

# FAT-UNIVERSITAS BRAWIJAYA

## INTERNATIONAL STUDENT INBOUND MOBILITY

**Integrated Agricultural Technologies: Smart Farming, Sustainable Agriculture, Nanotechnology, Bioprocessing, and Biotechnology”**

**29 April-22 May 2024**

Type	Date	Time	Activities	Instructor
<b>Session 1</b>				
Online	Monday, 29 April 2024	Tentative	<b>Orientation and Introduction</b> <ul style="list-style-type: none"> <li>• Introduction (students and facilitators)</li> <li>• Introduction to Integrated Agricultural Technology</li> <li>• Global perspectives</li> </ul>	Prof. Yusuf Hendrawan, STP., M.App.Life.Sc., Ph.D  Dr. Panji Deoranto, STP, MP
Online	Tuesday, 30 April 2024	Tentative	<b>Smart Farming and Precision Agriculture</b> <ul style="list-style-type: none"> <li>• Overview of smart farming technologies and precision agriculture principles.</li> <li>• Hands-on experience with precision farming tools and sensors.</li> </ul>	Dr.Agr.Sc. Dimas Firmanda Al Riza, ST., M.Sc.
Online	Thursday, 2 May 2024	Tentative	<b>Sustainable Agriculture: Ecosystem-Friendly Farming Practices</b> <ul style="list-style-type: none"> <li>• Principles of sustainable agriculture for soil health, water conservation, and biodiversity.</li> <li>• Discussion on sustainable farming techniques.</li> </ul>	Prof. Sri Suhartini, STP., M.Env.Mgt., Ph.D., PGCert.
<b>Session 2</b>				
On-site	Monday, 6 May 2024	08.30-09.00	<b>Registration</b>	
On-site		09.00-09.15	<b>Opening and welcoming remarks</b>	Prof. Yusuf Hendrawan, STP., M.App.Life.Sc., Ph.D

On-site		09.15-11.15	<b>Bioprocessing and Value Addition in Agriculture</b> <ul style="list-style-type: none"> <li>Understanding bioprocessing techniques for biomass utilization.</li> <li>Case study on bioprocessing in agriculture</li> </ul>	Prof. Yusuf Wibisono, S.TP, M.Sc, Ph.D
On-site		11.15-12.30	<b>Lunch break</b>	
On-site		12.30-14.30	<b>Digital Agriculture: IoT and Connectivity in Agricultural Systems</b> <ul style="list-style-type: none"> <li>Exploration of Internet of Things (IoT) applications in agriculture.</li> <li>Collaborative project assignment.</li> </ul>	Dr. Eng. Akhmad Adi Sulianto, S.TP. M.Sc.
On-site		14.30-16.30	<b>Waste-to-Energy: Bioprocessing for On-site Sustainable Resource Utilization</b> <ul style="list-style-type: none"> <li>Utilizing agricultural waste for bioenergy and value-added products.</li> <li>Case study on bioprocessing for waste conversion.</li> </ul>	Hendrix Yulis Setyawan, STP, M.Si, PhD
On-site	Tuesday, 7 May 2024	06.00 – 18.00	<b>Industrial Visit</b> <ul style="list-style-type: none"> <li>Greenfield Indonesia/Cimory Dairy Farm</li> </ul>	
On-site	Wednesday, 8 May 2024	08.30 – 10.00	<b>Role of food processing in food and nutrition security</b> <ul style="list-style-type: none"> <li>Crop production system</li> <li>Emerging technologies in food processing</li> <li>Effects of food processing on health</li> </ul>	Ahmad Zaki Mubarok, S.TP, M.Si, Ph.D
		10.00 – 11.30	<b>Group Discussion</b>	
		11.30 – 12.30	<b>Lunch Break</b>	
		12.30 – 14.00	<b>Biotechnology for Crop Improvement and Genetic Enhancement</b> <ul style="list-style-type: none"> <li>Overview of biotechnological tools for crop breeding and improvement.</li> </ul>	Muhammad Nurcholis, S.TP, MP, Ph.D

			<ul style="list-style-type: none"> <li>• Discussion on genetic modification and molecular breeding.</li> </ul>	
		14.00 – 16.40	<b>Group Discussion</b>	
On-site	Thursday, 9 May 2024	00.00-12.00	<b>Cultural trip :</b> <ul style="list-style-type: none"> <li>• Bromo Tengger Semeru National Park</li> </ul>	
On-site	Friday, 10 May 2024	06.00 – 18.00	<b>Field Trip:</b> <ul style="list-style-type: none"> <li>• Temple Tour</li> <li>• Visit SME (batik/tempeh)</li> <li>• Visit Agrotourism “Petik Buah” (Strawberry/orang, etc)</li> </ul>	
On-site	Monday, 13 May 2024	08.30 – 16.00	<b>Introduction to Capstone Project: Designing an Integrated Agricultural System</b> <ul style="list-style-type: none"> <li>• Participants collaborate on developing a comprehensive plan for an integrated agricultural system.</li> </ul>	Suprayogi,S.TP, MP, Ph. D
On-site	Tuesday, 14 May 2024	06.00 – 18.00	<b>Field trip</b> <ul style="list-style-type: none"> <li>• Coffee/tea plantations and processing (Kabupaten Malang)</li> </ul>	
On-site	Wednesday, 15 May 2024	06.00 – 18.00	<b>Cultural Trip:</b> <ul style="list-style-type: none"> <li>• Trip to Beaches in Southern Malang</li> </ul>	
On-site	Thursday, 16 May	08.30 – 16.00	<b>Assessments</b> <b>Group Discussion</b>	
On-site	Friday, 17 May	08.30 – 16.00	<b>Group Presentation+ Feedbacks</b> <b>Closing remarks</b>	Rini Yulianingsih, S.TP, MT, Ph.D
<b>Session 3</b>				
Online	20 May 2024	Tentative	<b>Nanotechnology in Agriculture and Food Products</b> <ul style="list-style-type: none"> <li>• nanotechnology in agriculture : Nano-fertilizers, nano-pesticides, and smart delivery systems</li> <li>• Application of nanomaterials in food preservation and packaging.</li> <li>• Discussions on the potential</li> </ul>	Endrika Widyastuti, S.Pt. M. Sc., MP., Ph.D

			benefits and challenges of nanotechnology in agri-food.	
Online	20 May 2024		<b>Biotechnology for Soil Health and Nutrient Management</b> <ul style="list-style-type: none"> <li>• Application of biotechnology in soil health assessment and nutrient management.</li> <li>• Virtual project on soil bioremediation techniques.</li> </ul>	Fajri Anugroho S.TP, M.Agr.,Ph.D
Online	21 May 2024		<b>Capstone Project (1) Designing an Integrated Agricultural System</b> <ul style="list-style-type: none"> <li>• Presentation and feedback session on the capstone projects</li> <li>• Group assessment</li> </ul>	Suprayogi, STP, MP, Ph. D
Online	22 May 2024		<b>Capstone Project (2) Designing an Integrated Agricultural System</b> <ul style="list-style-type: none"> <li>• Presentation and feedback session on the capstone projects</li> <li>• Group assessment</li> </ul> <b>Closing remarks of short course</b>	Wike Agustin Prima Dania, S.TP, M.Eng, Ph.D  Prof. Yusuf Hendrawan, STP., M.App.Life.Sc., Ph.D
<b>Total : 134 hours</b>				