

SDM College of Engineering & Technology, Dharwad
Department of Mechanical Engineering

CO PO 2021-22

Subject Code	Subject	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6
18UMAC300	Engineering Mathematics-III	83	84	87.5	83.5	88.5	
18UMEC300	Basic Thermodynamics	82.5	81	83	74.5	85.5	80
18UMEC301	Materials Science	64	47.5	37.5	48.5	23	
18UMEC302	Strength of Materials	90.5	79	63.5	80	85	94
18UMEC303	Manufacturing Processes- I	87	73	74	54	70	60
18UMEC304	Machine Drawing	84.5	86	90.5	81.5	98.5	
18UMEL305	Materials Science & Materials Testing Lab	92	93	94	82	48	
18UMEL306	Foundry & Forging Lab	89	90	94	89		
18UMEC400	Fluid Mechanics	94.5	79.5	72.5	86	82.5	
18UMEC401	Manufacturing Processes - II	85	73	58	75	87	86
18UMEC402	Applied Thermodynamics	98	97	97	95	96	
18UMEC403	Metrology and Measurements	82	90	87	90	93	
18UMEC404	Design of Machine Elements-I	58.5	69.5	23	84.5	73	
18UMEL405	Measurements Laboratory	87	92	88	86	77	40
18UMEL406	Thermal Engineering Laboratory-I	92	93	88	0	88	
18UMEL407	Introductory Project	98	98	98	98	98	
18UHUC500	Management, Economics &Intellectual Property Rights	78.5	84	84	89	87	72.5
18UMEC500	Theory of Machines	74.5	62.5	84.5	77	52	31.5
18UMEC501	Design of Machine Elements-II	82	68.5	55	62.5	61	
18UMEC502	Turbo machines	90	88.5	60.5	74	83.5	
18UMEC503	Renewable Energy Technology	80	68.5	63.5	69	89.5	
18UMEL504	Machine shop Practice	98	99	100	98		
18UMEL505	Thermal Engg. Lab - II	83	81	75	76		
18UMEE521	CAD/CAM (Computer aided design / Computer aided manufacturing)	83	71	76	69	83	81
18UMEE527	Fundamentals of Automobile Design	73	86	59	45	59	31
18UMEC600	Heat Transfer	72.5	76.5	72	71.5	64.5	
18UMEC601	Finite Element Methods	63.5	82	73	54.5	40.5	
18UMEL603	Thermal Engineering Laboratory - III	84	73	78	67	77	
18UMEL604	Mini Project						
18UMEE621	Refrigeration & Air conditioning	84	52	84	72	84	
18UMEE624	Internal Combustion Engines	84.5	65	92.5	90.5	79.5	
18UMEE631	Tool Design Engineering	83	63	74	89	94	94
18UMEE634	Design and Drawing of Mechanical Assemblies	33	67		30		
18UMEE637	Advanced Automobile Design	56	46	49	59	73	46
18UMEO642	Total Quality Management	71	71	44	79	69	79
18UMEO647	Introduction to Scientific programming	88.5	78.5	77	89.5	89.5	
18UMEC700	Mechanical Vibrations	77	82	81.5	57	71	
18UMEC701	Control Engineering	83.5	56	80.5	75	77.5	85.5
18UMEL702	Dynamics Lab	86	69	67	80	76	
18UMEL703	Major Project Phase-1	100	100	100	100	89	
18UMEL704	Internship	98.4	98.4	96.91	94.81		
18UMEE723	Hybrid Vehicle Technology	100	85	78	78	78.5	
18UMEE724	Computational Fluid Dynamics	100	99	100	96.5	100	100
18UMEO731	Introduction To Aircraft Systems	90	81	79	63	69	73
18UMEO732	Project Management	95	95	81	88	84	
18UMEC800	Fluid Power Control	93	87	87	88	93.5	
18UMEL802	Major Project Phase-2	100	100	100	100	100	100
18UMEE821	Operations Research	92	77	69	84		


Subject Code	Subject	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6
18UMEE823	Organizational Behavior	64	77	77	61	69	
18UMEE834	Tribology and Bearing Design	96	98	89	79	79	
18UMEE837	Industry 4.0 & Artificial intelligence	89	85	93	96	93	

SDM College of Engineering & Technology, Dharwad
Department of Mechanical Engineering
CO PO 2021-22

