Form

<table>
<tr><td>Subject Code</td><td>FSN2003</td></tr>
<tr><td>Subject Title</td><td>Introductory Food Microbiology</td></tr>
<tr><td>Credit Value</td><td>3</td></tr>
<tr><td>Level</td><td>2</td></tr>
<tr><td>Co-requisite</td><td>FSN1004 Fundamentals of Modern Science in Food and Nutrition</td></tr>
<tr><td>Objectives</td><td>To introduce students to the world of microorganisms in food and equip students with foundational microbiological techniques in the laboratory.</td></tr>
<tr><td>Intended Learning Outcomes</td><td>Upon completion of the subject, students will be able to:
a. Compare the key features which define eukarya, bacteria, and viruses
b. Understand the diversity of microbial world
c. Describe the growth characteristics of food-related microorganisms
d. Explain basic host-microbe interactions
e. Demonstrate hand-on techniques in performing microbiological analysis</td></tr>
<tr><td>Subject Synopsis/ Indicative Syllabus</td><td>1. History of Microbiology and application in food
2. Structure and Function: Eukaryota, Bacteria, Archaea
3. Diversity of microbial world: Bacteria, Protozoa, Algae and Fungi
4. Microbial Growth
5. Introduction to Viruses
6. Host Microbe Interactions
7. Common foodborne pathogens</td></tr>
<tr><td>Teaching/Learning Methodology</td><td>Lectures are designed to provide students with the basic concepts on the subject content. Interactive tutorials are aimed at clarifying material related to lectures. Laboratory classes are used to introduce to students the essential basic techniques in conducting microbiological experiments and to develop their skills in data interpretation and report writing.</td></tr>
<tr><td>Assessment Methods in Alignment with Intended Learning Outcomes</td><td>
<table>
<tr><td rowspan="2">Specific assessment methods/tasks</td><td rowspan="2">% weighting</td><td colspan="5">Intended subject learning outcomes to be assessed (Please tick as appropriate)</td></tr>
<tr><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td></tr>
<tr><td>1. Assignment</td><td>10%</td><td>√</td><td>√</td><td>√</td><td>√</td><td></td></tr>
<tr><td>2. Quizzes</td><td>25%</td><td>√</td><td>√</td><td>√</td><td>√</td><td></td></tr>
<tr><td>3. Lab Reports</td><td>15%</td><td></td><td>√</td><td>√</td><td></td><td>√</td></tr>
<tr><td>4. Examination</td><td>50%</td><td>√</td><td>√</td><td>√</td><td>√</td><td></td></tr>
<tr><td>Total</td><td>100 %</td><td colspan="5"></td></tr>
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	Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes: Quizzes and assignment will be used to assess the students' ability to understand the lecture materials, be able to synthesize new knowledge based on the lecture materials. The laboratories and laboratory reports emphasise the demonstration from students on their competence and familiarity in executing biochemical assays along the subsequent interpretation and analysis of experimental data. Examination will include MCQ and written questions which are set to evaluate students' ability to understand the basic concepts.	
Student Study Effort Required	**Class contact:**	
	Lecture	24 Hrs.
	Tutorial	12 Hrs
	Laboratory Sessions	9 Hrs.
	Other student study effort:	
	Self study	70 Hrs.
	Report Writing	12 hrs
	Total Study Effort:	127 Hrs
Reading List and References	**Textbook:** Talaro's Foundations in Microbiology, 11th Edition. McGraw Hill. **References:** Prescott's Microbiology, 12th Edition, McGraw Hill.	