Module Handbook

<table>
<tr><td>Module Name</td><td colspan="6">Biochemistry</td></tr>
<tr><td>Module Level</td><td colspan="6">Higher Diploma</td></tr>
<tr><td>Code, if applicable</td><td colspan="6">VKD322</td></tr>
<tr><td>Subtitle, if applicable</td><td colspan="6">-</td></tr>
<tr><td>Courses, if applicable</td><td colspan="6">-</td></tr>
<tr><td>Semester(s) in which the module is taught</td><td colspan="6">3rd semester</td></tr>
<tr><td>Person responsible for the module</td><td colspan="6">Puji Kurniawati, S.Si., M.Sc.
Dr. Tatang Shabur Julianto, S.Si., M.Si.</td></tr>
<tr><td>Lecturer</td><td colspan="6">Puji Kurniawati, S.Si., M.Sc.
Dr. Tatang Shabur Julianto, S.Si., M.Si.</td></tr>
<tr><td>Language</td><td colspan="6">Bahasa Indonesia</td></tr>
<tr><td>Relation to curriculum</td><td colspan="6">Compulsory</td></tr>
<tr><td>Type of teaching, contact hours</td><td colspan="6">Lectures: 100 min/week
Structured Assignments/structured activities: 120 min/week
Online Activity/individual study: 120 min/week
Laboratory work: 340 min/week</td></tr>
<tr><td rowspan="3">Workload</td><td>Total Workload</td><td colspan="5">91 hours; 2 CU</td></tr>
<tr><td></td><td>Face to face teaching</td><td>Structured activities</td><td>Independent study</td><td>Data Analysis</td><td>Exam</td></tr>
<tr><td>Hours</td><td>12</td><td>14</td><td>14</td><td>40</td><td>11</td></tr>
<tr><td>Credit Points</td><td colspan="6">2 SCU/3,4 ECTS</td></tr>
<tr><td>Requirements according to the examination regulations</td><td colspan="6">75% minimum requirements of attendance in theory
100% requirements of attendance in lab activities</td></tr>
<tr><td>Recommended prerequisites</td><td colspan="6">Organic Chemistry</td></tr>
<tr><td>Module objectives/intended learning outcomes</td><td colspan="6">PLO 3: Able to express basic concepts of chemistry, chemical analysis, operation and maintenance of chemical instruments that can be applied in their work
Subject LO:
Student are able to describe the structure and function of biomolecules
Student are able to describe reactions that occur in organisms

PLO 7: Students can select and carry out chemical analysis methods and operate instruments by applying the principles of chemical occupational health and safety
Subject LO:
Student able to apply laboratory procedure and perform qualitative and quantitative analysis technique of biochemical specimens
Student able to apply laboratory procedure and perform determination of enzymatic reactions
Students are able to apply principles and build a culture of chemical safety and health
Students are able to analyze data and report test results in writing and orally</td></tr>
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	Students are able to build team work in carrying out laboratory procedures
Content	1. Biomolecules: carbohydrates, proteins, fats, and nucleic acid 2. Metabolism: catabolism and anabolism 3. Qualitative and quantitative analysis of biochemical specimens 4. Enzymatic reactions
Study and examination requirements and forms of examination	Table Value Graduation A 80 A- 77.5 A/B 75 B+ 72.5 B 70 B- 67.5 B/C 65 C+ 62.5 C 60 C- 55 C/D 50 D+ 45 D 40 E 0
Media employed	Google classroom, zoom meeting, google form, google doc
Reading list	1. Boyer, R., 1999, *Concept in Biochemistry*, Pacific Grove : Ann International Thompson Publishing Company, Inc. 2. Lehninger, A.L., Nelson,c D., Michael M. Cox, M.M., 1993, *Principles of Biochemistry* 2nd Ed. Worth Publisher, New York 3. Poedjiadi, A., Supriyanti, T. F. M., 2005, *Basics of Biochemistry*, UI-Press, Jakarta 4. Martin, D.W Jr., Peter A. Meyes, P.A., Rodwel, V.W., Daryl K. Granner, D.K., 1985 *Harper's Review of Biochemistry*,12th Ed. Lange Medical Publisher, California 5. Mathew, K.C., Van Holde, K. E., 1996, *Biochemistr*y, The Benyamin/Cummings Publishing Company, Inc., Menlo Park 6. Plummer, T. D., 1974, *An Introduction to Practical Biochemistry*, 2nd Edition, Tata McGraw-Hill Publ. Comp. Ltd., New Delhi 7. Stryer, L., 1988, *Biochemistry*, W. H. Freeman and Company, New York 8. Voet, D and Voet, J.G., 1990, *Biochemistry,* John Wiley and Sons, New York