

DAYANANDA SAGAR UNIVERSITY

ShavigeMalleshwara Hills, Kumaraswamy Layout,

Bengaluru - 560078, Karnataka.

SCHOOL OF ENGINEERING



SCHEME & SYLLABUS

FOR

BACHELOR OF TECHNOLOGY (B.Tech.) – 2019

MECHANICAL ENGINEERING

(3rd to 8th Sem)

(WITH EFFECT FROM 2019 - 20)

SCHEME - B.TECH - 2019-20 ONWARDS

III SEM - MECHANICAL ENGINEERING

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	105	19ME2301	ENGINEERING MATHEMATICS - III - MECH & ASE	CR	03	01	--	--	04	*	***
2	105	19ME2302	ENGINEERING MATERIALS	CR	03	--	02	--	04	*	***
3	105	19ME2303	ENGINEERING MECHANICS	CR	03	--	--	--	03	*	***
4	105	19ME2304	THERMODYNAMICS	CR	03	--	--	--	03	*	***
5	105	19ME2305	COMPUTER AIDED MACHINE DRAWING	CR	02	--	04	---	04	II	19EN1271
6	105	19ME2306	MECHANICAL MEASUREMENTS	CR	03	--	02	--	04	*	***
7	105	19ME2307	SPECIAL TOPICS - I	CR	02	--	--	--	02	*	***
					19	01	08	-	24		

CR – Credit, AU – Audit, L – Lecture, T – Tutorial, P – Practical, S/P – Seminar/Project, C – No. of Credits,

SCHEME - B.TECH - 2019-20 ONWARDS

IV SEM - MECHANICAL ENGINEERING

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	105	19ME2401	APPLIED THERMODYNAMICS	CR	02	01	02	--	04	III	19ME2304
2	105	19ME2402	MECHANICS OF MATERIALS	CR	02	01	--	--	03	III	19ME2303
3	105	19ME2403	FLUID MECHANICS AND MACHINES	CR	03	--	02	--	04	*	***
4	105	19ME2404	MANUFACTURING PROCESS	CR	03	--	02	--	04	*	***
5	105	19ENC003	ECONOMICS FOR ENGINEERS	CR	02	--	--	--	02	*	***
6	105	19ME2405	SPECIAL TOPICS - II	CR	02	--	--	--	02	*	***
					14	02	06	--	19		

CR – Credit, AU – Audit, L – Lecture, T – Tutorial, P – Practical, S/P – Seminar/Project, C – No. of Credits,

SCHEME - B.TECH - 2019-20 ONWARDS

V SEM - MECHANICAL ENGINEERING

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	105	19ME3501	HEAT TRANSFER	CR	03	--	02	--	04	III	19ME2304
2	105	19ME3502	KINEMATICS & THEORY OF MACHINES	CR	03	01	--	--	04	*	***
3	105	19ME3503	DESIGN OF MACHIN ELEMENTS - I	CR	02	01	02	--	04	IV	19ME2402
4	105	19ME3504	MANUFACTURING TECHNOLOGY	CR	03	--	02	--	04	IV	19ME2404
5	105	19ME35XX	PROFESSIONAL ELECTIVE - I	CR	03	--	--	--	03	AS INDICATED IN PROGRAM ELECTIVE LIST	
6	105	19OEXXXX	OPEN ELECTIVE - I	CR	03	--	--	--	03	*	***
7	105	19ME3505	SPECIAL TOPICS - III	CR	02	--	--	--	02	*	***
					19	02	06	--	24		

CR – Credit, AU – Audit, L – Lecture, T – Tutorial, P – Practical, S/P – Seminar/Project, C – No. of Credits,

PROGRAM ELECTIVE - I				
SL.NO	COURSE CODE	COURSE TITLE	PREREQUISITE	
			SEM	COURSE CODE
1	19ME3506	REFRIGERATION AND AIR CONDITIONING	IV	19ME2401
2	19ME3507	QUALITY AND RELIABILITY ENGINEERING	*	***
3	19ME3508	NON-DESTRUCTIVE EVALUATION AND TESTING	*	***
4	19ME3509	TOOL DESIGN	*	***
5	19ME3510	INTRODUCTION TO ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING	*	***

SCHEME - B.TECH - 2019-20 ONWARDS
VI SEM - MECHANICAL ENGINEERING

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	105	19ME3601	DESIGN OF MACHINE ELEMENTS – II	CR	02	01	02	--	04	IV	19ME2402
2	105	19ME3602	FINITE ELEMENT ANALYSIS	CR	02	01	02	--	04	I	19EN1101
3	105	19ME3603	MECHANICAL VIBRATIONS	CR	03	--	02	--	04	II	19EN1201
4	105	19ME36XX	PROFESSIONAL ELECTIVE – II	CR	03	--	--	--	03	AS INDICATED IN PROGRAM ELECTIVE LIST	
5	105	19ME36XX	PROFESSIONAL ELECTIVE – III	CR	03	--	--	--	03		
6	105	19OEXXXX	OPEN ELECTIVE – II	CR	03	--	--	--	03		
7	105	19ENXXXX	LAW FOR ENGINEERS	CR	02	--	-	--	02		
					18	02	06	--	23		