Subject Code	Subject	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13 (PSO 01)	PO 14 (PSO 02)
18UMAC300	Engineering Mathematics-III	85	84.5												
18UMEC300	Basic Thermodynamics	81.5	81.5			79.5									
18UMEC301	Materials Science	46	49	37.5											
18UMEC302	Strength of Materials	82	82	79.5											
18UMEC303	Manufacturing Processes-I	71	67	60											
18UMEC304	Machine Drawing	87.5	90.5			98.5									
18UMEL305	Materials Science & Materials Testing Lab	82			82	82	82			82					
18UMEL306	Foundry & Forging Lab	86			87	86									
18UMEC400	Fluid Mechanics	82.5	82.5	79											
18UMEC401	Manufacturing Processes - II	78	74	86	75	87									
18UMEC402	Applied Thermodynamics	97	97	98											
18UMEC403	Metrology and Measurements	88	89.5	90	87									80	
18UMEC404	Design of Machine Elements-I	60.5	60	62			78.5								
18UMEL405	Measurements Laboratory	84			73	77	86								
18UMEL406	Thermal Engineering Laboratory-I			50	93					68					
18UMEL407	Introductory Project	98	98	98	98	98	98	98	98	98	98		98		98
18UHUC500	Management, Economics & Intellectual Property Rights	81.5	84				89		79		87	84.5		87	84
18UMEC500	Theory of Machines	63.5	57	84.5											
18UMEC501	Design of Machine Elements-II	70.5	59	65.5						61	70.5		59.5		
18UMEC502	Turbo machines	79.5	77.5	71.5											
18UMEC503	Renewable Energy Technology	74	68.5	68.5			79.5	75.5							
18UMEL504	Machine shop Practice	99		98	100	98				99					

Subject Code	Subject	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13 (PSO 01)	PO 14 (PSO 02)
18UMEL802	Major Project Phase-2	100	100	100	100	100	100	100	100	100	100	100	100	100	100
18UMEE821	Operations Research	50	52	81			77							84	
18UMEE823	Organizational Behavior	69	69				64								
18UMEE834	Tribology and Bearing Design	88	88												
18UMEE837	Industry 4.0 & Artificial intelligence	91	91												

Final Attainment calculations															
POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14	
Direct attainment	79.0	77.2	76.2	83.3	86.8	82.8	90.4	91.6	81.3	80.6	79.7	89.6	90.7	91.4	
Indirect attainment	80.8	82.2	82.9	81.7	79.5	82.9	82.4	86.4	88.0	84.1	84.2	84.7	84.7	83.2	
Total Attainment (0.80 x direct + 0.20 x indirect)	79.4	78.2	77.5	83.0	85.3	82.8	88.8	90.5	82.7	81.3	80.6	88.6	89.5	89.7	


HOD of Mech. Engg.
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SDM College of Engineering & Technology, Dharwad
Department of Mechanical Engineering
CO PO attainment 2020-21 (Odd & Even Sem)


Subject	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6
18UMEC300 Basic Thermodynamics	87	86.5	89	89	72.5	73
18UMEC301 Materials Science	100	99	97	95	81	
18UMEC302 Strength of Materials	89	88.5	89	90	91.5	91
18UMEC303 Manufacturing Processes- I	89	95	91	94.5	86.5	82.5
18UMEC304 Machine Drawing	88	70.5	95.5	68	91.5	
18UMEL305 Materials Science & Materials Testing Lab	97.8	88	91	48.4	48.4	
18UMEL306 Foundry & Forging Lab	99	99	98.5	99		
0						
18UHUC500 Management, Economics & Intellectual Property Rights	87	90	91	82.5	87.5	86
18UMEC500 Theory of Machines	72	73	70.5	92	64.5	74
18UMEC501 Design of Machine Elements-II	84	79	80	17.5	56.5	
18UMEC502 Turbo machines	91.5	94	91	48.5	90.5	
18UMEC503 Renewable Energy Technology	73.5	89.5	88.5	74	63.5	
18UMEL504 Machine shop Practice	99	99	99			
18UMEL505 Thermal Engg. Lab - II	88.6	88.6	85.2	89		
18UMEL506 Minor Project-1	98.4	98.4	98.4	98.4		
0						
18UMEE521 CAD/CAM (Computer aided design / Computer aided manufacturing)	100	90	83	51	51	27
18UMEE527 Fundamentals of Automobile Design	91	89	89	35	65.5	15.5
15UMEC700 Mechanical Vibrations	92	91	45	51	67	88
15UMEC701 Hydraulics & Pneumatics	98	96	78	86.5	45.5	28.5
15UMEC702 Operation Research & Optimization Techniques	86	98.5	81.5	82	76	77
15UMEL703 Dynamics Lab	81.65	74.1	0	87	0	77
15UMEL704 Project – Phase 1	100	100	100	100	100	
15UMEE725 Non-conventional Energy Sources	96	89	91	84.5	88	
15UMEE726 Total Quality Management	100	100	100	98	95.5	96.5

