

**Matrix of relationship between Courses and Intended Learning Outcomes (ILO) on the Bachelor Program of Agroecotechnology (BPA)**

No	Kode Mata Kuliah <i>Course Code</i>	Mata Kuliah <i>Courses</i>	Capaian Pembelajaran (CPL) <i>Intended Learning Outcomes (ILO)</i>							
			ILO1	ILO2	ILO3	ILO4	ILO5	ILO6	ILO7	ILO8
1.	MU0000603W001	Pendidikan Agama <i>Religion Education</i>	3	2	0	0	0	0	0	0
2.	MU0000602W002	Pancasila <i>Pancasila</i>	3	0	0	0	0	0	0	0
3.	MU0000602W004	Bahasa Indonesia <i>Indonesian Language</i>	2	0	1	0	0	2	0	0
4.	MU0000602W006	Ilmu Sosial dan Budaya Dasar <i>Social Science and Basic Culture</i>	3	0	3	1	0	2	0	0
5.	220301612W005	Pengantar Ilmu Pertanian Tropika Lembab <i>Introduction of Humid Tropical Agriculture Science</i>	1	3	2	0	0	0	0	0
6.	220301613W006	Mikrobiologi Dasar <i>Fundamental of Microbiology</i>	1	3	0	0	0	0	0	0
7.	220301612W007	Agroekologi <i>Agroecology</i>	1	3	0	2	0	0	0	0
8.	220301612W008	Sistem Manajemen Informasi <i>Information Management System</i>	2	3	0	0	0	0	0	3
9.	220301612W009	Biologi Pertanian <i>Agriculture Biology</i>	1	2	3	2	0	0	0	0
10.	MU0000602W003	Kewarganegaraan <i>Citizenship</i>	3	0	0	0	1	2	0	0
11.	220301622W002	Kewirausahaan <i>Enterpreunership</i>	1	0	0	0	3	2	3	2
12.	220301623W003	Bahasa Inggris Pertanian <i>Agricultural English</i>	1	0	0	0	0	2	0	3
13.	220301623W004	Agronomi <i>Agronomy</i>	1	0	3	2	0	0	2	1
14.	220301623W005	Ilmu Tanah <i>Soil Science</i>	1	0	3	2	0	0	2	1
15.	220301622W006	Genetika Dasar <i>Fundamental of Genetics</i>	1	3	0	2	0	0	3	0
16.	220301623W007	Proteksi Tanaman <i>Plant Protection</i>	1	0	3	2	0	0	2	1
17.	220301623W008	Botani <i>Botany</i>	1	3	0	2	0	0	0	1
18.	220301633W001	Statistika Pertanian <i>Agricultural Statistics</i>	1	0	0	3	0	0	0	3

