

M. TECH. & PH. D. COURSES PROPOSED AS PER BSMA COMMITTEE
RECOMMENDATION

By

Department of Farm Machinery and Power Engineering,
College of Agricultural Engineering,
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COURSES PROPOSED FOR M. TECH. (FARM MACHINERY AND
POWER ENGINEERING)

COURSES OFFERED FOR M. TECH. FIRST SEMESTER

S.N.	Name of Courses		Credit
	Major courses (Minimum required 20 credits)		11
1	FMPE 501*	Soil Dynamics in Tillage and Traction	3(2+1)
2	FMPE 502*	Testing and Evaluation of Agricultural Equipment	3(2+1)
3	FMPE 517	Machinery for Precision Agriculture	3(2+1)
4	FMPE 515	Computer Aided Design of Machinery	2(0+2)
	Minor courses (Minimum required 8 credits)		05
1	ME 501	Mechatronics and Robotics in Agriculture	2(2+0)
2	ME 504	Vibrations	3(2+1)
	Supporting courses (Minimum required 6 credits)		03
1	STAT 501*	Statistical Methods for Research Work	3(2+1)

	Common Courses / Non-credit courses (Minimum Required 5 Credits)		03
1	PGS 501*	Library and Information Services	1(0+1)
2	PGS 503*	Intellectual Property and its Management in Agriculture	1(0+1)
3	PGS 504*	Basic Concepts in Laboratory Techniques	1(0+1)

COURSES OFFERED FOR M. TECH. SECOND SEMESTER

S.N.	Name of Courses		Credit
	Major courses (Minimum required 20 credits)		09
1	FMPE 503*	Ergonomics and Safety in Farm Operations	3(2+1)
2	FMPE 507*	Management of Farm Power and Machinery System	3(2+1)
3	FMPE 511	Principles of Automation and Control	3(2+1)
	Minor courses (Minimum required 8 credits)		03
1	CSE 502	Artificial Intelligence	3(2+1)
	Supporting courses (Minimum required 6 credits)		04
1	PFE 511	Food Processing Equipment and Plant Design	2(1+1)
2	SWCE-507/ IDE 507	Remote Sensing and GIS for Land and Water Resource Management	2(1+1)

	Common Courses / Non-credit courses (Minimum Required 5 Credits)		02
1	PGS 502*	Technical Writing and Communications Skills	1(0+1)
2	PGS 505*	Agricultural Research, Research Ethics and Rural Development Programmes	1(0+1)
	Master Seminar/ Other Essential Requirements		01
1	FMPE 591	Masters Seminar-I	1(0+1)

COURSES OFFERED FOR M. TECH. THIRD AND FOURTH SEMESTER

	Master Seminar/ Other Essential Requirements		30
1	FMPE 599	Masters Research	30 (0+30)

Summary of minimum credits requirement as per BSMA and credit load proposed for M. Tech (FMPE) degree programme:

Sr. No.	Name of the Courses	Minimum Credits required for M. Tech. as per BSMA	Credits proposed by deptt. of FMPE
1.	Major courses	20	20 (11+9)
2.	Minor Courses	08	08 (5+3)
3.	Supporting Courses	06	07(3+4)
4.	Master seminar	01	01
5.	Master Research	30	30
6.	Common courses/ Non-credit compulsory courses	05	05 (3+2)
7.	Total credits required and proposed	70	71

COURSES PROPOSED FOR PH. D. (FARM MACHINERY AND POWER ENGINEERING)

COURSES OFFERED FOR PH. D. FIRST SEMESTER

S.N.	Name of Courses		Credit
	Major courses (Minimum Required 12 Credits)		06
1	FMPE 601*	Advances in Farm Machinery and Power Engineering	3(2+1)
2	FMPE 614	Ergonomics in Working Environment	3(2+1)
	Minor courses (Minimum Required 06 Credits)		03
1	ME 515	Computer Aided Design	3(2+1)
	Supporting courses (Minimum Required 05 Credits)		02
1	CPE-RPE	Research and Publication Ethics	2(1+1)
	Doctoral Seminar (Minimum Required 02 Credits)		01
1	FMPE 691	Doctoral Seminar-I	1(0+1)
	Common courses Non-credit (Minimum Required 08 Credits)		03
1	PGS 501*	Library and Information Services	1(0+1)
2	PGS 503*	Intellectual Property and its Management in Agriculture	1(0+1)
3	PGS 504*	Basic Concepts in Laboratory Techniques	1(0+1)

COURSES OFFERED FOR PH. D. SECOND SEMESTER

S.N.	Name of Courses		Credit
	Major courses (Minimum Required 12 Credits)		06
1	FMPE 612*	Farm Machinery Management and System Engineering	3(2+1)
2	FMPE 603	Energy Conservation and Management in Production Agriculture	3(3+0)
	Minor courses (Minimum Required 06 Credits)		03
1	CSE 506	Digital Image Processing	3(2+1)
	Supporting courses (Minimum Required 05 Credits)		03
1	CSE 501	Big Data Analytics	3(2+1)

	Doctoral Seminar (Minimum Required 02 Credits)		01
1	FMPE 692	Doctoral Seminar-II	1(0+1)
	Common courses -Non-credit (Minimum Required 08 Credits)		02
1	PGS 502*	Technical Writing and Communications Skills	1(0+1)
2	PGS 505*	Agricultural Research, Research Ethics and Rural Development Programmes	1(0+1)

COURSES OFFERED FOR PH. D. THIRD, FOURTH, FIFTH AND SIXTH SEMESTER

	Doctoral Research (Minimum Required 75 Credits)		75
1	FMPE 699	Doctoral Research	75(0+75)

Summary of minimum credits requirement as per BSMA and credit load proposed for Ph. D. (FMPE) degree programme:

Sr. No.	Name of the Courses	Minimum Credits required for Ph.D.	Credits proposed
1.	Major courses	12	12 (6+6)
2.	Minor Courses	06	06 (3+3)
3.	Supporting Courses	05	05 (2+3)
4.	Doctoral seminar	02	02(1+1)
5.	Doctoral Research	75	75(0+75)
6.	Non-credit compulsory courses	05	05(3+2)
7.	Total credits required and proposed	100	100 (Without Common courses credits)

Note:

1. Those students who have already completed non-credit /common courses during their M. Tech. degree programme, need not to register/complete it during their Ph. D. degree programme.
