CHOICE BASED CREDIT SYSTEM EVALUATION SCHEME AND COURSE OF STUDY



B. TECH. IN MECHANICAL ENGINEERING BATCH (2018-2022)

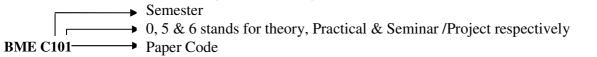
FACULTY OF ENGINEERING & TECHNOLOGY GURUKULA KANGRI (DEEMED TO BE) UNIVERSITY HARIDWAR

(Semester – I)

a ====	COURSE	COURSE OPTED		Pe	eriod j				TION SCH	IEME	Semes [®] Credit	Subject
S.NO.	CODE		SUB JEC T	L	week T	Р	CT	TA	L EXAM. TOTAL	EXAM. ESE		
	THEORY SUBJECTS											
1	BAP- C101	DSC1	Engineering Physics	3	1	0	20	10	30	70	4	100
2	BEM- C101	DSC2	Engineering Mathematics-I	3	1	0	20	10	30	70	4	100
3	BEE- C101	DSC3	Basic Electrical Engineering	3	1	0	20	10	30	70	4	100
4	BET- C101	DSC4	Basic Electronics Engineering	3	1	0	20	10	30	70	4	100
5	BME- C102	DSC5	Basic Manufacturing Process	3	1	0	20	10	30	70	4	100
			PRACTICA PR	L / TF OJEC		NG/	I		1	1		1
6	BEG- A151	AECC1 Lab	Technical Communication Lab	0	0	2	20	10	30	70	2	100
7	BAP- C151	DSC1 Lab	Engineering Physics Lab	0	0	2	20	10	30	70	2	100
8	BEE- C151	DSC3 Lab	Basic Electrical Engineering Lab	0	0	2	20	10	30	70	2	100
9	BET- C151	DSC4 Lab	Basic Electronics Engineering Lab	0	0	2	20	10	30	70	2	100
10	BME- C152	DSC5 Lab	Workshop Practice	0	0	2	20	10	30	70	2	100
	1	11	TOTAL	15	5	12	200	100	300	700	30	1000

L-Lecture; T-Tutorial; P-Practical; CT-Cumulative Test; TA- Teacher Assessment; ESE–End Semester Examination; DSC-Core Course; DSC- Discipline Specific Compulsory; DSE-Discipline Specific Elective; SEC- Skill Enhancement Course; AECC- Ability Enhancement Compulsory Course

Grading & Grade Points: O(Outstanding)= 10; A⁺(Excellent)= 9; A(Very Good)= 8; B⁺(Good)= 7; B(Above Average)= 6; C(Average)= 5; P(Pass)= 4; F(Fail)= 0; Ab(Absent)= 0



							-			(Seme	ester –	II)
	COURSE	COURSE		Period per week					TION SCH		Credit	Subject
S.NO.	CODE	OPTED	SUBJECT	L	Т	Р	СТ	ТА	TOTAL	EXAM. ESE		TOTAL
		·	THEORYS	SUBJE	ECTS							
1	BEN- A201	AECC2	Environmental Studies	3	1	0	20	10	30	70	4	100
2	BHU- S201	SEC1	Vedic Science & Engineering	3	1	0	20	10	30	70	4	100
3	BME- C201	DSC6	Fundamental of Mechanical Engineering	3	1	0	20	10	30	70	4	100
4	BCE- C201	DSC7	Problem Solving Through 'C'	3	1	0	20	10	30	70	4	100
5	BEM- C201	DSC8	Engineering Mathematics- II	3	1	0	20	10	30	70	4	100
6	BAC- C201	DSC9	Engineering Chemistry	3	1	0	20	10	30	70	4	100
			PRACTICAL / TRA	INING	G / PR	OJEC	T					
7	BAC- C251	DSC9 Lab	Engineering Chemistry Lab	0	0	2	20	10	30	70	2	100
8	BME- C251	DSC6 Lab	Basic Mechanical Engineering Lab	0	0	2	20	10	30	70	2	100
9	BCE- C251	DSC7 Lab	Computer Programming Lab	0	0	2	20	10	30	70	2	100
10	BME- C253	DSC10 Lab	Engineering Graphics	0	0	2	20	10	30	70	2	100
11	BSP- S251	SEC2 Lab	Physical training and yoga	0	0	0	0	100	100			100
	1	<u> </u>	TOTAL	18	6	8	200	200	400	700	32	1100

