MODULE DESCRIPTION OF APPLIED FISHERIES BIOTECHNOLOGY

<table>
<tr><td>Module name</td><td colspan="4">Applied Fisheries Biotechnology</td></tr>
<tr><td>Module level</td><td colspan="4">7</td></tr>
<tr><td>Code</td><td colspan="4">19L06212103</td></tr>
<tr><td>Subtitle</td><td colspan="4">-</td></tr>
<tr><td>Course</td><td colspan="4">Applied Fisheries Biotechnology</td></tr>
<tr><td>Semester(s) in which the module is taught</td><td colspan="4">1st Semester</td></tr>
<tr><td>Person responsible for the module</td><td colspan="4">Prof. Dr. Ir. Yusinta Fujaya, M.Si. (YFJ)</td></tr>
<tr><td>Lecturer(s)</td><td colspan="4">Prof. Dr. Ir. Yusinta Fujaya, M.Si. (YFJ)
Dr. Ir. Siti Aslamyah, MP (SAL)
Dr. Ir. Elmi Zainuddin, DES (EZD)
Dr. Asmi Citra Malina, M.Si (ACM)</td></tr>
<tr><td>Language</td><td colspan="4">Indonesian</td></tr>
<tr><td rowspan="2">Relation to curriculum</td><td>Programme</td><td colspan="2">Mode</td><td>Semester</td></tr>
<tr><td>MSc. Fisheries Science</td><td colspan="2">Elective</td><td>Odd</td></tr>
<tr><td rowspan="4">Type of teaching, contact hours</td><td colspan="4">Contact hours and class size separately for each teaching method: lecture, lesson, practical, project, seminar, etc.</td></tr>
<tr><td>Taeching Method</td><td colspan="2">Contact Hours per week</td><td>Class Size</td></tr>
<tr><td>Lecture</td><td colspan="2">1.7</td><td>40</td></tr>
<tr><td>Exercises</td><td colspan="2">2.0</td><td>40</td></tr>
<tr><td rowspan="3">Workload</td><td colspan="4">(Estimated) workload, divided into contact hours (lecture, exercise, laboratory session, etc) and private study, icluding examination preparation, specified in hours</td></tr>
<tr><td>Contact Hours per week</td><td>Private Study per week</td><td>Semester Workload</td><td>ECTS Credits</td></tr>
<tr><td>3.7</td><td>2.0</td><td>91.2 h</td><td>3.4</td></tr>
<tr><td>Requirements according to the examination regulations</td><td colspan="4">In order to pass the module, student must obtain a minimal final grade of D (≥ 45). This value is the average value of 5 lecturers (Exam. Reg.)</td></tr>
<tr><td>Recommended prerequisites</td><td colspan="4">Formal : none
Content : none</td></tr>
<tr><td>Module objectives/intended learning outcomes</td><td colspan="4">After having finished the module, students are able to:
Knowledge:
- Having knowledge of the application of biotechnology which is directly related to fisheries
Skills:
- Skillful in applying biotechnology that is directly related to fisheries for integrated and sustainable fisheries development and management
Competences:
- Capable of biotechnology which is directly related to fisheries for integrated and sustainable fisheries development and management</td></tr>
<tr><td>Content</td><td colspan="4">This course discusses biotechnology which is directly related to fisheries such as: Genetic engineering, use of hormones from plants to stimulate the growth and reproduction process of cultivated animals, use of probiotics, prebiotics, postbiotics and synbiotics for fish cultivation, fermentation products, cell protein products single cell protein (SCP), bioremediation, use of natural materials to produce enzymes or imnostimulants, vaccine development, recombinant DNA and others.</td></tr>
<tr><td>Study and examination requirements and forms of examination</td><td colspan="4">Lecture:
● Partial quizzes
● Lectures/lectures
● Studying
● Collaborative group discussions</td></tr>
<tr><td>Media employed</td><td colspan="4">LCD, website, print out, computer, library</td></tr>
</table>

Literature	● Garth L. Fletcher, C. Jamie C. Grier, SadasivamJ. Kaushik and Patrick Prunet, MN Kutty and KV Rajendran ● KR Sreenivasan, Didier Montet and Raphael Lavoie, Simon A. MacKanzie and BK Nowak, and Zhanjiang (John) Liu