

SATUAN ACARA PERKULIAHAN
ANALISIS DAN DESAIN SISTEM PRODUKSI AGROINDUSTRI

Oleh :

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PROGRAM STUDI PASCASARJANA
DEPARTEMEN TEKNOLOGI INDUSTRI PERTANIAN
FAKULTAS TEKNOLOGI PERTANIAN
INSTITUT PERTANIAN BOGOR
2016

Course Syllabus

Analysis and Design System of Agroindustry

Course title	Analysis and Design System of Agroindustry		
Course code: TIN511	Credits: 3(2-2)	Semester: 6	Compulsory/optional: Compulsory
Coordinator's name	Dr. Ir. Machfud, MS	Instructor's name	Dr. Eng. Ir. Taufik Djatna, Msi Dr. Ir. Hartrisari H, DEA
Main reference (Title, author, year) (maximum 3 references)	<ol style="list-style-type: none"> 1. Wasson S Charles. 2013. System Analysis, Design, and Development Concepts, Principles, and Practices. Springer 2. Shelly B Gary and Rosenblatt J Harry. 2012. Systems Analysis and Design, Ninth Edition. Course Technology, Cengage Learning 3. Valacich S Joseph. 2012. Essentials of System Analysis and Design. Pearson Education Inc 		
Additional reference (Supplemental materials)	<ol style="list-style-type: none"> 1. Satzinger W John, Jackson B Robert, and Burd D Stephen. 2009. Systems Analysis and Design. Course Technology, Cengage Learning 		
Brief description	<p>Discuss the analysis approach and design for Agroindustry system modeling and forming tools and support systems in an effort to identify and solve problems Agroindustry operating service-oriented. Object-based design analysis approach and quantitative formulations used in the entities modeling, both structured static, dynamic, and collaboration components in the Agroindustry system. Develop analysis and design using the Unified Modeling Language (UML) and Business Process Modeling (BPMN).</p>		
Course outcome	<ol style="list-style-type: none"> A. Able to analyze and synthesize the problems in Agroindustry production systems B. Able to analyze and explain the characteristics of the various types of Agroindustry production system C. Able to explain the concept of life cycle system and its application in Agroindustry production systems and measure its performance D. Able to modeling and analyzing and solving problems Agroindustry production system E. Able to analysis, synthesis and resolve Agroindustry production system case problems F. Able to conduct a process-oriented system analysis and based on value added activity for the design of production systems G. Able to develop concept and stages in the production system design H. Able to design and develop Agroindustry production system design I. Able to design models and production systems based systems dynamic J. Able to explain and develop the design of production systems 		
Offered to	Study Program of Agroindustrial Technology-IPB and other study programs as elective course		
Topics to be covered	<ol style="list-style-type: none"> 1. Definition, scope and problems of Agroindustry production system 2. Classification and characteristics of Agroindustry production system 		

	3. Cycle System models, concepts and variety of performance measures production system 4. Models, modeling, verification and model validation 5. Method and techniques analysis of production system 6. Process oriented analysis and value stream mapping 7. Method approach, framework design, and preparation process of the production system design 8. Production system development conceptually and detailed design 9. System Dynamic				
Percentage	Knowledge	40 %	Facility/media	x	White board
	Skill	40 %		x	LCD projector
	Attitude	20 %		x	Computer
Activity, contact hours (hour/week)	Lecture	2 hours/week			Wifi
	Lab work	3 hours/week		x	Sound system
	Tutorial	-		x	Courseware
	Others	40 %		x	Others
Assessment	Assignment	30% (paper, critical review, practical report)			
	Examination	70% (midterm and final exams)			
	Quiz	-			

MAIN REFERENCE:

1. Wasson S Charles. 2013. System Analysis, Design, and Development Concepts, Principles, and Practices. Springer
2. Shelly B Gary and Rosenblatt J Harry. 2012. Systems Analysis and Design, Ninth Edition. Course Technology, Cengage Learning
3. Valacich S Joseph. 2012. Essentials of System Analysis and Design. Pearson Education Inc

