

**Matrixes of Relationship between Subject Specific Criteria 08 (SSC08) and Learning Outcomes (LO) of Bachelor Degrees of Agronomy Study Program**

**a. Matrix of SSC08 – LO Knowledge Competence (KC)**

	<b>SSC-01.</b> know and understand the principles of natural sciences, social science, mathematics, medical science, economics and engineering their discipline is based on	<b>SSC-02.</b> have a coherent knowledge in their discipline including knowledge of the latest findings in their discipline	<b>SSC-03.</b> know concepts of identification and safeguarding of quality in their respective fields of work	<b>SSC-04.</b> know the essential legal regulations relating to their discipline	<b>SSC-05.</b> are aware of the further multidisciplinary context of agriculture, nutrition science, or landscape and neighbouring fields
<b>LO-KC-1.</b> Mastering the theoretical concepts and being able to develop science and technology for the cultivation of food crops, plantations and horticulture based on local wisdom and resources	√	√			
<b>LO-KC-2.</b> Mastering the theoretical concepts of plant cultivation problems and being able to manage and solve problems in the field	√				√
<b>LO-KC-3.</b> Mastering the theoretical concepts of sustainable and environmentally friendly plant cultivation management	√		√	√	
<b>LO-KC-4.</b> Mastering theoretical concepts in the development of appropriate technology that is applicable in the community to increase agricultural production		√			√
<b>LO-KC-5.</b> Mastering the theoretical concepts of the latest science and technology development in plant cultivation that can be applied to the community		√			√

**b. Matrix of SSC08 – LO General Skills (GS)**

	<b>SSC-06.</b> have the required knowledge and understanding to identify and formulate problems arising in agriculture, nutrition science, or landscape architecture (which may contain aspects stemming from areas other than their field of specialization)	<b>SSC-07.</b> are able to apply different methods orientated on fundamentals –such as mathematical, statistical, and experimental (laboratory) analysis	<b>SSC-08.</b> are qualified to plan and conduct respectively suitable experiments, interpret the data, and draw conclusions	<b>SSC-09.</b> are able to pursue literature searches in a targeted way and to use data bases and other sources of information	<b>SSC-10.</b> are qualified to carry out assessments on the basis of comparisons with literature references and plausibility considerations
<b>LO-GS-1.</b> Capable of applying logical, critical, systematic, and innovative thinking in the context of the development or implementation of science and technology that pays attention to and applies humanities values in accordance with their field of expertise	√	√			
<b>LO-GS-2.</b> Capable of demonstrating independent, quality, and measurable performance	√	√	√		
<b>LO-GS-3.</b> Capable of examining the implications of the development or implementation of science and technology that pays attention to and applying humanities values according to their expertise based on scientific principles, procedures and ethics in order to produce solutions, ideas, designs or art criticisms	√	√	√		
<b>LO-GS-4.</b> Capable to compiling a scientific description of the results of the studies mentioned above in the form of a Research Project or final project report, and upload it on the university's website		√	√	√	√
<b>LO-GS-5.</b> Capable of appropriating decisions in the context of solving problems in their area of expertise, based on the results of analysis of information and data			√	√	√

<b>LO-GS-6.</b> Capable of maintaining and developing work networks with supervisors, colleagues, colleagues both inside and outside the institution	√				
<b>LO-GS-7.</b> Capable of responsible for the achievement of group work results, supervising and evaluating the completion of work assigned to workers under their responsibility	√				√
<b>LO-GS-8.</b> Capable of conducting process of self-evaluation of the work group under their responsibility, and able to manage learning independently	√				√
<b>LO-GS-9.</b> Capable of documenting, storing, securing, and recover data to ensure validity and preventing plagiarism and				√	
<b>LO-GS-10.</b> Capable of adapting quickly to the world of work and the environment				√	√