15UMEE728 Computational Fluid Dynamics	100	99	100	96.5	100	100
15UMEE733 Introduction to Aircraft Industry & Aircraft Systems	98	86	100	8	6	14
18UMEC400 Fluid Mechanics	98.05	98.05	98.05	98.05	98.05	
18UMEC401 Manufacturing Processes - II	97.35	97.35	97.35	97.35	97.35	97.35
18UMEC402 Applied Thermodynamics	100	100	100	100	100	
18UMEC403 Metrology and Measurements	97	97	97	97	97	97
18UMEC404 Design of Machine Elements-I	97.8	97.8	97.8	97.8	97.8	98.6
18UMEL405 Measurements Lab	96	96	96	96	96	96
18UMEL406 Thermal Engineering Lab - I	97	97	97	97	97	
18UMEL407 Introductory Project	98	98	98	98	98	
	0					
18UMEC600 Heat Transfer	100	100	100	100	100	
18UMEC601 Finite Element Methods	100	100	100	100	100	
18UMEL602 Computer Aided Engineering Analysis Lab	100	100	100	100	100	
18UMEL603 Thermal Engg. Lab - III	100	100	100	100	100	
18UMEL604 Minor Project-2	99	99	99	99	99	99
18UMEE624 Internal Combustion Engines	100	100	100	100	100	
18UMEE631 Tool Design Engg.	100	100	100	100	100	100
18UMEE637 Advanced Automobile Design	100	100	100	100	100	100
18UMEO642 Total Quality Management	100	100	100	100	100	100
18UMEO647 Introduction to Scientific programming	100	100	100	100	100	
15UMEC800 Control Engineering	100	100	100	100	100	
15UMEC801 Mechatronics	100	100	100	100	100	100
15UMEL802 Seminar on current topic	100	100	100	100		
15UMEL803 Project – Phase 2	100	100	100	100	100	100
15UMEE827 Energy Management	100	100	100	100	100	100
15UMEE828 Cryogenics	100	100	100	100	100	100
15UMEE830 Industrial Robotics	100	100	100	100	100	100
15UMEE832 Design of Aircraft Structures	100	100	100	100	100	100

SDM College of Engineering & Technology, Dharwad
Department of Mechanical Engineering
PO attainment 2020-21 (Odd & Even Sem)

Subject	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13 (PSO 01)	PO 14 (PSO 02)
18UMEC300 Basic Thermodynamics	83	83			88									
18UMEC301 Materials Science	95	98	97											
18UMEC302 Strength of Materials	89.5	89.5	90											
18UMEC303 Manufacturing Processes- I	90.5	90.5	82.5											
18UMEC304 Machine Drawing	81	93.5	89		93									
18UMEL305 Materials Science & Materials Testing Lab	74.7	92.23	92.23	74.7		92.23			94.7					
18UMEL306 Foundry & Forging Lab	99			99	99									
0														
18UHUC500 Management, Economics & Intellectual Property Rights	89.5	90				82.5		87.5		87.5	90		87.5	91
18UMEC500 Theory of Machines	74	79.5	70.5											
18UMEC501 Design of Machine Elements-II	69.5	48.5	59.5						56.5	71		51.5		
18UMEC502 Turbo machines	84	82.5	91											
18UMEC503 Renewable Energy Technology	78	89.5	89.5			76.5	74.5							
18UMEL504 Machine shop Practice	74		50	99	0				99					
18UMEL505 Thermal Engg. Lab - II	88.2	87.8	87.5	87.5					85.2					

15UMEE830 Industrial Robotics	100	100	100		100									
15UMEE832 Design of Aircraft Structures	100	100	100	100	100			100	100	100		100		
Final Attainment calculations														
POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14
Direct attainment	97.1	95.8	96.2	97.6	92.4	99.5	97.3	99.4	96.7	99.5	99.7	97.1	99.2	99.3
Indirect attainment	74.1	73.8	73.9	73.1	72.8	72.8	75.0	75.3	75.5	75.8	75.8	77.3	73.3	73.0
Total Attainment (0.80 x direct + 0.20 x indirect)	92.5	91.4	91.7	92.7	88.5	94.1	92.8	94.6	92.4	94.8	94.9	93.2	94.0	94.0


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SDM College of Engineering & Technology, Dharwad
Department of Mechanical Engineering
CO PO attainment 2019-20 (Odd & Even Sem)