CR – Credit, AU – Audit, L – Lecture, T – Tutorial, P – Practical, S/P – Seminar/Project, C – No. of Credits,

PROGRAM ELECTIVE – II				
SL.NO	COURSE CODE	COURSE TITLE	PREREQUISITE	
			SEM	COURSE CODE
1	19ME3604	PRODUCT DESIGN AND MANUFACTURING	*	***
2	19ME3605	SURFACE ENGINEERING	*	***
3	19ME3606	RENEWABLE ENERGY SOURCES	III	19ME2304
4	19ME3607	ROBOTICS	V	19ME3502
5	19ME3608	COMPUTER AIDED DESIGN	*	***
PROGRAM ELECTIVE – III				
1	19ME3609	PRINCIPLES OF FRACTURE MECHANICS	IV	19ME2402
2	19ME3610	INTERNAL COMBUSTION ENGINES	IV	19ME2401
3	19ME3611	MODELLING AND SIMULATION OF MANUFACTURING SYSTEMS	V	19ME3504
4	19ME3612	ADVANCED MATERIAL TECHNOLOGY	III	19ME2302
5	19ME3613	DEEP LEARNING & IMAGE PROCESSING	*	***

SCHEME - B.TECH - 2019-20 ONWARDS

VII SEM - MECHANICAL ENGINEERING

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	105	19ME4701	CONTROL SYSTEMS ENGINEERING	CR	03	--	02	--	04	II	19EN1201
2	105	19ME47XX	PROFESSIONAL ELECTIVE - IV	CR	03	--	--	--	03	AS INDICATED IN PROGRAM ELECTIVE LIST	
3	105	19ME47XX	PROFESSIONAL ELECTIVE - V	CR	03	--	--	--	03		
4	105	19OEXXXX	OPEN ELECTIVE - III	CR	03	--	--	--	03	*	***
5	105	19ME4702	MAJOR PROJECT PHASE - I	CR	--	--	--	04	02	*	***
					12	-	02	04	15		

CR - Credit, AU - Audit, L - Lecture, T - Tutorial, P - Practical, S/P - Seminar/Project, C - No. of Credits,

PROGRAM ELECTIVE - IV				
SL.NO	COURSE CODE	COURSE TITLE	PREREQUISITE	
			SEM	COURSE CODE
1	19ME4703	ADVANCED MACHINING PROCESSES	IV	19ME2404
2	19ME4704	GAS DYNAMICS AND JET PROPULSION	IV	19ME2403
			V	19ME3501
3	19ME4705	MEMS (MICRO ELECTRO MECHANICAL SYSTEMS)	*	***
4	19ME4706	COMPOSITE MATERIALS	III	19ME2302
5	19ME4707	OPERATION RESEARCH	*	***
PROGRAM ELECTIVE - V				
1	19ME4708	RAPID MANUFACTURING TECHNOLOGIES	V	19ME3504
2	19ME4709	DESIGN FOR MANUFACTURING	*	***
3	19ME4710	COMPUTATIONAL FLUID DYNAMICS	IV	19ME2403
			V	19ME3501
4	19ME4711	OPERATIONS MANAGEMENT	*	***

SCHEME - B.TECH - 2019-20 ONWARDS

VIII SEM - MECHANICAL ENGINEERING

SL	PROGRAM CODE	COURSE CODE	COURSE TITLE	CR / AU	SCHEME OF TEACHING					PREREQUISITE	
					L	T	P	S/P	C	SEM	COURSE CODE
1	105	19ME48XX	PROFESSIONAL ELECTIVE - VI	CR	03	--	--	--	03	AS INDICATED IN PROGRAM ELECTIVE LIST	
2	105	19ME4801	MAJOR PROJECT PHASE- II	CR	--	--	--	20	10	VII	19ME4702
					03	-	-	10	13		

CR – Credit, AU – Audit, L – Lecture, T – Tutorial, P – Practical, S/P – Seminar/Project, C – No. of Credits,

PROGRAM ELECTIVE - VI				
SL.NO	COURSE CODE	COURSE TITLE	PREREQUISITE	
			SEM	COURSE CODE
1	19ME4802	TRIBOLOGY AND BEARING DESIGN	VI	19ME3601
2	19ME4803	PLASTIC PROCESSING TECHNOLOGY	*	***
3	19ME4804	AUTOMOBILE ENGINEERING	*	***
4	19ME4805	FUELS AND COMBUSTION	IV	19ME2401