**c. Matrix of SSC08 – LO Specific Skills (SS)**

	<b>SSC-11.</b> have the skills to solve practical problems	<b>SSC-12.</b> can combine theory and practice to solve subject specific practical problems	<b>SSC-13.</b> are able to select and apply suitable devices, processes, and methods	<b>SSC-14.</b> have developed an understanding of applicable techniques and methods and their imitations	<b>SSC-15.</b> recognize the technical, health and safety, social, ecological, and legal implications of engineering practice in their field of scientific expertise	<b>SSC-16.</b> can apply methods relevant for their profession	<b>SSC-17.</b> are aware of the usability and the restrictions of concepts and solution strategies	<b>SSC-18.</b> can resort to experience with problems, topics, and processes relating to their scientific discipline	<b>SSC-19.</b> are able to consult adequate literature and information sources and coordinate the work of experts
<b>LO-SS-1.</b> Capable of applying plant cultivation in agricultural systems by utilizing biological resources creatively and innovatively	√		√	√	√				
<b>LO-SS-2.</b> Capable of applying and modifying local wisdom by using the latest science and technology	√	√	√	√	√				

to be applied in plant cultivation practices with specific locations									
<b>LO-SS-3.</b> Capable of conducting plant cultivation practices and collaborating with teams from various scientific backgrounds	√		√		√	√		√	√
<b>LO-SS-4.</b> Capable of identifying problems, providing alternative solutions, and making decisions in the cultivation of crops in the agricultural and plantation industrial systems	√	√		√			√		
<b>LO-SS-5.</b> Capable of planning and evaluating efficient and effective crop cultivation systems	√	√	√	√					
<b>LO-SS-6.</b> Capable of recognizing and taking advantage of business opportunities in the field of agricultural cultivation			√		√	√			
<b>LO-SS-7.</b> Capable of accessing resources including capital, labour, and technology to initiate and run a business in the field of plant cultivation			√		√	√			√
<b>LO-SS-8.</b> Capable of actualizing creative and innovative ideas related to plant cultivation technology into commercial activities						√	√		
<b>LO-SS-9.</b> Capable of conducting basic research on the development and implementation of plant cultivation science and technology based on scientific methodologies to generate specific plant cultivation ideas or recommendations	√	√	√					√	
<b>LO-SS-10.</b> Capable of writing research results as mentioned above in the form of scientific		√				√		√	√

articles and present them in scientific forums									
<b>LO-SS-11.</b> Capable of thinking analytically and synthetically regarding plant cultivation problems and be responsive to the development of related science and technology	√						√		
<b>LO-SS-12.</b> Capable of communicating aspects of plant cultivation in an attractive, efficient, effective and productive manner				√		√		√	
<b>LO-SS-13.</b> Capable of analyzing and evaluating potential barriers to plant cultivation on the sustainability of national biological resources	√			√			√		

**d. Matrix of SSC08 – LO Attitudes and Values (AV)**

	<b>SSC-20.</b> are able to work efficiently on their own and as team members	<b>SSC-21.</b> are qualified to apply different methods to communicate effectively with the scientific community and the society as a whole	<b>SSC-22.</b> feel obliged to act in accordance with professional ethics and the responsibilities and standards of practical engineering	<b>SSC-23.</b> are aware of the methods of project management and business practices such as risk and change management and understand their limitations	<b>SSC-24.</b> recognize the necessity of independent life -long learning and are qualified to do so	<b>SSC-25.</b> depending on the professional field they have competences in the fields of management and marketing, in particular project management, acquisition, personnel management, controlling etc	<b>SSC-26.</b> are adequately competent in the area of communication, e.g., presentations or moderation
<b>LO-AV-1.</b> Faithful to God Almighty and capable of actualizing a religious attitude			√		√		
<b>LO-AV-2.</b> Act as citizens who are proud and love their homeland, have nationalism and are responsible for the State and nation		√					
<b>LO-AV-3.</b> Capable of contributing in improving the quality of life in	√	√					

society, nation and state based on Pancasila							
<b>LO-AV-4.</b> Upholding human values based on morals and ethics	√		√	√			
<b>LO-AV-5.</b> Capable of collaborating and have social sensitivity and concern for society and the environment	√	√				√	√
<b>LO-AV-6.</b> Respect the diversity of cultures, views, religions, and beliefs, as well as the opinions	√						
<b>LO-AV-7.</b> Obey the law and discipline in social and state life				√			
<b>LO-AV-8.</b> Capable of internalizing academic values, norms and ethics			√				
<b>LO-AV-9.</b> Capable of internalizing the spirit of independence and struggle					√		
<b>LO-AV-10.</b> Demonstrate a responsible attitude towards work in their area of expertise independently	√	√				√	
<b>LO-AV-11.</b> Internalize the spirit of independence, struggle, and entrepreneurship					√		