JADWAL DAN MATERI KULIAH

Week	Learning Outcomes	Topics	Reference	Lecturer
1.	Mampu menganalisis dan mensintesis permasalahan pada sistem produksi agroindustri	✓ Introduction	1	Machfud
2.		✓ Problem of System Modelling Agroindustry ✓ System Boundary	1,2	Machfud
3.	Mampu menganalisis dan menjelaskan karakteristik pada beragam tipe sistem produksi agroindustri	✓ Characteristics System Modelling Agroindustry ✓ System Analysis	1	Machfud
4.	Menguasai konsep Siklus Hidup Sistem dan aplikasinya dalam sistem produksi agroindustri, serta ukuran kinerjanya	✓ Model – model Daur Hidup Sistem serta konsep dan beragam ukuran kinerja system produksi	2,3	Machfud
5.		✓ Model – model Daur Hidup Sistem serta konsep dan beragam ukuran kinerja system produksi (lanjutan)	1	Machfud
6.	Mampu merancang model dan menganalisis serta menyelesaikan masalah system produksi Agroindustri	✓ Models and Modeling	1	Machfud
7.		✓ Simulation Model ✓ Verification and Validation	1	Machfud
<i>Midterm Exam</i>				
8.	Mampu melaksanakan analisis system berorientasi proses serta berbasis <i>Value added activity</i> untuk perancangan system produksi	✓ VSM ✓ System Design	2	Machfud
9.	Mampu merancang dan mengembangkan rancangan system produksi Agroindustri	✓ Conceptual Modeling ✓ System Design	1,3	Machfud
10.		✓ Method Approach and Framework Design	1	Hartrisari
11.	Mampu mengembangkan konsep dan tahapan dalam perancangan sistem produksi.	✓ Production System Development	2	Hartrisari
12.		✓ Production System Development (continue)	1,2	Hartrisari
13.	Mampu merancang model dan system produksi berbasis <i>System Dynamic</i>	✓ System Dynamic	1,2	Hartrisari
14.		✓ System Dynamic (continue)	1	Hartrisari
<i>Final Exam</i>				

JADWAL DAN MATERI RESPONSI

Week	Learning Outcomes	Topics	Reference	Lecturer
1.	Mampu menganalisis dan mensintesis permasalahan pada sistem produksi agroindustri	✓ Introduction	1	Machfud
2.		✓ Problem of System Modelling Agroindustry ✓ System Boundary	1,2	Machfud
3.	Mampu menganalisis dan menjelaskan karakteristik pada beragam tipe sistem produksi agroindustri	✓ Characteristics System Modelling Agroindustry ✓ System Analysis	1	Machfud
4.	Menguasai konsep Siklus Hidup Sistem dan aplikasinya dalam sistem produksi agroindustri, serta ukuran kinerjanya	✓ Model – model Daur Hidup Sistem serta konsep dan beragam ukuran kinerja system produksi	2,3	Machfud
5.		✓ Model – model Daur Hidup Sistem serta konsep dan beragam ukuran kinerja system produksi (lanjutan)	1	Machfud
6.	Mampu merancang model dan menganalisis serta menyelesaikan masalah system produksi Agroindustri	✓ Models and Modeling	1	Machfud
7.		✓ Simulation Model ✓ Verification and Validation	1	Machfud
<i>Midterm Exam</i>				
8.	Mampu melaksanakan analisis system berorientasi proses serta berbasis <i>Value added activity</i> untuk perancangan system produksi	✓ VSM ✓ System Design	2	Machfud
9.	Mampu merancang dan mengembangkan rancangan system produksi Agroindustri	✓ Conceptual Modeling ✓ System Design	1,3	Machfud
10.		✓ Method Approach and Framework Design	1	Hartrisari
11.	Mampu mengembangkan konsep dan tahapan dalam perancangan sistem produksi.	✓ Production System Development	2	Hartrisari
12.		✓ Production System Development (continue)	1,2	Hartrisari
13.	Mampu merancang model dan system produksi berbasis <i>System Dynamic</i>	✓ System Dynamic	1,2	Hartrisari
14.		✓ System Dynamic (continue)	1	Hartrisari
<i>Final Exam</i>				