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19.	220301632W002	Metodologi Penelitian <i>Research Methodology</i>	1	0	0	3	0	0	3	2
20.	220301633W0023	Fisiologi Tumbuhan <i>Plant Physiology</i>	1	0	0	2	0	0	0	1
21.	220301633W004	Mekanisasi Pertanian <i>Agricultural Mechanisation</i>	3	0	0	2	0	0	3	0
22.	220301633W005	Kesuburan Tanah dan Pemupukan <i>Soil Fertility and Fertilizer</i>	3	0	0	3	0	0	3	1
23.	220301632W006	Pengelolaan Terpadu Organisme Pengganggu Tumbuhan <i>Integrated Pests Management</i>	1	2	3	2	0	0	3	0
24.	220301633W007	Prinsip Pertanian Perkotaan <i>Principles of Urban Farming</i>	1	2	0	3	0	0	2	0
25.	220301632W008	Keanekaragaman Hayati Tumbuhan Tropika Lembab <i>Biodiversity of Humid Tropical Plants</i>	1	3	0	2	0	1	0	0
26.	220301643W001	Agrohidrologi <i>gohidrology</i>	1	2	3	2	0	0	3	2
27.	220301643W002	Rancangan Penelitian <i>Experimental Design</i>	1	0	0	2	0	0	3	0
28.	220301643W003	Bioteknologi Pertanian <i>Agricultural Biotechnology</i>	1	1	0	2	0	0	3	0
29.	220301643W004	Pengelolaan Tanah Tropika Lembab <i>Soil Management of Humid Tropics</i>	1	2	3	3	0	0	2	0
30.	220301643W005	Pestisida dan Teknik Aplikasi <i>Pesticides and Aplication techniques</i>	1	0	0	3	0	0	2	1
31.	220301643W006	Pengelolaan Limbah Pertanian <i>Agricultural Waste Management</i>	1	0	2	3	0	0	1	0
32.	220301642W007	Pertanian Masa Depan <i>Future Agriculture</i>	1	0	3	3	0	0	1	1
33.	220301643W008	Agroklimatologi <i>Agroclimatology</i>	1	0	0	3	0	0	2	2
34.	220301653P003	Kultur Jaringan Tanaman * <i>Tissue Culture*</i>	1	0	0	3	0	1	3	1
35.	220301652P004	Tanaman Bioenergi* <i>Bioenergy Plants*</i>	1	2	2	2	0	1	3	0
36.	220301653P005	Budidaya tanaman Sawit dan Karet* <i>Cultivation of Oil palm and Rubber plantations*</i>	1	1	0	0	2	0	3	0
37.	220301653P006	Budidaya Tanaman Semusim* <i>Cultivation of Annual Crops*</i>	1	1	0	0	2	0	3	0

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38.	220301653P007	Pemuliaan Tanaman* <i>Plant Breeding*</i>	1	1	0	2	0	0	3	0
39.	220301653P008	Ilmu Hortikultura* <i>Horticulture Science*</i>	1	1	0	2	0	0	0	3
40.	220301652P009	Budidaya Tanaman Kopi, Kakao, dan Lada <i>Cultivation of Coffee, Cocoa, and Pepper*</i>	1	1	0	0	2	0	3	0
41.	220301652P010	Budidaya Tanaman Rempah dan Obat-obatan <i>Cultivation of Spice and Plant Medicine*</i>	1	1	0	0	2	0	3	0
42.	220301653P011	Budidaya Tanaman Hias <i>Cultivation of Ornamental Plants*</i>	1	1	0	0	2	0	3	0
43.	220301653P012	Pomologi <i>Pomology*</i>	1	1	0	2	0	0	0	3
44.	220301653P013	Reklamasi Lahan* <i>Land Reclamation*</i>	1	0	2	3	0	0	2	0
45.	220301653P014	Analisis Tanah dan Tanaman* <i>Analysis of Soil and Plants*</i>	1	2	0	2	0	0	3	0
46.	220301653P015	Kimia Tanah* <i>Soil Chemistry*</i>	1	2	0	2	0	0	2	0
47.	220301653P016	Fisika Tanah* <i>Soil Physics*</i>	1	2	0	2	0	0	2	0
48.	220301653P017	Geologi dan Mineralogi* <i>Geology and Mineralogy*</i>	1	0	1	2	0	0	2	0
49.	220301653P018	Morfologi dan Klasifikasi Tanah* <i>Morphology and Soil Classification*</i>	1	1	0	2	0	0	2	0
50.	220301653P019	Geodesi dan Kartografi* <i>Geodesy and Cartography*</i>	1	1	0	2	0	0	2	0
51.	220301653P020	Geomorfologi dan Analisis Lanskap* <i>Geomorphology and Landscape Analysis*</i>	1	0	2	2	0	0	0	2
52.	220301653P021	Penginderaan Jarak Jauh* <i>Remote Sensing*</i>	1	3	0	2	0	0	0	3
53.	220301653P022	Survei Tanah dan Evaluasi Lahan* <i>Soil Survey and Land Evaluation*</i>	1	3	0	2	0	0	0	3
54.	220301653P023	Biologi dan Kesehatan Tanah* <i>Soil Biology and Health*</i>	1	0	2	2	0	0	2	0
55.	220301653P024	Entomologi <i>Entomology*</i>	1	1	0	2	0	0	0	3
56.	220301653P025	Mikologi dan Bakteriologi <i>Micology and Bacteriology*</i>	1	1	0	2	0	0	0	3

