SEMESTER COURSE OUTLINE
& LESSON PLANS
FIRST SEMESTER
2023/2024

Agricultural Microbiology Major

Department of Agricultural Microbiology

Undergraduate Thesis

PNU20194110

Team Teaching:

Lecturers of the Agricultural Microbiology Study Program

UNIVERSITAS GADJAH MADA
FACULTY OF AGRICULTURE
2023

	Universitas Gadjah Mada Faculty of Agriculture Department of Agricultural Microbiology First Semester of 2023/2024	**Document Code:**

RENCANA PROGRAM DAN KEGIATAN PEMBELAJARAN SEMESTER (RPKPS)
SEMESTER COURSE OUTLINE & LESSON PLANS

Kode Mata Kuliah *Course Code*	Nama Mata Kuliah *Course Name*	Bobot (sks) *Credits*		Semester *Semester*	Status Mata Kuliah *Course Status*	Mata Kuliah Prasyarat *Prerequisite Courses*
PNU20194110	*Skripsi* *Undergraduate Thesis*	*T: 0*	*P: 6*	*First*	*Wajib* *Compulsory*	*Semua mata kuliah* *All courses*

Deskripsi Singkat Mata Kuliah		Skripsi merupakan suatu laporan penelitian mahasiswa S1 yang menerapkan metode ilmiah. Skripsi merupakan sebagian persyaratan guna memperoleh gelar Sarjana Pertanian atau Perikanan. Mata kuliah ini bertujuan untuk melatih mahasiswa untuk merencanakan, melaksanakan, dan menyusun hasil penelitian ilmiah. Bagi mahasiswa Departemen Mikrobiologi Pertanian, topik penelitian yang dilakukan harus berada dalam ruang lingkup mikrobiologi pertanian. Hasil penelitian yang dilakukan oleh mahasiswa akan disajikan dalam bentuk laporan akhir dan presentasi.
Course Overview		*An undergraduate thesis research report written by an undergraduate student 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.*
Capaian Pembelajaran Lulusan Program Studi (CPL) ***Program Learning Outcome*** **(PLO)**	***CPL1*** ***PLO1***	Menunjukkan sikap jujur, bertanggung-jawab, percaya diri, kematangan emosional, beretika, dan kesadaran menjadi pembelajar sepanjang hayat (S2). *Demonstrate honesty, responsibility, self-confidence, emotional maturity, ethics, and awareness of a lifelong learner (A1).*
	CPL2 ***PLO2***	Mampu menjelaskan konsep teoritis biologi mikroorganisme serta mengembangkan teknologi berbasis mikroba untuk meningkatkan produksi tanaman dan layanan lingkungan (P2). *Able to explain theoretical concepts of biology microorganism and develop microbial-based technology to increase plant production and environmental services (K2).*
	CPL3 ***PLO3***	Mampu mengimplementasikan ilmu pengetahuan dan teknologi di bidang keahlian mikrobiologi pertanian dalam rangka menghasilkan solusi, gagasan, menyusun deskripsi saintifik hasil kajiannya serta mampu menggunakan minimal satu bahasa internasional untuk komunikasi lisan dan tulis (KU3).

		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 (G3).
	CPL4	Mampu mengidentifikasi, merancang, melaksanakan, serta dapat memecahkan masalah yang timbul dalam bidang mikrobiologi untuk memberikan saran penyelesaian pada bidang industri dan pertanian (KK2).
	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 (S2).*
	CPL5	Mampu memilih, memanfaatkan, dan mengelola potensi mikroba dan mikrobioma untuk membangun sistem industri dan pertanian (KK3).
	PLO5	*Able to select, utilize and manage the potential of microbes and microbiomes to build industrial and agricultural systems (S3).*
	CPL6	Mampu membuat, mengambil, dan menyajikan data yang diperoleh dalam penelitian, serta mampu memanfaatkan bank data biologi (KK4).
	PLO6	*Able to create, retrieve and present data obtained in research, and able to utilize biological data banks (S4).*
Capaian Pembelajaran Mata Kuliah (CPMK) ***Course Learning Outcomes (CLO)***	**Setelah menyelesaikan pembelajaran mata kuliah ini, mahasiswa diharapkan mampu:** ***After completing this course, students are expected to be able:***	
	CPMK1	Mahasiswa mampu mengidenfikasi permasalahan dan mengimplementasikan ilmu pengetahuan dan teknologi berbasis mikrobia dalam rangka menghasilkan solusi, gagasan dan menyusun data saintifik [CPL 1, CPL2, CPL3].
	CLO1	*Students are able to identify problems and implement microbial-based science and technology in order to generate solutions, ideas, and collect scientific data [PLO 1, PLO 2, PLO 3].*
	CPMK2	Mahasiswa mampu mengidentifikasi, merancang, dan memanfaatkan potensi mikrobia dalam memecahkan permasalahan pada bidang industri dan pertanian [CPL4, CPL5]
	CLO2	*Students are able to identify, design, and use microorganisms' potential to solve issues in the agricultural and industrial systems [PLO 4, PLO 5].*
	CPMK 3	Mahasiswa mampu menyajikan data hasil penelitian dalam bentuk makalah dan mempresentasikan hasil penelitian [CPL 6].
	CLO3	*Stude nts able to create and present their final research findings [PLO 6]*