Semester	Subject Code (in full As per syllabus)	Subject	CO 1	CO 2	CO 3	CO 4	CO 5	CO 6
III	18UMAC300	Engineering Mathematics-III	100.0	100.0	100.0	100.0	100.0	
III	18UMEC300	Basic Thermodynamics	78.2	79.8	68.5	67.0	68.2	60.9
III	18UMEC301	Materials Science	73.5	76.5	55.6	70.9	58.5	57.3
III	18UMEC302	Strength of Materials	91.6	73.2	83.5	28.7	57.9	40.0
III	18UMEC303	Manufacturing Processes- I	61.9	74.8	78.1	68.4	65.8	76.1
III	18UMEC304	Machine Drawing	92.7	90.4	85.7	67.8	68.7	
III	18UMEL305	Materials Science & Materials Testing Lab	82.0	72.7	91.7	90.7		
III	18UMEL306	Foundry & Forging Lab	96.7	94.6	96.7	96.7	94.9	94.9
IV	18UMAC400	Engineering Mathematics-IV	95.5	95.5	95.5	95.5	95.5	
IV	18UMEC400	Fluid Mechanics	97.5	97.5	97.5	97.5	97.5	97.5
IV	18UMEC401	Manufacturing Processes-II	98.0	98.0	98.0	98.0	98.0	98.0
IV	18UMEC402	Applied Thermodynamics	98.3	98.3	98.3	98.3	98.3	
IV	18UMEC403	Metrology and Measurements	98.5	98.5	98.5	98.5	98.5	98.5
IV	18UMEC404	Design of Machine Elements -I	100.0	100.0	100.0	100.0	100.0	100.0
IV	18UMEL405	Measurements Lab	94.9	94.9	94.9	94.9	94.9	94.9
IV	18UMEL406	Thermal Engineering Lab I	97.0	97.0	97.0	97.0		
V	15UMEC500	Management, Economics & IPR	56.4	48.7	80.4	55.6	52.3	61.9
V	15UMEC501	Kinematics of Machines	62.4	53.7	62.5	84.7	64.3	35.4
V	15UMEC502	Turbo machinery	78.2	55.2	59.4	64.7	66.5	
V	15UMEC503	Machine Design – II	81.0	68.4	77.4	85.7	71.8	54.6
V	15UMEE525	Refrigeration and Air-Conditioning	75.1	77.4	62.0	82.9	69.7	73.6
V	15UMEE526	Internal Combustion Engines	69.8	84.5	87.9	80.9	80.7	63.7
V	15UMEE527	Tool Design Engineering	76.6	78.0	72.5	87.1	92.9	80.5
V	15UMEE530	Deign of IC engines	98.0	90.6	75.3	71.8	60.4	
V	15UMEL504	Fluid Mechanics and Fluid Machinery Lab	89.0	87.0	93.0	88.0		
V	15UMEL505	Machine shop Practice	92.0	92.0	92.0	92.0		
VI	15UMEC600	Finite Element Method	100.0	100.0	100.0	100.0	100.0	
VI	15UMEC601	HEAT TRANSFER	99.5	99.5	99.5	99.5	99.5	
VI	15UMEC602	Dynamics of Machinery	99.3	99.3	99.3	99.3		
VI	15UMEE625	Engineering system design	98.3	98.3	98.3	98.3	98.3	98.3
VI	15UMEE626	ORGANIZATIONAL BEHAVIOR	97.5	97.5	97.5	97.5	97.5	97.5
VI	15UMEE629	Advanced Fluid Dynamics	100.0	100.0	100.0	100.0	100.0	
VI	15UMEE632	DESIGN DRAWING & ASSEMBLIES	100.0	100.0	100.0	100.0	100.0	
VI	15UMEL603	HEAT TRANSFER LABORATORY	99.0	99.0	99.0	99.0	99.0	
VI	15UMEL604	CAE/CAM LAB	98.6	98.6	98.6	98.6	98.6	98.6
VI	15UMEL630	Tribology and Bearing Design	100.0	100.0	100.0	100.0	100.0	
VII	15UMEC700	Mechanical Vibrations	64.8	67.4	72.0	66.1	58.0	61.2
VII	15UMEC701	Hydraulics & Pneumatics	72.3	75.3	58.9	60.7	50.5	58.8
VII	15UMEC702	Operation Research & Optimization Tech	54.8	69.7	91.8	86.0	89.1	44.5
VII	15UMEE726	Total Quality Management	85.7	79.6	69.3	76.5	68.0	72.6
VII	15UMEE728	Computational Fluid Dynamics	98.4	94.7	84.4	95.1	95.7	95.1
VII	15UMEE731	Power Plant Engineering	80.9	82.4	70.4	76.0	89.1	
VII	15UMEE733	Introduction to Aircraft Industry & Aircra	83.3	76.7	85.0	70.0	68.3	64.0

Semester	Subject Code (in full As per syllabus)	Subject	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13 (PSO 01)	PO 14 (PSO 02)
V	15UMEL504	Fluid Mechanics and Fluid Machinery Lab	89	89	90	90					93					
V	15UMEL505	Machine shop Practice	92		92	92					92					
VI	15UMEC600	Finite Element Method	100	100			100								100	
VI	15UMEC601	HEAT TRANSFER	99.5	99.5												
VI	15UMEC602	Dynamics of Machinery	99.3	99.3	99.3	98.3		98.3	98.3			98.3				
VI	15UMEE625	Engineering system design	98.3	98.3	98.3	98.3		98.3	98.3			98.3				
VI	15UMEE626	ORGANIZATIONAL BEHAVIOR								97.5	97.5					
VI	15UMEE629	Advanced Fluid Dynamics	100.0	100.0												
VI	15UMEE632	DESIGN DRAWING & ASSEMBLIES	100	100	100		100	100				100				
VI	15UMEL603	HEAT TRANSFER LABORATORY	99	99	99	99	99									
VI	15UMEL604	CAE/CAM LAB	98.62	98.62	98.62	98.62	98.62				98.62					
VI	15UMEL630	Tribology and Bearing Design	100	100	100											
VII	15UMEC700	Mechanical Vibrations	66.55	68.65	66.5	65.1	72									
VII	15UMEC701	Hydraulics & Pneumatics	62.75	55.55	55.55	64.3										
VII	15UMEC702	Operation Research & Optimization Techniques	72.6	72.6	72.95	72.1										
VII	15UMEE726	Total Quality Management	85.65	85.65	79.55	76.5										
VII	15UMEE728	Computational Fluid Dynamics	93.65				95.1				95.1			95.1		
VII	15UMEE731	Power Plant Engineering	78.8	81.85	78.45											89.1
VII	15UMEE733	Introduction to Aircraft Industry & Aircraft Systems*	74.6	71	69.9		78.7				76.7			85		
VII	15UMEL703	Dynamics Lab	88.4	88.63	92.8	84.7	74.1				92.8	92.85		74.1		
VII	15UMEL704	Project – Phase 1	100	80	100	100	50	100	100	100	100	100	100	100	67	100
VIII	15UMEC800	Control Engineering	99.2	99.2	99.2	99.2	99.2									
VIII	15UMEC801	Mechatronics	100	100		100										
VIII	15UMEE825	Design of Heat Exchangers	100.0	100.0	100.0											
VIII	15UMEE830	Industrial Robotics	98.5	98.5	98.5		98.5									
VIII	15UMEE831	Automotive Engineering	100	100	100				100					100		