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57.	220301653P026	Nematologi (Nematology)*	1	1	0	2	0	0	0	3
58.	220301652P027	Karantina Tumbuhan* <i>Plant Quarantine*</i>	1	0	0	3	0	0	0	0
59.	220301653P028	Epidemiologi Penyakit Tumbuhan* <i>Epidemiology of Plant Diseases*</i>	1	0	1	3	0	0	2	0
60.	220301653P029	Vertebrata Hama* <i>Pest Vertebrates*</i>	1	1	0	2	0	0	0	3
61.	220301653P030	Biologi dan Pengendalian Nematoda* <i>Nematode Biology and Control*</i>	1	1	0	2	0	0	3	0
62.	220301653P031	Fisiologi dan Biokimia Herbisida* <i>Physiology and Biochemistry of Herbicide*</i>	1	1	0	2	0	0	3	0
63.	220301653P032	Ilmu Gulma* <i>Weed Science*</i>	1	1	0	2	0	0	0	3
64.	220301653P033	Ilmu Penyakit Tumbuhan* <i>Plant Disease Science*</i>	1	1	0	2	0	0	0	3
65.	220301653P034	Ilmu Hama Tumbuhan* <i>Plant Pest Science*</i>	1	1	0	2	0	0	0	3
66.	220301663P002	Teknologi Benih* <i>Seed Technology*</i>	1	2	0	1	0	0	3	0
67.	220301663P003	Budidaya Tanaman Padi Tropika Lembab* <i>Humid Tropical Rice Cultivation*</i>	1	1	0	2	0	0	3	0
68.	220301663P004	Nutrisi Tanaman* <i>Plant Nutrition*</i>	1	2	0	3	0	0	3	0
69.	220301663P005	Agroforestri <i>Agroforestry*</i>	1	2	0	3	0	0	2	0
70.	220301663P006	Penanganan Pasca Panen* <i>Post Harvest Handling*</i>	1	2	0	3	0	0	3	0
71.	220301663P007	Pengendalian Hayati* <i>Biological Control*</i>	1	1	0	2	0	0	3	0
72.	220301663P008	Dasar Penyuluhan dan Komunikasi Pertanian* <i>Basic Agricultural Extension and Communicatio*</i>	1	3	0	2	0	3	0	0
73.	220301663P009	Konservasi Tanah dan Air* <i>Soil and Water Conservation*</i>	1	0	2	3	0	0	3	0
74.	220301663P010	Perencanaan Pengembangan Wilayah dan Tata Guna Lahan <i>Regional Development Planning and Land Use *</i>	1	2	0	0	0	0	2	3
75.	220301663P011	Pengelolaan Daerah Aliran Sungai* <i>Watershed Management*</i>	1	0	2	3	0	0	3	0
76.	220301663P012	Sistem Pertanian Kearifan Lokal*	1	0	2	2	0	0	1	0

