


## MODULE HANDBOOK

	<b>UNIVERSITAS PADJADJARAN FACULTY OF MATHEMATICS AND NATURAL SCIENCES BACHELOR OF BIOLOGY PROGRAMME</b>	<b>COURSE CODE: D10D-5003</b>
<b>Module designation</b>	Biochemistry and Analytics	
<b>Semester in which the module is taught</b>	5	
<b>Persons responsible for the module</b>	<ol style="list-style-type: none"> <li>1. Safri Ishmayana, Ph.D.</li> <li>2. Agus Safari, M.Si.</li> <li>3. Dr. Muhammad Fadhilillah</li> <li>4. Muhammad Yusuf, Ph.D.</li> </ol>	
<b>Medium of instruction</b>	Indonesian	
<b>Relation to curriculum</b>	Compulsory Course	
<b>Teaching methods</b>	Lectures and discussions	
<b>Workload</b>	<p>Total workload : 5440 minute = 90.67 hour</p> <p>Lecture and discussion : 2 x 50 minute x 16 week = 1600 minute = 26.67 hour</p> <p>Exercises : 2 x 60 minute x 16 week = 1920 minute = 32 hour</p> <p>Self-study : 2 x 60 minute x 16 week = 1920 minute = 32 hour</p>	
<b>Credit points</b>	2.00 (3.62 ECTS)	
<b>Required and recommended prerequisites for joining the module</b>	Basic Chemistry	
<b>Module objectives/intended learning outcomes</b>	<ol style="list-style-type: none"> <li>1. Students can explain the differences in the structure of biomolecules and the function of each of these biomolecules (T2)</li> <li>2. Students can explain the metabolism of biomolecules including carbohydrates, amino acids, and lipids (T2)</li> <li>3. Students can explain the flow of genetic information on the process of protein biosynthesis (T2)</li> </ol>	
<b>Contents</b>	This course studies the structure and function of biomolecules including carbohydrates, lipids, proteins, and nucleic acids. Enzymes will be reviewed specifically as one of the functions of proteins. In addition, the bioenergetics and metabolism of each biomolecule will be discussed as well as the flow of genetic information.	
<b>Examination forms</b>	Quiz, Midterm exam, Assignment, and Final exam	
<b>Study and examination requirements</b>	The minimum attendance in lectures is 80%. Final grades are evaluated based on quiz (40%), midterm exam (25%), assignment (25%), and final exam (10%)	
<b>Reading lists</b>	<ol style="list-style-type: none"> <li>1. Raven, P.H. &amp; Johnson, G.B. (2002). Biology. 6th ed. McGraw-Hill. Boston</li> <li>2. Alberts, B., Bray, D., Hopkin, K., Johnson, A., Lewis, J., Raff, M., Roberts, K. &amp; Walter, P. (2010). Essential Cell Biology. 3rd ed. Garland Science. New York.</li> <li>3. Bolsover, S.R., Hyams, J.S., Shephard, E.A., White, H.A. &amp; Wiedemann, C.G. (2004). Cell Biology: A Short Course. 2nd ed. Wiley-Liss. New Jersey</li> <li>4. Postlethwait, J.H. &amp; Hopson, J.L. (2006). Modern Biology. Holt, Rinehart and Winston. Texas.</li> </ol>	