20FM006 ENERGY CONSERVATION AND MANAGEMENT IN FARM MACHINERY AND POWER ENGINEERING

Hours Per Week :

L	T	P	C
3	-	-	3

Total Hours :

L	T	P
45	-	-

WA/RA	SSH/HSH	CS	SA	S	BS
-	-	-	-	-	-

Course Description & Objective:

To acquaint and equip with the energy use pattern in agriculture production systems, conservation of energy, energy planning and economics.

Course outcomes:

1. Determine what farm practices use the most energy for producing a crop.
2. Describe farm equipment options for reducing energy use.
3. Describe management options for reducing energy use

SKILLS:

Knowledge on various engines,fuels,power developed

Knowledge on engine advancements like CRDI,MPFI,HCCI etc

UNIT I

Energy requirement of different operations in agricultural production systems viz. crop, livestock and aquaculture.

UNIT II

Energy conservation through proper management and maintenance of farm machinery

UNIT III

Planning and management of agricultural production systems for energy conservation and energy returns assessment.

UNIT IV

Development of computer program for efficient energy management in agiven agricultural production system.

UNIT V

Energy use planning and forecastingfor a given system.

Text books:

1. Mittal JP, Panesar BS, Singh S, Singh CP &Mannan KD. 1987. *Energy in Production Agriculture and Food Processing*. ISAE and School of Energy Studies, Ludhiana. ISAE Publ.

Reference books:

1. Pimental D. 1980. *Handbook of Energy Utilization in Agriculture*. CRC Press.

ACTIVITIES:

- *Energy forecasting and budgeting for paddy crop and chilly crop.*