Kaitan CPMK dengan Materi dan Bentuk Pembelajaran, serta Alokasi Waktu		**Materi Pembelajaran** ***Course Materials***	**Bentuk Pembelajaran (Luring/Daring)** ***Course Methos (Offline/Online)***	**Alokasi Waktu** ***Estimated Time***
	CPMK1	1. Studi Literatur	Konsultasi	6 x 50 menit
	CLO1			*6 x 50 minutes*

Correlation among CLO, the material, learning method and estimated time		1. *Literature Review*	*Discussion*	
	CPMK1 ***CLO1***	2. Pemilihan Judul Tugas Akhir: Konsultasi Komisi Penelitian 2. *Selection of Final Assignment Title: Discussion with Research Commission*	Konsultasi *Discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK1 ***CLO1***	3. Pembuatan Outline/Proposal Penelitian I: Konsultasi Dosen Pembimbing 1 3. *Making a research outline/proposal I: Discussion with 1st Supervisor*	Konsultasi *Discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK1 ***CLO1***	4. Pembuatan Outline/Proposal Penelitian II: Konsultasi Dosen Pembimbing 1 4. *Making a research outline/proposal II: Discussion with 1st Supervisor*	Konsultasi *Discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK1 ***CLO1***	5. Pembuatan Outline/Proposal Penelitian III: Konsultasi Dosen Pembimbing 2 5. *Making a research outline/proposal III: Discussion with 2nd Supervisor*	Konsultasi *Discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK2 ***CLO2***	6. Pelaksanaan Penelitian: Konsultasi Progres Penelitian 1 6. *Research Activity: Research Progress Discussion 1*	Pelaksanaan kegiatan penelitian dan diskusi *Research activity and discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK2 ***CLO1***	7. Pelaksanaan Penelitian: Konsultasi Progres Penelitian 2	Pelaksanaan kegiatan penelitian dan diskusi	6 x 50 menit *6 x 50 minutes*

		7. *Research Activity: Research Progress Discussion 2*	*Research activity and discussion*	
	CPMK2 ***CLO2***	8. Pelaksanaan Penelitian: Konsultasi Progres Penelitian 3 8. *Research Activity: Research Progress Discussion 3*	Pelaksanaan kegiatan penelitian dan diskusi *Research activity and discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK2 ***CLO2***	9. Pelaksanaan Penelitian: Konsultasi Progres Penelitian 4 9. *Research Activity: Research Progress Discussion 4*	Pelaksanaan kegiatan penelitian dan diskusi *Research activity and discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK2 ***CLO2***	10. Pelaksanaan Penelitian: Konsultasi Progres Penelitian 5 10. *Research Activity: Research Progress Discussion 5*	Pelaksanaan kegiatan penelitian dan diskusi *Research activity and discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK2 ***CLO2***	11. Pelaksanaan Penelitian: Konsultasi Progres Penelitian 6 11. *Research Activity: Research Progress Discussion 6*	Pelaksanaan kegiatan penelitian dan diskusi *Research activity and discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK3 ***CLO3***	12. Penyusunan Skripsi I: Konsultasi Dosen Pembimbing 1 12. *Undergraduate Thesis Preparation I: Discussion with 1st Supervisor*	Konsultasi *Discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK3 ***CLO3***	13. Penyusunan Skripsi II: Konsultasi Dosen Pembimbing 1 13. *Undergraduate Thesis Preparation II: Discussion with 1st Supervisor*	Konsultasi *Discussion*	6 x 50 menit *6 x 50 minutes*

