

Module Handbook

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| Module Name: | Biochemistry II |
| Module Level: | Bachelor |
| Abbreviation, if applicable: | BIK304 |
| Sub-heading, if applicable: | - |
| Courses included in the module, if applicable: | - |
| Semester/term: | 6 th / Third year |
| Module coordinator(s): | Prof. Dr. Afaf Baktir, M.S |
| Lecturer(s): | Prof. Dr. Afaf Baktir, M.S , Prof. Dr. Ni Nyoman TP, M.S, Dr. Purkan, M.S, Dr. Sri Sumarsih, M.S |
| Language: | English and Bahasa Indonesia |
| Classification within the curriculum | Compulsory / Elective course |
| Teaching format / class hours per week during semester: | 2 hours(50 min / hour) |
| Workload: | 2 hours lectures, 2 hour structural activities, 2 hours individual study, 13 week per semester, and total 78hours per semester~ 2.6 ECTS * |
| Credit Points: | 2 |
| Requirements: | BiochemistryI |
| Learning goals/competencies: | <p><u>General Competence(knowledge):</u> Linking the molecular theory of genetic information and physiology with the efforts of its application in the laboratory for analysis and production.</p> <p><u>Specific Competence:</u></p> <ol style="list-style-type: none"> 1. to explain the structure and role of DNA genetic 2. to explain DNA replication 3. describing the mRNA and Transcription 4. to explain the principles of the genetic code and gene-protein relations 5. to link the translation process by controlling gene expression in prokaryotes and eukaryotes 6. to analyze the eukaryotic chromosome structure and gene expression 7. to analyze the structure and nature of the virus, as well as its role as a vector 8. to explain the rearrangement of genes: recombination, transposition 9. The theory linking molecular genetic information with the principles of gene cloning |
| Attribut softskills | Logic, effort, communication skill |
| Content: | Overview molecular structure and the role of genetic DNA, the replication of DNA, mRNA and transcription, the genetic code and the relationship of gene-protein, translational, control of gene expression in prokaryotes and eukaryotes, chromosome structure eukaryotic and gene expression, structure and properties of the virus, as well as its role as a vector , rearrangement of the gene: recombination, transposition, theory |

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| | of molecular genetic information with the principles of gene cloning |
| Study/exam achievements: | <p>Students are considered to be competent and pass if at least get 55</p> <p>The final value is calculated as follows:</p> <p>30% group discussion + 10 % Soft Skill + 30 % Middle Semester Exam (UTS) + 30% Final Semester Exam (UAS)</p> <p>Final index is defined as follow:</p> <p>A : 100 > NA ≥ 75</p> <p>AB : 74,99 > NA ≥ 68</p> <p>B : 68 > NA ≥ 60</p> <p>BC : 60 > NA ≥ 55</p> <p>C : 55 > NA ≥ 50</p> <p>D : 5 > NA ≥ 45</p> <p>E : 45 < NA</p> |
| Learning methods | Lecture, group discussion, class discussion. |
| Forms of Media: | Computer, LCD, whiteboard |
| Literature: | <ol style="list-style-type: none"> 1. Berg, J.M., Tymoczko, J.L., Stryer, L., 2012. Biochemistry, W.H. Freeman and Co., New York. 2. Nelson, D.L. and Cox, M.M., 2005. Lehninger: Principles of Biochemistry, 4th Ed., Worth Publisher, Inc., New York. |
| Notes: | <p>*Total ECTS = {(total hours workload x 50 min) / 60 min } / 25 hours</p> <p>Each ECTS is equals with 25 hours</p> |