Module Descriptions

Module Name	Waste Management *Pengelolaan Limbah*
Course Code	8420502192
Semester/Term	6th Semester
Person responsible for the module	Dra. Herlina Fitrihidajati, M.Si. Dr. Winarsih, M.Kes.
Language	Bahasa Indonesia (Indonesian Language)
Relation to curriculum	Elective Course
Teaching methods	Lecture
Workload	Contact hours: 1 x 50 minutes lectures, 1x170 minutes lab activity Private study: 1 x 60 minutes structured activity, 1 x 60 minutes individual activity, Total 79.33 total hours per semester ~ 3.18 ECTS**
Credit Point	2 sks (3.18 ECTS)
Required and recommended prerequisites for joining the module	Ecology, Conservation of Natural Resources and Environment
Module Objectives/intended learning outcomes	1. Able to apply biological knowledge and technology for solving natural resource and environmental problems both in the laboratory and in real practice that supports the profession and or entrepreneurship. *(Knowledge)* 2. Able to demonstrate the basic principles of software applications and instruments, standard analytical methods, and synthesis in biology. *(Knowledge)* 3. Able to design and conduct experiments in the field of biology, manage, analyze, interpret, document, and store research data, to manage biological natural resources. *(Special Competence)* 4. Able to apply transferable skills in biology to develop ecopreneurship (eco-innovation, eco-opportunity, eco-commitment *(Special Competence)* 5. Able to apply logical, critical, systematic, and innovative thinking in the context of the development or implementation of science and/or technology in accordance with their field of expertise. *(General Competence)* 6. Able to work independently, responsibly, both as individuals and in groups, and able to work together. *(Attitude and Social)*

<table>
<tr><td>Content</td><td>This course studies waste management which includes the underlying regulations, types of solid, liquid and gaseous waste generated from human activities at household, regional and industrial scale. How to manage solid waste (garbage) and liquid in an environmentally friendly manner as well as waste treatment with the principles of Reuse, Reuse and Recycle (3R). This course is presented through theory and practice by emphasizing the problem solving process related to the concepts studied. Lecture activities are carried out in a student center with discussions, observations, project assignments, and presentations by developing ecopreneurship characteristics</td></tr>
<tr><td>Examination forms</td><td>Written exam</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td>
Study Requirement

Attendance: students must attend at least 75% of the lectures to be eligible for the final examination.

Study examination

The final grade (NA) is calculated based on the following ratio:

<table>
<tr><th>Assessment Components</th><th>Percentage of contribution</th></tr>
<tr><td>Participation</td><td>20%</td></tr>
<tr><td>Assignment</td><td>30%</td></tr>
<tr><td>Mid-semester test</td><td>20%</td></tr>
<tr><td>Final semester test</td><td>30%</td></tr>
</table>

Grade conversion of 0-100 scale into 0-4 scale is set as below:
<table>
<tr><th>Letter</th><th>Number</th><th>Grade Interval</th></tr>
<tr><td>A</td><td>4,00</td><td>85 ≤ A ≤ 100</td></tr>
<tr><td>A-</td><td>3,75</td><td>80 ≤ A- < 85</td></tr>
<tr><td>B+</td><td>3,50</td><td>75 ≤ B+ < 80</td></tr>
<tr><td>B</td><td>3,00</td><td>70 ≤ B < 75</td></tr>
<tr><td>B-</td><td>2,75</td><td>65 ≤ B- < 70</td></tr>
<tr><td>C+</td><td>2,50</td><td>60 ≤ C+ < 65</td></tr>
<tr><td>C</td><td>2,00</td><td>55 ≤ C < 60</td></tr>
<tr><td>D</td><td>1,00</td><td>40 ≤ D < 55</td></tr>
<tr><td>E</td><td>0,00</td><td>0 ≤ E < 40</td></tr>
</table>
</td></tr>
<tr><td>Reading List</td><td>1. Fitrihidajati, F. Ratnasari, E., Isnawati, Soeparno, G. 2014. Kualitas Hasil Fermentasi Pada Pembuatan Pakan Ternak Ruminansia Berbahan Baku Eceng Gondok (Eichornia crassipes). Biosaintifika: 7 (1) : 62-67</td></tr>
</table>

	2. Fitrihidajati, Herlina. Winarsih. 2017. Pengelolaan Limbah. Surabaya : Unesa University Press. 3. Hieronymi Klaus, Ramzy Kahhat, Eric Williams. 2012. E-Waste Management From Waste to Resource. Routledge: London 4. Rao M.N, Razia Sultana, Sri Harsha Kota. 2016. Solid and Hazardous Waste Management 1st Edition. Butterworth-Heinemann: Oxford. 5. UU Nomor 18 Tahun 2018 Tentang Sistem Pengolahan Sampah. 6. UU/32/2009 Tentang Perlindungan Dan Penggelolaan Hidup.