B. Tech. I Year

L-Lecture; T-Tutorial; P-Practical; CT-Cumulative Test; TA- Teacher Assessment; ESE–End Semester Examination; DSC-Core Course; DSC- Discipline Specific Compulsory; DSE-Discipline Specific Elective; SEC- Skill Enhancement Course; AECC- Ability Enhancement Compulsory Course

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→ Semester

0, 5 & 6 stands for theory, Practical & Seminar /Project respectively

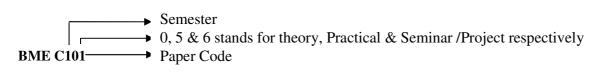
BME C101 Paper Code

										(Semes	ster – I	II)
				Pe	riod _l		E	VALUA	TION SCH	IEME		
S.NO.	COURSE	COURSE	SUBJECT	week			SESSIONAL EXAM.			EXAM.		Subject
	CODE	OPTED		L	Т	Р	СТ	ТА	TOTAL	ESE		TOTAL
			THEORY S	UBJE	CTS							
1	BEM- C301	DSC11	Engineering Mathematics – III	3	1	0	20	10	30	70	4	100
2	BME- C302	DSC12	Material Science	3	1	0	20	10	30	70	4	100
3	BME- C303	DSC13	Applied Thermodynamics	3	1	0	20	10	30	70	4	100
4	BME- C304	DSC14	Strength of Material	3	1	0	20	10	30	70	4	100
5	BME- C305	DSC15	Kinematics of Machines	3	1	0	20	10	30	70	4	100
6	BET- C301	DSC16	Electronic Devices and Circuits	3	1	0	20	10	30	70	4	100
			PRACTICAL / TRA	INING	G / PR	OJEC	T					
7	BME- C351	DSC17 Lab	Machine Drawing	0	0	2	20	10	30	70	2	100
8	BME- C352	DSC12 Lab	Material Science and Testing Lab	0	0	2	20	10	30	70	2	100
9	BME- C353	DSC13 Lab	Applied Thermodynamics Lab	0	0	2	20	10	30	70	2	100
10	BET- C351	DSC16 Lab	Electronics Devices and Circuits Lab	0	0	2	20	10	30	70	2	100
			TOTAL	18	6	8	200	100	300	700	32	1000

B. Tech. II Year

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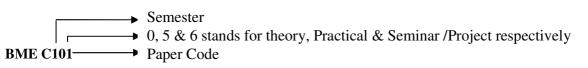
Department of Mechanical Engineering

										(Semes	ster – l	V)
				Pe	riod j		E	VALUA	TION SCH	IEME		
S.NO.	COURSE	COURSE	SUBJECT	week			SESSIONAL EXAM.			EXAM.	Credit	Subject
	CODE	OPTED	ED CODECT	L	Т	Р	СТ	ТА	TOTAL	ESE		TOTAL
			THEORY S	SUBJE	ECTS							
1	BME-C401	DSC18	Fluid Mechanics	3	1	0	20	10	30	70	4	100
2	BME-C402	DSC19	Dynamics of Machines	3	1	0	20	10	30	70	4	100
3	BME-C403	DSC20	Manufacturing Science – I	3	1	0	20	10	30	70	4	100
4	BHU-C401	DSC21	Engineering Economics	3	1	0	20	10	30	70	4	100
5	BEM-C402	DSC22	Numerical Analysis	3	1	0	20	10	30	70	4	100
6	BEE-C404	DSC23	Electrical Machines	3	1	0	20	10	30	70	4	100
7	BKT-C403	AECC	Indian Knowledge Tradition	3	1	0	20	10	30	70	2	100
			PRACTICAL / PROJ		ININC	G /						
8	BME-C451	DSC18 Lab	Fluid Mechanics Lab	0	0	2	20	10	30	70	2	100
9	BME-C 452	DSC19 Lab	Theory of Machines Lab	0	0	2	20	10	30	70	2	100
10	BME-C 453	DSC20 Lab	Manufacturing Science – I Lab	0	0	2	20	10	30	70	2	100
11	BEE-C 454	DSC23 Lab	Electrical Machines Lab	0	0	2	20	10	30	70	2	100
			TOTAL	18	6	8	200	100	300	700	34	1000

