

## Module Handbook

Module Name:	<b>Biochemistry I</b>
Module Level:	Bachelor
Abbreviation, if applicable:	BIK302
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/term:	5 <sup>th</sup> / Third Year
Module coordinator(s):	Prof Dr. Ni Nyoman Tri Puspaningsih, M.Si.,
Lecturer(s):	Prof. Dr. Afaf Baktir, MS., Dr. Sri Sumarsih, M.Si., Dr. Purkan, M.Si.
Language:	Bahasa Indonesia
Classification within the curriculum	Compulsory Course / <del>Elective Studies</del>
Teaching format / class hours per week during semester:	3 hours lectures (50 min / hour)
Workload:	3 hours lectures, 3 hour structural activities, 3hours individual study, 13 week per semester, and total 117hours per semester ~ 3.9 ECTS *
Credit Points:	3
Requirements:	Organic Chemistry II
Learning goals/competencies:	<p><b>General Competence(knowledge):</b> capable of linking the biochemical processes in living organisms with the basic theory of molecular</p> <p><b>Specific Competence:</b></p> <ol style="list-style-type: none"> <li>1. Connect the structure and function of proteins</li> <li>2. Explain biomembran and transport processes in living organisms.</li> <li>3. Explain the concept and design of the metabolic</li> <li>4. Describe the process of obtaining energy in living organisms</li> <li>5. Comparing the pentose phosphate pathway and the glycolytic pathway</li> <li>6. Calculating the ATP number of metabolic fuels (carbohydrates and fatty acids)</li> <li>7. Comparing the biochemical processes in the organism khemotropik and photosynthetic.</li> </ol>
Content:	The molecular basis of living beings that include: relationships protein structure and function; biomembran and transport process, concept and design of metabolism: glycolysis; citric acid cycle; oxidative phosphorylation; energetics; pentose phosphate pathway; glycogen metabolism and disaccharide; fatty acid metabolism; nitrogen compounds metabolism and photosynthesis.
Attribut soft skill	Active and good communication
Study/exam achievements:	<p>Students are considered to be competent and pass if at least get 40of maximum mark of the exams (UTS dan UAS), structured activity (group discussion).</p> <p>Final score (NA) is calculated as follow: 20%assignment 1 + 20% assignment 2 + 30% UTS + 30% UAS</p> <p>Final index is defined as follow: A : 75 - 100</p>

	AB : 70 - 74.99 B : 65 - 69.99 BC : 60 - 64.99 C : 55 - 59.99 D : 40 - 54.99 E : 0 - 39.99
Forms of Media:	Slides and LCD projectors, whiteboards
Learning Methods	Lecture, assignment and group discussion
Literature:	1. Berg, J.M., Tymoczko, J.L., and Stryer, L., 2012, <b>Biochemistry</b> , 7 <sup>th</sup> Ed, W.H., Freeman and Co., New York, 2. Nelson, D.L., and Cox, M.M., 2005, <b>Lehninger Principle of Biochemistry</b> , 4 <sup>th</sup> Ed, W.H. Freeman & Co, New York
Notes:	*Total ECTS = {(total hours workload x 50 min) / 60 min} / 25 hours <b>Each ECTS is equals with 25 hours</b>