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		<i>Local Wisdom Agriculture System*</i>								
77.	220301663P013	Polusi Tanah dan Air* <i>Soil and Water Polution*</i>	1	3	0	2	0	0	0	3
78.	220301663P014	Sistem Informasi Geografi* <i>Geographic Information System*</i>	1	2	0	0	0	0	2	3
79.	220301663P015	Virologi <i>Virology*</i>	1	1	0	2	0	0	0	3
80.	220301663P016	Sistem Peramalan Hama <i>Pest Forecasting System*</i>	1	0	1	3	0	0	2	0
81.	220301663P017	Ekologi Pestisida* <i>Ecology of Pesticide *</i>	1	3	0	2	0	0	0	0
82.	220301663P018	Dasar Ekologi Serangga* <i>Fundamentals of Insect Ecology*</i>	1	3	0	2	0	0	0	0
83.	220301663P019	Teknologi Pestisida Nabati* <i>Botanical Pesticide Technology*</i>	1	3	0	2	0	0	0	0
84.	220301663P020	Identifikasi Jasad Pengganggu Tanaman* <i>Identification of Insects Pest, Diseases, and Weeds*</i>	1	2	0	2	0	0	0	0
85.	220301663P021	Klinik Tumbuhan* <i>Plant Clinic*</i>	1	1	0	2	0	0	3	0
86.	220301663P022	Hama dan Penyakit Pasca Panen* <i>Pests and Postharvest Diseases*</i>	1	2	0	2	0	0	0	0
87.	220301672W001	Praktek Kerja Lapangan <i>Field Practice</i>	2	0	0	0	3	3	1	0
88.	MU0000673W007	Kuliah Kerja Nyata <i>Community Service Program</i>	1	0	0	0	3	3	2	0
89.	220301672W002	Seminar <i>Seminar</i>	3	0	0	3	2	0	3	1
90.	220301676W003	Skripsi <i>Thesis</i>	1	0	3	1	2	1	3	1

**Table Discription:**

Contribution of the courses to Intended learning Outcomes (ILO)	Score
No contribution	0
Low	1
Medium	2
High	3

**Capaian Pembelajaran / Description of Intended learning Outcomes (ILO) on the Bachelor Program of Agroecotechnology (BPA)**

<b>ILO</b>	<b>Description</b>
<b>ILO1</b>	Bertakwa kepada Tuhan Yang Maha Esa, menjunjung tinggi nilai kemanusiaan, agama, moral, norma dan etika akademik, serta bertanggung jawab terhadap pengetahuan dan penerapan teknologi yang dimiliki. <i>Have faith in God Almighty, uphold human values, religion, morals, academic norms and ethics, and be responsible for the knowledge and application of technology.</i>
<b>ILO2</b>	Menguasai IPTEKS dalam Bidang Pertanian Tropika lembab yang berkelanjutan <i>Mastering science and technology in the field of sustainable humid tropical agriculture</i>
<b>ILO3</b>	Menguasai metodologi penelitian sehingga mampu beradaptasi terhadap situasi yang dihadapi dalam penyelesaian masalah di Bidang Pertanian Tropika Lembab secara prosedural dan etika keilmuan. <i>Mastering research methodology and adapting to situations faced in solving problems in the Humid Tropical Agriculture Sector procedurally and scientifically.</i>
<b>ILO4</b>	Mampu menerapkan pemikiran logis, kritis, sistematis, dan inovatif dalam konteks pengembangan dan implementasi IPTEKS dalam menyelesaikan permasalahan pertanian tropika lembab <i>Able to implement logical, critical, systematic, and innovative thinking in the context of developing and implementing science and technology to solve humid tropical agricultural problems.</i>
<b>ILO5</b>	Mampu menunjukkan kinerja mandiri, bermutu, dan terukur serta mampu bertanggungjawab atas pencapaian hasil kerja kelompok dan melakukan supervisi dan evaluasi terhadap penyelesaian pekerjaan. <i>Able to demonstrate independent, quality, and measurable performance and to be responsible for the achievement of group work results and supervise and evaluate work completion.</i>
<b>ILO6</b>	Mampu memelihara dan mengembangkan jaringan kerja dengan pembimbing, sejawat, mitra di dalam dan di luar Lembaga. <i>Able to maintain and develop working networks with supervisors, colleagues, and partners inside and outside the institution.</i>
<b>ILO7</b>	Mampu merencanakan, melaksanakan, mengevaluasi dan berinovasi dalam mengembangkan sistem produksi dan mampu memberikan solusi permasalahan bidang pertanian berkelanjutan. <i>Able to plan, implement, evaluate, and innovate in developing production systems and able to provide solutions to the problems in the field of sustainable agriculture.</i>
<b>ILO8</b>	Mampu mengaplikasikan teknologi <i>Internet of Things</i> (IoT), dan penguasaan Bahasa Asing di bidang pertanian. <i>Able to apply Internet of Things (IoT) technology and mastery of foreign languages in the agricultural sector.</i>