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Grading & Grade Points: O(Outstanding)= 10; A⁺(Excellent)= 9; A(Very Good)= 8; B⁺(Good)= 7; B(Above Average)= 6; C(Average)= 5; P(Pass)= 4; F(Fail)= 0; Ab(Absent)= 0



 $Department \ of \ Mechanical \ Engineering$

										(Seme	ester –	V)
				Pe	riod j		E	VALUA	TION SCH	IEME		
S.NO.	COURSE	COURSE	SUBJECT	week			SESSIONAL EXAM.			EXAM.	Credit	Subject
	CODE	OPTED	ע <u>ז</u>	L	Т	Р	СТ	ТА	TOTAL	ESE		TOTAL
			THEORY S	UBJF	CTS							
1	BEM- C501	DSC24	Optimization Techniques	3	1	0	20	10	30	70	4	100
2	BME- C501	DSC25	Fluid Machines	3	1	0	20	10	30	70	4	100
3	BME- C502	DSC26	Measurement, Metrology and Control	3	1	0	20	10	30	70	4	100
4	BME- C503	DSC27	Manufacturing Science-II	3	1	0	20	10	30	70	4	100
5	BHU- C502	DSC28	Principles and Practices of Management	3	1	0	20	10	30	70	4	100
6	BEE- C503	DSC29	Automatic Control System	3	1	0	20	10	30	70	4	100
			PRACTICAL / TRA	INING	G / PR	OJEC	Т					
7	BME- C551	DSC25 Lab	Fluid Machines Lab	0	0	2	20	10	30	70	2	100
8	BME- C552	DSC26 Lab	Measurement, Metrology and Control Lab	0	0	2	20	10	30	70	2	100
9	BME- C553	DSC27 Lab	Manufacturing Science-II Lab	0	0	2	20	10	30	70	2	100
10	BME- C554	DSC30 Lab	Seminar	0	0	2	20	10	30	70	2	100
			TOTAL	18	6	8	200	100	300	700	32	1000

B. Tech. III Year

L-Lecture; T-Tutorial; P-Practical; CT-Cumulative Test; TA- Teacher Assessment; ESE–End Semester Examination; DSC-Core Course; DSC- Discipline Specific Compulsory; DSE-Discipline Specific Elective; SEC- Skill Enhancement Course; AECC- Ability Enhancement Compulsory Course

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- → Semester
- 0, 5 & 6 stands for theory, Practical & Seminar /Project respectively
- BME C101 Paper Code

										(Semes	ster – V	VI)
				Pe	eriod j		E	VALUA	ATION SCH	IEME		
S.NO.	COURSE	COURSE	SUBJECT	week			SESSIONAL EXAM.			EXAM.	Credit	Subject
54101	CODE	OPTED		L	Т	Р	СТ	ТА	TOTAL	EXAM. ESE		TOTAL
			THEORY	SUBJE	ECTS							
1	BME- C601	DSC31	Machine Design – I	3	1	0	20	10	30	70	4	100
2	BME- C602	DSC32	Heat and Mass Transfer	3	1	0	20	10	30	70	4	100
3	BME- C603	DSC33	I.C. Engines	3	1	0	20	10	30	70	4	100
4	BME- C604	DSC34	Industrial Engineering	3	1	0	20	10	30	70	4	100
5	BME- C605	DSC35	Quality Control and Reliability Engineering	3	1	0	20	10	30	70	4	100
6	BME- C606	DSC36	Mechanical Vibrations	3	1	0	20	10	30	70	4	100
			PRACTICAL / TRA	INING	G / PR	OJEC	T					
7	BME- C651	DSC31 Lab	Machine Design – I Lab	0	0	2	20	10	30	70	2	100
8	BME- C652	DSC32 Lab	Heat and Mass Transfer Lab	0	0	2	20	10	30	70	2	100
9	BME- C653	DSC33 Lab	I. C. Engines Lab	0	0	2	20	10	30	70	2	100
10	BEG- C651	DSC37 Lab	Technical Communication Lab	0	0	2	20	10	30	70	2	100
	-	·	TOTAL	18	6	8	200	100	300	700	32	1000