Semester	Subject Code (in full As per syllabus)	Subject	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PO 13 (PSO 01)	PO 14 (PSO 02)
VIII	15UMEE832	DESIGN OF AIRCRAFT STRUCTURES	94	94	94	94	94			94	94	94		94		
VIII	15UMEL803	Project Phsa II	100	100	100	100	99	100	100	97	97	97	97	98	98	97

Final Attainment calculations															
POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14	
Direct attainment	87.7	87.1	89.8	90.7	89.2	95.5	96.1	92.0	92.3	94.2	98.5	88.3	91.3	95.4	
Indirect attainment	75.6	75.5	76.2	72.5	70.9	75.3	77.1	77.3	78.9	74.2	78.2	77.3	70.9	73.6	
Total Attainment (0.80 x direct + 0.20 x indirect)	85.3	84.7	87.1	87.1	85.6	91.5	92.3	89.1	89.7	90.2	94.4	86.1	87.2	91.0	


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Department of Mechanical Engineering

PO Attainment direct Academic year 2018-19 (ODD & EVEN SEM)

Course Code	Course Title	CO1	CO2	CO3	CO4	CO5	CO6	SEM
15UMAC300	Engineering Mathematics –III	84.6	79.3	76	81.5	97.8	52.8	III
15UMEC300	Basic thermodynamics	68.2	65	65.8	67	34.5	49.1	III
15UMEC301	Basic Manufacturing Process	58.5	54.9	72.9	48.2	53.7	58.6	III
15UMEC302	Materials Science	75.3	79.9	69.5	75.8	57.3	62.6	III
15UMEC303	Strength of materials	70.1	58.2	69.2	57.9	65.5	60.4	III
15UMEC306	Computer Aided Machine Drawing	62	57.9	58	51.1	82.5	74.9	III
15UMEL304	MSMT Lab	85.6	86.8	84.8	81.2	50	0	III
15UMEL305	FFT Lab	98	94	97	97	97	97	III
15UMAC400	Engineering Mathematics - IV	80	75.5	89	92	86.5	-	IV
15UMEC400	Machine Design-I	59.5	96	71.5	31	87	58	IV
15UMEC401	Mechanical measurements	81.5	43	64	57.5	73	71.5	IV
15UMEC402	Fluid mechanics	56	78.5	60.5	57.5	71.5	33.5	IV
15UMEC403	Applied thermodynamics	88.5	83	27.5	54.5	86	-	IV
15UMEC404	Manufacturing Technology	58	67	65.5	66.5	82	64.5	IV
15UMEL405	Measurements lab	87.8	79.4	83.6	82.2	84	79.4	IV
15UMEL406	Energy conversion lab	91.7	87	82.8	81	83.8	-	IV
15UMEC500	Management, Economics & IPR	77.4	73.7	84.6	73	76.3	80.8	V
15UMEC501	Kinematics of machine	63.5	57.6	50.4	77.6	64.5	37.3	V
15UMEC502	Turbo Machines	74.9	70	63.5	43.4	42.8	-	V
15UMEC503	Machine Design-II	53.8	57	46.7	56.7	56.6	34.7	V
15UMEL504	Fluid Mechanics and Fluid Machinery Lab	87.7	95.4	89.3	86.9	-	-	V
15UMEL505	Machine shop Practice	96	96	96	96	-	-	V
15UMEE525	Refrigeration and Air-Conditioning	70	68.2	61.8	53.6	54.5	50	V
15UMEE526	Internal Combustion Engines	72.8	86.3	79.2	70.9	74.6	81.5	V
15UMEE527	Tool Design Engineering	79.4	52.1	62.7	81.8	89.1	77.5	V
15UMEE530	Deign of IC engines	77.4	70.7	54.2	70.8	51.1	-	V
15UMEC600	Finite Element Methods	57	47.5	56.5	80	52	-	VI
15UMEC601	Heat Transfer	64	62.5	61	64	69.5	64.5	VI
15UMEC602	Dynamics of Machinery	61.7	48.1	61.8	55.5	-	-	VI
15UMEL603	Heat Transfer Lab	76.7	75.4	67.5	60.5	64.5	-	VI
15UMEL604	CEA / CAM Lab	83.6	87	86.4	74.8	88.1	87.9	VI
15UMEL605	Mini Project	100	100	100	100	100	100	VI
15UMEE625	Engineering System Design	88.5	62	64	55	87	70.5	VI
15UMEE626	Organizational Behavior	76	86	76	71	63	68	VI
15UMEE629	Advanced Fluid Dynamics	90.5	88	78.5	93	72	-	VI
15UMEE630	Tribology & Bearing design	89.1	89.9	89.9	89.9	50.6	-	VI
15UMEC700	Mechanical Vibrations	68.4	66.5	84.4	75.2	62.4	66	VII
15UMEC701	Hydraulics & Pneumatics	58.2	67	76.6	63	62.2	55.1	VII
15UMEC702	Operation Research & Optimization Techniques	53.4	69.3	90.6	85.1	89.6	18	VII
15UMEL703	Dynamics Lab	77.5	67.6	80.4	77.5	58.3	76.5	VII
15UMEL704	Project – Phase 1	97	98	99	0	95	96	VII
15UMEE726	Total Quality Management	87.6	81.4	86.6	82	76.6	77.2	VII

