

Module Handbook

Module Name:	Enzymology
Module Level:	Bachelor
Abbreviation, if applicable:	BIK204
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/term:	6 th / third year
Module coordinator(s):	Prof. Dr. Ni Nyoman Tri Puspaningsih, MSi
Lecturer(s):	Prof. Dr. Ni Nyoman Tri Puspaningsih, MSi, Prof. Dr. Afaf Baktir, MS dan Dr. Ali Rohman, M.Si.
Language:	Bahasa Indonesia
Classification within the curriculum	Compulsory Course / Elective Studies
Teaching format / class hours per week during semester:	2 hours lectures (50 min / hour)
Workload:	2 hours lectures, 2 hours structured assignment, 2 hours individual assignment, 13 weeks per semester, and total 78 hours per semester ~ 2.6 ECTS *
Credit Points:	2
Requirements:	Biochemistry I
Learning goals/competencies:	<p><u>General Competence (Knowledge):</u> Linking theory with some aspects of enzyme technology enzymes, enzyme application in industry and biotechnology enzymes</p> <p><u>Specific Competence:</u></p> <ol style="list-style-type: none"> 1. Describe the structure and properties of the enzyme 2. Describe the mechanism of enzyme catalysis 3. Explain the enzyme reaction kinetics 4. Explain inhibition of enzyme reactions 5. Explain the regulation of enzymes in the metabolism 6. Describe the process of extraction and purification of enzymes 7. Describe the process of immobilizing enzymes and their role in enzyme technology 8. Explain enzymes in industrial applications 9. Describe the enzymes that play a role in genetic engineering
Attribute skills:	Logic, effort, communication skill
Content:	The structure and properties of the enzyme; the mechanism of enzyme catalysis; kinetics of enzyme reactions; inhibition of enzyme reactions; regulation of enzyme activity; extraction and purification of enzymes; immobilization of enzymes; enzymes in industrial applications; enzymes that play a role in genetic engineering
Study/exam achievements:	Students are considered to be competent and pass if at least get D <u>The final value is calculated as follows:</u> 30% group discussion + 10 % Softskill+ 30 % UTS + 30% UAS

	<p>Final index is defined as follow:</p> <p>A : 100 > NA ≥ 75</p> <p>AB : 75 > NA ≥ 68</p> <p>B : 68 > NA ≥ 60</p> <p>BC : 60 > NA ≥ 55</p> <p>C : 55 > NA ≥ 50</p> <p>D : 50 > NA ≥ 45</p> <p>E : 45 < NA</p>
Metode Pembelajaran:	Lecture, group discussion, and class discussion
Forms of Media:	computer, LCD, whiteboard
Literature:	<ol style="list-style-type: none"> 1. Stryer, L., 2003, Biochemistry, 4-ed, W.H. Freeman and company, New York 2. Godfrey, T. and S. West, 1996, Industrial Enzymology, second ed., stockton Press, New York. 3. Fersht, A., 1985, Enzyme Structure and mechanism, second ed. , W.H. Freeman and company, New York 4. Lehninger, A.L., 1982, Priciples of Biochemistry, Worth Publishers Inc., New York. 5. Eidelstain , 1992, Protein Method, Worth Publishers Inc., New York. 6. Bickerstaff, G.F. (Ed), 1997. Immobilization of Enzymes and Cells, Human Press.
Notes:	<p>*Total ECTS = {(total hours workload x 50 min) / 60 min } / 25 hours</p> <p>Each ECTS is equals with 25 hours</p>