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→ Semester

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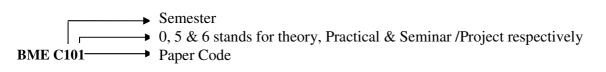
BME C101 Paper Code

										(Semes	ster – V	VII)
				Pe	riod				TION SCH	IEME	Credit	
S.NO.	COURSE CODE	COURSE OPTED	SUR IF("I"	L	week T	Р	SESS CT	SIONAL TA	L EXAM. TOTAL	EXAM. ESE		Subject TOTAL
			THEORY S	UBJE	ECTS	<u>I</u>		<u> </u>				
1	BME- C701	DSC38	Machine Design – II	3	1	0	20	10	30	70	4	100
2	BME- C702	DSC39	Refrigeration and Air Conditioning	3	1	0	20	10	30	70	4	100
3	BME- C703	DSC40	Energy Resources and Management	3	1	0	20	10	30	70	4	100
4	BME- C714	DSE1	Elective-I (Unconventional Engineering Processes)	3	1	0	20	10	30	70	4	100
5	BME- C716	DSE2	Elective-II (Computer Aided Design)	3	1	0	20	10	30	70	4	100
6	BME-	DSC38	PRACTICAL / PROJ Machine Design – II Lab		NINC	G/ 2	20	10	30	70	2	100
7	C751 BME-	Lab DSC39	Refrigeration and Air Conditioning Lab	0	0	2	20	10	30	70	2	100
8	C752 BME- C760	Lab DSC40 Lab	Minor Project	0	0	4	20	50	50	150	4	200
			TOTAL	15	5	8	140	120	260	640	28	900

B. Tech. IV Year

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 $Department \ of \ Mechanical \ Engineering$

		1					1		· · · · · · · · · · · · · · · · · · ·	Semeste	er - VI	II)
				Pe	riod J week				TION SCH	IEME		
S.NO.	COURSE CODE	COURSE OPTED	SUBJECT	WCCK			SESSIONAL EXAM.			EXAM.	Credit	Subject TOTAL
	CODE	OTTED		L	Т	Р	СТ	ТА	TOTAL	ESE		IUIAL
			THEORY S	UBJE	CTS							
1	BME- C801	DSC41	Machine Tool Design	3	1	0	20	10	30	70	4	100
2	BME- E821	DSE3	Elective III (Total Quality Management)	3	1	0	20	10	30	70	4	100
3	BME- E826	DSE4	Elective IV (Advanced Welding Process)	3	1	0	20	10	30	70	4	100
4	BME- E827	DSE5	Elective V (Maintenance Engineering and Management)	3	1	0	20	10	30	70	4	100
			PRACTICAL / TRA	INING	j/PR	OJEC	T		-			-
5	BME-C 860	DSC42 Lab	Major Project	0	0	8	0	100	100	300	8	400
			TOTAL	12	4	8	80	140	220	580	24	800

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→ Semester



BME C101 Paper Code

10

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LIST OF ELECTIVES

Elective -	I & II (Seventh semester)
BME-E 711	Advanced Materials Technology
BME-E 712	Advanced Synthesis of Mechanisms
BME-E 713	Thermal Turbo Machines
BME-E 714	Unconventional Manufacturing Processes
BME-E 715	Automobile Engineering
BME-E 716	Computer Aided Design (CAD)
BME-E 717	Computer Aided Manufacturing (CAM)
BME-E 718	Product Development and Design
BME-E 719	Robotics
BME-E 720	Operations Management: Models & Concepts
Elective -	III, IV & V (Eighth semester)
BME-E 821	Total Quality Management (TQM)
BME-E 822	Non Destructive Testing
BME-E 823	Concurrent Engineering
BME-E 824	Automatic Controls
BME-E 825	Optimization Techniques in Engineering
BME-E 826	Advanced Welding Processes
BME-E 827	Maintenance Engineering & Management
BME-E 828	Advanced Dynamics of Machinery
BME-E 829	Mechanical System Design
BME-E 830	Project Management
BME-E 831	Foundry Engineering
BME-E 832	Finite Element Methods
BME-E 833	Nanotechnology and Nanocomputing

NOTE: Electives will be offered depending upon the availability of teaching staff and minimum thirty students should opt for a particular elective.

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