PO Attainment direct Academic year 2018-19 (ODD & EVEN SEM)

Course Code	Course Title	CO1	CO2	CO3	CO4	CO5	CO6	SEM
15UMEE727	Computer Integrated Manufacturing	88.5	84	89.5	82.8	-	-	VII
15UMEE728	Computational Fluid Dynamics	98.9	90.2	78	89	92.7	85.9	VII
15UMEE733	Introduction to Aircraft Industry & Aircraft Systems*	61.5	73.2	71.6	76.2	77.2	82.8	VII
15UMEC800	Control Engineering	76.2	73.9	64.2	71.4	78.9	49.4	VIII
15UMEC801	Mechatronics	83.3	70.6	82.6	70.1	32.9	47.2	VIII
15UMEL802	Seminar on current topic	100	100	100	100	-	-	VIII
15UMEL803	Project – Phase 2	100	100	100	100	100	100	VIII
15UMEE825	Design of Heat Exchangers	96	93	92	91	90	94	VIII
15UMEE828	Cryogenics	80	97	80	72	60	63	VIII
15UMEE830	Industrial Robotics	93	71	93	65	62	90	VIII
15UMEE831	Automotive Engineering	76	50	91	88.5	91.5	-	VIII

SDM College of Engineering & Technology, Dharwad
 Department of Mechanical Engineering
 PO Attainment direct
 Academic year 2018-19

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14
15UMAC300	78.7	73.0												
15UMEC300	58.3	58.3												
15UMEC301	57.6		58.6	72.9										
15UMEC302	73.3	75.8	64.8	65.1									69.6	
15UMEC303	63.6		61.7							69.2				
15UMEC306	62.9	54.5	59.9	80.7	65.1									
15UMEL304	77.7	85.7	72.3	77.7		85.7			77.7					
15UMEL305	97.0	97.0	97.0	97.0										
15UMAC400	71.0	82.0												
15UMEC400	67.5		62.0			67.0								
15UMEC401	65.5	62.5	65.0	64.0									81.5	
15UMEC402	60.0	58.0												
15UMEC403	68.0	68.0												
15UMEC404	68.0		64.5	66.5										
15UMEL405														
15UMEL406														
15UMEC500	77.6	79.3	82.8			78.4	75.2	77.0				77.8		
15UMEC501	59.3	57.9	77.6											
15UMEC502	57.4	53.6												
15UMEC503	53.3	48.8	52.6						56.6	50.9		48.7		
15UMEL504	90.3	44.9	90.8	90.4	89.3									
15UMEL505	96.0		96.0	96.0					96.0					
15UMEE525	59.7	59.7												
15UMEE526	77.5	80.1	77.6			78.0	80.0	75.5				77.3		
15UMEE527	73.7	89.1	72.2											
15UMEE530	64.2	67.4	67.4											
15UMEC600	60.0	60.0			52.0								52.0	
15UMEC601	65.5	65.5												
15UMEC602	56.8	56.8	55.0											
15UMEL603	70.2	71.5	64.2	76.1	72.2									
15UMEL604	84.0	81.0	85.0	83.0	85.0				84.0					
15UMEL605	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
15UMEE625	80.5	75.5	74.0	65.5	62.0	71.0	66.0							
15UMEE626								79.0	72.0					
15UMEE629	81.5	81.5	69.5											
15UMEE630	79.1	76.8												
15UMEC700	73.1	76.4	72.0	71.9	84.4									
15UMEC701	63.7	62.6	62.6	66.2										
15UMEC702	67.7	67.7	65.8	71.1										
15UMEL703	90.0	90.6	91.5	92.3	95.7	91.5	87.2	91.5						

