**Module Handbook**

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| Modul Name | Introduction to Animal Cell Culture |
| Modul Level | Bachelor |
| Abbreviation, If applicable: | BIT 308 |
| Sub---heading, if applicable: | - |
| Courses included in the module, if applicable: | - |
| Semester | Even |
| Module Coordinator | Sugiharto, S.Si., M.Si. |
| Lectures | Dr. Alfiah Hayati, M.Kes. |
| Language | Bahasa Indonesia |
| Classification within the curriculum: | ~~Compulsory Course~~ / Elective Studies |
| Teaching format/ class hours per week during semester | 300 minutes/ week |
| Workload per semester | 100 min lecture + 100 min structural assignment + 100 min self-assignment x 13 weeks; total 3900 min = 65 hours<br>65/25 = 2.6 ECTS |
| Credit point | 2 |
| Requirements | - |
| Learning goals/competencies | **General Competence (Knowledge)**<br>Student are able to explain the principles, mechanisms and treatment of animal cell cultures and to analyze research journals that related to animal cell culture properly.<br><br>**Specific Competence**<br>1. Explaining the basic fundamentals principle of Animal cell culture techniques<br>2. Explaining Management and Animal cell culture laboratory<br>3. Explaining the growth of cell cultures and treatment 1<br>4. Explaining the growth of cell cultures and treatment 2<br>5. Discussing some of the findings of research coming from the international journal 1<br>6. Discussing some of the findings of research coming from the international journal 2<br>7. Explaining the basic principle of the basic animal cell culture techniques<br>8. Explaining method or techniques of animal cell culture<br>9. Explaining the basic principle of the basic animal cell culture techniques<br>10. Explaining method or techniques of animal cell culture<br>11. Discussing some of the findings of research coming from the international journal 1<br>12. Discussing some of the findings of research coming from the international journal 2 |
| Content | Basic theory, types and kinds of cell lines, classification, sources and application of animal cell culture; management laboratory of cell cultures; media preparation; thawing, growth, maintenance, storage, cell culture; some tests are often used for cell culture; discussion of relevant journals animal cell culture. |
| Soft skill Attribute | Discipline and Team work |

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| Study/ exam achievements | Students are considered to be competent and pass if at least get 40% of maximum. Final score (NA) is calculated as follow: mid exam (35%), final exam (35%), and project assignment (30%)<br><br>Final index is defined as follow:<br>A : 75 - 100<br>AB : 70 - 74.99<br>B : 65 - 69.99<br>BC : 60 - 64.99<br>C : 55 - 59.99<br>D : 40 - 54.99<br>E : 0 - 39.99 |
| Form of media | LCD |
| Learning Method | Class and discussion |
| Literature | a. ATCC (American Type Culture Collection), Animal Cell Culture Basics: Tips and technique for continous cell lines, USA<br>b. Gibco Invitrogen, Handbook: Cell Culture Basics, USA<br>c. Hou, S.X. and Singh, S.R., 2008. Germline Stem Cell, Methods in Molecular Biology, Humara Press.<br>d. Tufan, A. C.; I. Akdogan dan E. Adiguzel. 2004. Shell-less culture of the chick embryo as a model system in the study of developmental neurobiology. Neuroanatomy 3 : 8–11<br>e. Sugiharto, Arbakariya Ariff, Syahida Ahmad, and Muhajir Hamid, 2015. Properties of Kojic Acid and Curcumin: Assay on Cell B16-F1, 5th International Conference And Workshop On Basic And Applied Sciences, Surabaya.<br>f. Sugiharto, Arbakariya Ariff, Syahida Ahmad, and Muhajir Hamid, 2013. Properties of Curcumin: Assay of Tyrosinase Activities, Proceeding 4th International Conference And Workshop On Basic And Applied Sciences and 11th Regional Annual Fundamental Science Symposium (ICOWOBAS – RAFSS 2013), Ibnu Sina Institute for Fundamental Science Studies, Universiti Teknologi Malaysia, Johor Bahru – Malaysia.<br>g. Sugiharto, Arbakariya Ariff, Syahida Ahmad, dan Muhajir Hamid, 2012. Efektivitas Kurkumin Sebagai Antioksidan Dan Inhibitor Melanin Pada Kultur Sel B16-F1, Berkala Penelitian Hayati 17: 173–176 |
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