

SYLLABUS CURRICULUM

COURSE	Course Name : Bioenergy
	Course Code : TM184862
	Credit : 3 sks
	Semester : choosed

COURSE DESCRIPTION

Provide an overview and understanding to students about the potential and assessment of bioenergy sources, bioenergy engineering technology and application of bioenergy products.

Provides an overview of the opportunities and challenges of bioenergy engineering development in terms of energy availability and the influence of bioenergy on the environment.

LEARNING OUTCOMES

LO8	Able to implement mathematics, science and engineering principles to solve engineering problems in mechanical systems.
LO9	Able to find the source of engineering problems in mechanical system through research that includes identification, formulation, analysis, data interpretation based on engineering principles.
LO10	Able to formulate the solution of engineering problem in mechanical system by considering economy, safety, environment and energy conservation.
LO11	Able to design mechanical system and the necessary components through analytical approach based on science and technology by considering technical standard and reliability.

COURSE LEARNING OUTCOMES

Student can understand well numerical basic concept, algorithm and error, able to understand well various kinds of numerical methods, be able to explain the character various kinds of numerical methods, and skilled applying the right numerical method solving engineering problems, both individually and group work.

MAIN SUBJECT

The focus of this course are as follows:

- Basics concept of numerical and error.
- Looking for the root equation with open and close method.
- System of linear algebraic equations.
- Curve fitting.
- Numerical integration.
- Ordinal and partial differential equation.

PREREQUISITES
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REFERENCE
1. Steven C. Chapra dan Raymond P. Canale, 'Numerical Methods for Engineers", 6th Ed., McGraw-Hill, Singapore, 2010