15UMEL704														
15UMEE726	82.4	86.9	81.4	79.8										
15UMEE727	86.2	85.8												
15UMEE728	89.7				85.9				85.9			85.9		
15UMEE733	73.8	74.4	77.3	71.6	76.7									
15UMEC800	68.0	67.6	64.1	68.4	66.5									
15UMEC801	46.5	76.5	76.5	31.5	77.0	71.0		23.0				22.0		
15UMEL802		100.0		100.0	100.0	100.0				100.0		100.0		
15UMEL803	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
15UMEE825	95.0	96.0	95.0											
15UMEE828	72.0	72.0	63.0											
15UMEE830	79.0	80.0	83.0	72.0										
15UMEE831	79.5	76.5	91.0				91.5					50.0		
Avg.	73.4	73.9	74.8	77.5	80.8	84.3	85.7	78.0	84.0	84.0	100.0	73.5	80.6	100.0

Final Attainment calculations

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14
Direct attainment	73.4	73.9	74.8	77.5	80.8	84.3	85.7	78.0	84.0	84.0	100.0	73.5	80.6	100.0
Indirect attainment	84.2	88.7	89.9	88.7	86.5	86.5	89.9	87.6	89.9	91	88.7	89.88	89.88	91
Total Attainment (0.80 x direct + 0.20 x indirect)	75.5	76.8	77.8	79.7	81.9	84.7	86.5	79.9	85.2	85.42	97.74	76.78	82.47	98.2

**HOD of Mech. Engg.
S.D.M. College of Engg & Tech
DHARWAD - 580 002**

CO/PO attainment for the academic year 2017-18

Academic year 2017-18 (CIE) – Odd Semester									
Target attainment level-50%									
Subject Code	CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	CO9
III									
15UMAC300	55.8	50.2	74.5	89.9	89.9	56.7			
15UMEC300	97.1	99.3	84.3	99.3	99.3	100.0	100.0		
15UMEC301	74.2	75.7	76.4	75.7	78.5	57.8	82.1		
15UMEC302	92.1	87.1	77.7	87.2	80.0	78.4			
15UMEC303	54.8	69.0	57.3	59.6	94.5	67.1			
15UMEC306	90.8	96.6	93.8	65.5	90.5	90.5			
15UMEL304	68.0	70.0	70.0	65.0	0.0				
15UMEL305	80.4	79.2	80.7	81.1	80.7	80.2			
V									
15UMEC500	89.9	88.5	90.7	90.7	89.4	88.6			
15UMEC501	40.1	73.1	74.3	77.9	55.0	75.6	47.9		
15UMEC502	73.8	66.5	64.9	72.6	79.9	79.9			
15UMEC503	88.8	94.7	91.6	81.0	92.5	92.7	93.4		
15UMEL504	81.1	82.0	79.5	80.6					
15UMEL505	86.8	86.8	86.6	86.1					
15UMBEE526	88.0	88.9	89.7	91.9	98.1	94.8			
15UMBEE527	77.5	76.6	80.0	82.5	61.6				
15UMBEE530	97.1	94.2	97.1	98.5	97.1	97.1			

VII

11UMEC700	86.0	97.4	73.8	86.1	71.2	57.0	88.6		
11UMEC701	69.4	83.2	93.4	92.0	78.2	82.7			
11UMEC702	70.0	52.1	42.8	84.4	43.5	46.1			
11UMEL703	79.0	76.3	80.1	82.4	64.0	82.6			
11UMEE704	53.9	40.3	25.5	40.7	52.9	31.2			
11UMEE706	98.1	92.5	96.3	92.5	88.7	83.0			
11UMEE708	98.6	97.3	97.3	97.3	97.3	98.6	98.6	98.6	
11UMEE713	90.3	86.1	75.0	72.2	93.1	92.4			
11UMEE714	83.7	79.1	4.7	4.7	30.2	23.5			

Academic year 2017-18 (CIE) – Even Semester

Target attainment level-50%

Subject Code	CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	CO9
IV									
15UMAC400	81.4	82.1	78.8	90.7	89.4	95.9			
15UMEC400	81.5	80.0	66.1	65.2	39.2	70.4			
15UMEC401	79.1	79.0	84.5	81.7	80.5	82.5			
15UMEC402	88.2	85.8	92.9	91.1	85.4	82.9			
15UMEC403	92.9	96.5	97.2	94.3	94.3	97.1			
15UMEC404	78.8	81.2	75.4	81.2	66.5	74.4	87.2	76.7	
15UMEL405	80.2	81.2	80.1	79.8	76.8	77.4	78.5		
15UMEL406	84.4	82.9	0.0	83.3	81.6				
VI									
15UMEC600	80.2	82.5	88.7	92.0	92.1				
15UMEC601	59.1	63.8	92.0	76.5	78.5	88.3	95.5		
15UMEC602	69.4	70.8	75.9	68.7	57.9				
15UMEL603	79.3	77.7	80.9	0.0	80.6				
15UMEL604	71.0	81.0	81.0	81.0	80.0	69.7			
15UMEL605									
15UMEE625	98.1	71.0	51.0	85.4	41.8	21.8			
15UMEE626	98.1	96.3	100.0	94.4	100.0	100.0	98.1		
15UMEE628	63.3	53.3	66.7	36.7	90.0				

