Module Handbook of Undergraduate Thesis

Module designation	An undegraduate thesis research report wirtten by a undergraduate students that applies scientific methods. This undergraduate thesis is a part of the requirements for obtaining a Bachelor's degree in Agriculture or Fisheries. The purpose of this course is to train students to organize, conduct, and summarize scientific research. The research topics conducted by Department of Agricultural Microbiology students should be within Agricultural Microbiology studies. Students' research findings will be presented in the form of final report and presentation.
Semester(s) in which the module is taught	Seventh Semester
Person responsible for the module	Prof. Ir. Triwibowo Yuwono, Ph.D. Prof. Ir. Irfan Dwidya Prijambada, M.Eng., Ph.D. Ir. Donny Widianto, Ph.D. Ir. Ngadiman, M.Si., Ph.D. Ir. Jaka Widada, M.P., Ph.D. M. Saifur Rohman, S.P., M.Si., M.Eng., Ph.D. Nur Akbar Arofatullah, S.P., M.Biotech., Ph.D. Ahmad Suparmin, S.P., M.Agr.Sc., Ph.D. Susanti Mugi Lestari, S.P., M.Si., Ph.D. Agung Dian Kharisma, S.Pd.Si., M.Biotech., Ph.D.
Language	Bahasa Indonesia/Indonesian Language
Relation to curriculum	*Compulsory Course*
Teaching methods	Activities: 1. Lecture offline and online (lecture, discussion, assignment) 2. Practice (field and laboratory activities) 3. Examinations (result seminar and final exam) 4. Independent studies online platform (eLOK, eLISA) (quiz, examination, discussion, and private study) This course uses blended learning and SCL (small group discussion, case-based learning) method
Workload (incl. contact hours, self-study hours)	6 SKS x 170 minutes x 16 meetings= 16,320 minutes = 272,00 hours = 272,00 hours/27,1 hours = 10,04 ECTS Total Workload = 10,04 ECTS
Credit points	*0/6 Credit Points*
Required and recommended prerequisites for joining the module	-

Module objectives/intended learning outcomes	*Program Learning Outcomes (PLO):* *PLO1: Demonstrate honesty, responsibility, self-confidence, emotional maturity, ethics, and awareness of a lifelong learner.* *PLO2: Able to explain theoretical concepts of biology microorganism and develop microbial-based technology to increase plant production and environmental services.* *PLO3: Able to implement science and technology in the field of agricultural microbiology in order to produce solutions, ideas, compile scientific descriptions of the results of their studies and be able to use at least one international language for oral and written communication.* *PLO4: Able to identify, design, implement and solve problems that arise in the field of microbiology to provide suggestions for solutions in the industrial and agricultural fields.* *PLO5: Able to select, utilize and manage the potential of microbes and microbiomes to build industrial and agricultural systems.* *PLO6: Able to create, retrieve and present data obtained in research, and able to utilize biological data banks.* *Course Learning Outcomes (CLO):* *CLO1: Students are able to identify problems and implement microbial-based science and technology in order to generate solutions, ideas, and collect scientific data.* *CLO2: Students are able to identify, design, and use microorganisms' potential to solve issues in the agricultural and industrial systems.* *CLO3: Students able to create and present their final research findings.*
Content	1. *Literature Review.* 2. *Selection of Final Assignment Title: Discussion with Research Commission.* 3. *Making a research outline/proposal I: Discussion with 1st Supervisor.* 4. *Making a research outline/proposal II: Discussion with 1st Supervisor* 5. *Making a research outline/proposal III: Discussion with 2nd Supervisor* 6. *Research Activity: Research Progress Discussion 1* 7. *Research Activity: Research Progress Discussion 2* 8. *Research Activity: Research Progress Discussion 3* 9. *Research Activity: Research Progress Discussion 4* 10. *Research Activity: Research Progress Discussion 5* 11. *Research Activity: Research Progress Discussion 6* 12. *Undergraduate Thesis Preparation I: Discussion with 1st Supervisor* 13. *Undergraduate Thesis Preparation II: Discussion with 1st Supervisor* 14. *Undergraduate Thesis Preparation III: Discussion with 1st Supervisor* 15. *Undergraduate Thesis Preparation IV: Discussion with 2nd Supervisor* 16. *Undergraduate Thesis Examination*

<table>
<tr><td>Examination forms</td><td>Thesis defense with presentations by students and discussions with supervisors and examiners
<table>
<tr><th colspan="4">Grade and Score</th></tr>
<tr><th>Grade</th><th>Score</th><th>Grade</th><th>Score</th></tr>
<tr><td>A</td><td>≥ 85</td><td>C+</td><td>64,0-66,9</td></tr>
<tr><td>A-</td><td>82,0-84,9</td><td>C</td><td>61,0-63,9</td></tr>
<tr><td>A/B</td><td>79,0-81,9</td><td>C-</td><td>58,0-60,9</td></tr>
<tr><td>B+</td><td>76,0-78,9</td><td>C/D</td><td>55,0-57,9</td></tr>
<tr><td>B</td><td>73,0-75,9</td><td>D+</td><td>52,0-54,9</td></tr>
<tr><td>B-</td><td>70,0-72,9</td><td>D</td><td>49,0-51,9</td></tr>
<tr><td>B/C</td><td>67,0-69,9</td><td>E</td><td><49</td></tr>
</table></td></tr>
<tr><td>Study and examination requirements</td><td>Have completed research and been approved by supervisor 1 to be examined</td></tr>
<tr><td>Reading list</td><td>Main references:
Thesis Writing Guidelines for Faculty of Agriculture UGM

Tambahan (Additional references):
1. Parija, S. C., and V. Kate. 2017. Writing and Publishing a Scientific Research Paper. Springer Nature Singapore, Singapore.
2. Davis, M., K. Davis, and M. Dunagan. 2012. Scientific Papers and Presentations, 3rd Edition. Elsevier Science, Netherlands.
3. Kholipah, S. and H. Subagiharti. 2018. Teknik Penulisan Karya Ilmiah. Swalova Publishing, Lampung.
4. Jurnal-jurnal referensi terkait dengan topik penelitian yang dilakukan (Scientific journals related to undergraduate thesis topic).</td></tr>
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