Perancangan Teknik I

Course Brief Description:	The course is designed to provide students with knowledge and skills in engineering design which they can apply in designing simple agricultural tools and equipment. This course discusses concepts, principles and procedures in engineering design and basic calculations for dimensions of machine element.
Course Learning Objectives:	[1] Student will be able to demonstrate understanding of engineering design. [2] Students will be able to demonstrate understanding of procedures in engineering design [3] Students will be able to demonstrate capability to calculate the dimension of machine element related to engineering design
Related Expected Learning Outcomes (ELOs):	• ELO-3: Apply knowledge of mathematics, sciences, and engineering principles in agricultural fields. • ELO-4: Use quantitative analysis, information technology and critical thinking in agricultural engineering profession • ELO-5: Use techniques, skills, and modem tools necessary for agricultural engineering practices. • ELO-7: Ability to design simple equipment, components, or processes needed in agricultural engineering operations • ELO-10: Explore and develop effective solutions related to agricultural engineering issues
Teaching Method	• Lecture and in-depth discussion • Tutorial • Independent assignment
Grading Policy	• Quiz and Assignment : 20% • Exam : 80%
Reference	Harsokoesoemo, H.D., 2004, Pengantar Perancangan Teknik (Perancangan Produk), Bandung, ITB press
Lecturer Name	• Prof Dr. Ir. Junaedi Muhidong, M.Sc • Dr. Ir. Abdul Waris, MT • Dr. Iqbal, STP., M.Si

Jadwal Perkuliahan

Lecture:	Topic:	
1	Introduction: Basic Concept of Engineering Design	
2	Hardware and Software Tools for Engineering Design	Assignment 1
3	Design Processes of Machine, Equipment and Products	Quiz 1

Lecture:	Topic:	
4	Models in Engineering Design	
5	Descriptive French Method	Assignment 2
6	Pahl and Beitz Method	Quiz 2
7	VDI and Ulman Method	
8	**Mid Test**	
9	Concept Design of Machines and Equipment	
10	Design component of Machines	Quiz 3
11	Case in Machine Component Design	Assignment 3
12	Design component of Equipment	
13	Case in Equipment Design	Quiz 4
14	Design Product: Quantity Function Deployment Method	Assignment 4
15	Case in Product Design	
16	**Final Exam**	