



**UNIVERSITAS PADJADJARAN
FACULTY OF MATHEMATICS AND NATURAL
SCIENCES**

MASTER OF SCIENCE IN CHEMISTRY

**COURSE
CODE:
D20B.105**

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| Module designation | Cell Builder Biomolecules and Metabolism |
| Semester(s) in which the module is taught | 1 |
| Lecturers | Prof. Toto Subroto Muhammad Yusuf, Ph.D. |
| Medium of instruction | English and Indonesian |
| Relation to curriculum | Compulsory Master of Science in Chemistry |
| Teaching methods | Lecture and discussion |
| Workload | Total workload: 53.42 hours CLASS Lecture : 18.36 hours Tutorial : 3.35 hours Assignment : 1 hours Assesment : 5.01 hours Independent Study : 26.7 hours |
| Credit points | 3 (3-0) 3 Credits = 5.43 ECTS |

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| Required and recommended prerequisites for joining the module | <ol style="list-style-type: none">1. Structure and Function of Biomolecules2. Metabolism and Genetics Information |
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| Module objectives/intended learning outcomes | <ol style="list-style-type: none">1. After completing this course, the students are able to master the basic principles of structure and metabolism of cell-building biomolecules, and are able to apply them in life2. Students are able to explain the principles of metabolic regulation and genetic information systems, and are able to apply them in life.(C3)3. Students are able to collect, process data and interpret the results of literature studies logically and systematically, and are able to present them. (C3) |
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| <p>Contents</p> | <p>In this course the structure and function of cell building biomolecules are studied; general aspects of protein, carbohydrate, lipid, and nucleic acid metabolism, as well as their control, were also studied.</p> |
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| <p>Examination forms</p> | <p>Test, presentation, and assignment</p> |
| <p>Study and examination requirements</p> | <p>Minimum attendance at lectures is 80%. Final score is evaluated based on quiz (10%), mid examination (35%), individual assignment (20%), and final examination (35%).</p> |
| <p>Reading lists</p> | <ol style="list-style-type: none"> 1. Nelson, D.L. & Cox, M.M. (2013) Lehninger: Principles of Biochemistry, 6th ed. Worth, New York 2. Alberts, B. et al. (2015) Molecular Biology of the Cell, 6th ed. Garland Publishing, New York |