DAYANANDA SAGAR UNIVERSITY

Shavige Malleshwara Hills, Kumaraswamy Layout,

Bengaluru - 560078, Karnataka.

SCHOOL OF ENGINEERING

SCHEME & SYLLABUS
FOR
MASTER OF TECHNOLOGY (M.Tech) – 2016

MECHANICAL ENGINEERING

SPECIALIZATION: DESIGN ENGINEERING

(With Effect from 2016-17)

SCHOOL OF ENGINEERING
PROGRAMME: MASTER OF TECHNOLOGY (M. TECH) – 2016-17
DEPARTMENT / BRANCH: MECHANICAL ENGINEERING

SPECIALIZATION: DESIGN ENGINEERING

SEMESTER – 1

SL. NO.	COURSE CODE	COURSE TITLE	CR / AU	NO. OF HOURS OF TEACHING				SCHEME OF EVALUATION	
				L	T	P	C	CIA	END EXAM
1	16MDE501	APPLIED MATHEMATICS	CR	03	02	--	04	40	60
2	16MDE502	FINITE ELEMENT METHOD	CR	03	--	--	03	40	60
3	16MDE 503	SOLID MECHANICS	CR	03	--	--	03	40	60
4	16MDE5XX	DEPARTMENT ELECTIVE	CR	03	02	--	04	40	60
5	16MDE5XX	DEPARTMENT ELECTIVE	CR	03	02	--	04	40	60
6	16MDE571	DESIGN LAB – I	CR	--	--	04	02	40	60
7	16MDE572	DESIGN LAB – II	CR	--	--	04	02	40	60
GRAND TOTAL = 700				**15**	**06**	**08**	**22**	**280**	**420**

SEMESTER – 2

SL. NO.	COURSE CODE	COURSE TITLE	CR / AU	NO. OF HOURS OF TEACHING				SCHEME OF EVALUATION	
				L	T	P	C	CIA	END EXAM
1	16MDE504	ADVANCES IN MATERIAL TECHNOLOGY	CR	03	02	--	04	40	60
2	16MDE505	MECHANICS OF COMPOSITE MATERIALS	CR	03	--	--	03	40	60
3	16MDE506	ADVANCED MACHINE DESIGN	CR	03	--	--	03	40	60
4	16MDE5XX	DEPARTMENT ELECTIVE	CR	03	02	--	04	40	60
5	16MDE5XX	DEPARTMENT ELECTIVE	CR	03	02	--	04	40	60
6	16MDE573	DESIGN LAB – III	CR	--	--	04	02	40	60
7	16MDE574	DESIGN LAB – IV	CR	--	--	04	02	40	60
GRAND TOTAL = 700				**15**	**06**	**08**	**22**	**280**	**420**

NOTE: CR – Credit, AU – Audit, L – Lecture, T – Tutorial, P – Practical, C – No. of Credits, CIA – Continuous Internal Assessment

SCHOOL OF ENGINEERING
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DEPARTMENT / BRANCH: MECHANICAL ENGINEERING

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SEMESTER – 3

SL. NO.	COURSE CODE	COURSE TITLE	CR / AU	NO. OF HOURS OF TEACHING				SCHEME OF EVALUATION	
				L	T	P	C	CIA	END EXAM
1	16MDE6XX	DEPARTMENT ELECTIVE	CR	03	02	--	04	30	70
2	16MDE6XX	INSTITUTIONAL ELECTIVE	CR	03	--	--	03	30	70
3	16MDE681	DISSERTATION	CR	--	--	--	03	100	--
GRAND TOTAL = 300				**06**	**02**	**--**	**10**	**160**	**140**

SEMESTER – 4

SL. NO.	COURSE CODE	COURSE TITLE	CR / AU	NO. OF HOURS OF TEACHING				SCHEME OF EVALUATION	
				L	T	P	C	CIA	END EXAM
1	16MDE6XX	DEPARTMENT ELECTIVE	CR	03	02	--	04	30	70
2	16MDE682	DISSERTATION	CR	--	--	--	06	200	100
GRAND TOTAL = 400				**03**	**02**	**--**	**10**	**230**	**170**

NOTE: CR – Credit, AU – Audit, L – Lecture, T – Tutorial, P – Practical, S/P – Seminar/Project, C – No. of Credits, CIA – Continuous Internal Assessment

SPECIALIZATION: DESIGN ENGINEERING
DEPARTMENTAL ELECTIVES (BATCH: 2016 – 2017):

COURSE CODE	COURSE TITLE	COURSE CODE	COURSE TITLE
16MDE521	EXPERIMENTAL STRESS ANALYSIS	16MDE621	RESEARCH METHODOLOGY
16MDE522	DYNAMICS	16MDE622	EMBEDDED SYSTEMS
16MDE523	PRODUCT DEVELOPMENT	16MDE623	SENSORS AND SIGNAL CONDITIONING
16MDE524	DATA VISUALIZATION	16MDE624	MICRO ELECTRICAL MECHANICAL SYSTEMS (MEMS)
16MDE525	ROBOTICS	16MDE625	TRIBOLOGY
16MDE526	DIGITAL CONTROL SYSTEMS	16MDE626	AUTOMOTIVE ELECTRONICS
16MDE527	FRACTURE MECHANICS	16MDE627	JIGS AND FIXTURES DESIGN
16MDE528	DESIGN OF HYDRAULIC AND PNEUMATIC SYSTEMS	16MDE628	OPTIMIZATION TECHNIQUES
16MDE529	LEAN MANUFACTURING	16MDE629	DESIGN OF EXPERIMENTS
16MDE530	SMART MATERIALS AND STRUCTURES	16MDE630	RELIABILITY AND FAILURE ANALYSIS
16MDE531	MECHATRONICS SYSTEM DESIGN	16MDE631	ROBUST DESIGN
16MDE532	MODELLING AND SIMULATION	16MDE632	FINITE ELEMENT METHODS FOR STRUCTURAL MECHANICS APPLICATIONS
16MDE533	MECHANISM DESIGN	16MDE633	DESIGN OF MATERIALS HANDLING SYSTEMS
16MDE534	INDUSTRIAL DESIGN AND ERGONOMICS	16MDE634	THEORY OF PLASTICITY
16MDE535	ADDITIVE MANUFACTURING	16MDE635	NON LINEAR ANALYSIS