	CPMK3 ***CLO3***	14. Penyusunan Skripsi III: Konsultasi Dosen Pembimbing 1 *14. Undergraduate Thesis Preparation III: Discussion with 1st Supervisor*	Konsultasi *Discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK3 ***CLO3***	15. Penyusunan Skripsi IV: Konsultasi Dosen Pembimbing 2 *15. Undergraduate Thesis Preparation IV: Discussion with 2nd Supervisor*	Konsultasi *Discussion*	6 x 50 menit *6 x 50 minutes*
	CPMK3 ***CLO3***	16. Ujian Skripsi *16. Undergraduate Thesis Examination*	Presentasi *Presentation*	120 menit Presentasi hasil penelitian dan diskusi *120 minutes of presentation and discussion*
	Keterangan (*) : Jumlah pertemuan bergantung kepada pembimbing seminar *Note (*): the number of meetings depends on the seminar supervisor*			
Metode Pembelajaran ***Learning Method***	**SCL: Case based and Project Based Learning**			
Pengalaman Belajar Mahasiswa ***Student Learning Experience***	**Saat Sinkron : Melakukan diskusi dan penelitian terkait dengan topik kuliah serta kaitan dan potensi penerapannya dalam bidang mikrobiologi pertanian atau pertanian secara umum.** **Saat Asinkron:** **Menyusun karya ilmiah secara individu dan mempresentasikannya di hadapan dosen pembimbing.** ***Synchronous lectures: conducting discussions and experiments related to lecture topics and their relationships and potential applications in the field of agricultural microbiology or agriculture in general*** ***Asynchronous lectures: create and present the specific scientitific paper to undergraduate thesis supervisors.***			

<table>
<tr><td></td><td></td></tr>
<tr><td>Akses Media Pembelajaran / LMS dan Persentase Luring & Daring

Akses Media Pembelajaran / LMS dan Persentase Luring & Daring

Learning Media and Course Method Percentage</td><td>Luring 100%

Offline 100%</td></tr>
<tr><td>Metode Penilaian dan Keselarasan dengan CPMK

Methods of assessment in accordance with course learning outcome</td><td>
<table>
<tr><th>Basis Evaluasi
Evaluation Basis</th><th>Komponen Evaluasi
Evaluation Components</th><th>Bobot
Percentages</th><th>CPMK 1

CLO1</th><th>CPMK 2

CLO2</th><th>CPMK 3

CLO3</th></tr>
<tr><td>A. Aktivitas Partisipatif*)

Participatory Activity</td><td>Diskusi

Discussion</td><td>20%</td><td>v</td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>B. Hasil Project/Hasil Studi Kasus/ Hasil PBL*)
Project results/case study results</td><td>Pelaksanaan Penelitian
Experiment</td><td>50%</td><td></td><td>v</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>C. Kognitif
Cognitive</td><td>Ujian Skripsi
Thesis examination</td><td>30%</td><td></td><td></td><td>v</td></tr>
<tr><td></td><td>Total
Total</td><td>100%</td><td></td><td></td><td></td></tr>
</table>
*) Sesuai IKU 7, jumlah persentase aktivitas partisipatif (A) dan hasil project/studi kasus/hasil PBL (B) adalah minimal 50%.
*) In accordance with IKU 7, the total percentage of participatory activities (A) and project results/case studies/PBL results (B) is at least 50%.
</td></tr>
<tr><td>Daftar Referensi</td><td>Utama:
Panduan Penulisan Skripsi Fakultas Pertanian UGM</td></tr>
</table>

<table>
<tr><td>References</td><td colspan="4">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>
<tr><td>Nama Dosen Pengampu

Team Teaching</td><td colspan="4">Lecturers of Agricultural Microbiology Study Program</td></tr>
<tr><td rowspan="2">Otorisasi

Authorization</td><td>Tanggal Penyusunan

Date of Authorization</td><td>Koordinator Mata Kuliah

Course Coordinator</td><td>Koordinator Bidang Keahlian (Jika Ada)

Expertise Coordinator (if any)</td><td>Ketua Program Studi

Head of the Study Program</td></tr>
<tr><td>July 28th, 2023</td><td>Ir. Ngadiman, M.Si., Ph.D.</td><td>Signature and name</td><td>Ir. Ngadiman, M.Si., Ph.D.</td></tr>
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