15UMEE629	95.9	93.7	94.9	93.5	96.2				
15UMEE630	98.0	100.0	98.0	98.0	96.1				
VIII									
11UMEC800	83.8	58.3	95.4	65.9	82.6	80.0			
11UMEC801	74.9	94.1	93.4	91.2	92.0	86.4			
11UMEL802									
11UMEL803									
11UMEE804	97.2	94.4	94.4	97.2	97.2				
11UMEE807	92.9	94.1	83.5	92.5	72.9	72.9			
11UMEE809	96.0	92.0	88.0	88.0	88.0	100.0	92.0		
11UMEE810	97.0	97.0	96.3	45.4	90.4	89.5	97.0		

Academic year 2017-18 (SEE) – Odd Semester

Target attainment level-50%

Subject Code	CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	CO9
I									
15UMEC100	59.6	59.5	58.4	71.6	73.5	75.3	84.2	72.7	48.8
15UMEL100	65.4	66.7	72.9	46.3	73.3	69.8			
15UMEC101	62.0	60.0	56.0	41.0	53.0	59.0			
III									
15UMAC300	62.9	61.0	61.4	54.7	82.1	39.1			
15UMEC300	54.1	63.1	63.1	40.4	25.5	36.1	36.1		
15UMEC301	54.8	56.3	56.2	53.3	16.7	45.4	17.4		
15UMEC302	66.9	56.9	65.4	49.8	30.5	32.7			
15UMEC303	53.5	43.8	53.2		67.9	30.6			
15UMEL304	68.0	76.0	72.0	68.0	66.0				
15UMEL305	81.3	83.1	81.4	81.7	77.9	76.4			
15UMEC306	81.3	83.1	81.4	81.7	77.9	76.4			
V									
15UMEC500	83.2	85.0	81.3	63.9	75.4	87.8			
15UMEC501	69.7	44.1	32.6	51.9	61.4	28.3	14.6		
15UMEC502	59.0	51.6	51.5	47.9	50.1	20.8			
15UMEC503	76.5	64.0	66.8	58.9	67.5	78.2	52.7		
15UMEL504	78.0	69.6	66.0	60.4					
15UMEL505	74.9	73.9	74.9	73.9					

15UMEE526	63.4	42.6	61.2	63.6	81.9	64.9			
15UMEE527	72.5	55.0	85.8	69.1	64.1				
15UMEE530	94.0	91.8	9.8	84.2	8.3	94.0			

VII

11UMEC700	69.0	63.8	38.9	76.9	69.0	35.9	66.3		
11UMEC701	76.8	82.2	69.5	71.4	82.9	41.2			
11UMEC702	30.9	31.5	63.2	69.2	40.3	35.3			
11UMEL703	65.2	63.4	70.2	72.1	31.1	70.3			
11UMEE704	29.5	44.2	59.0	44.2	35.4	59.0			
11UMEE706	81.1	96.2	69.8	96.2	77.4	73.6			
11UMEE708	91.8	97.3	97.3	95.9	90.4	93.1	95.9	45.2	
11UMEE713	4.9	4.9	35.5	18.8	0.0	69.5			
11UMEE714	32.5	41.8	79.1	23.5	67.4	60.4			

Academic year 2017-18 (SEE) – Even Semester

Target attainment level-50%

Subject Code	CO1	CO2	CO3	CO4	CO5	CO6	CO7	CO8	CO9
IV									
15UMAC400	78.7	52.1	15.3	80.8	68.0	-48.0	0.0	0.0	
15UMEC400	49.5	72.9	57.8	72.2	71.1	35.7	0.0	0.0	
15UMEC401	70.3	61.5	51.2	22.6	50.5	50.6	0.0	0.0	
15UMEC402	76.1	66.5	70.6	61.0	65.1	80.2	0.0	0.0	
15UMEC403	71.6	71.6	37.5	47.9	19.2	61.7	0.0	0.0	
15UMEC404	42.9	54.9	55.4	50.7	37.4	46.5	59.8	37.1	
15UMEL405	72.6	71.9	72.2	71.3	70.8	70.4	71.7	0.0	
15UMEL406	71.4	69.8	63.9	66.2	66.8	0.0	0.0	0.0	
VI									
15UMEC600	85.4	79.8	80.2	42.2	0.0	0.0	0.0	0.0	
15UMEC601	73.5	56.8	29.9	32.0	72.8	67.6	76.5	0.0	
15UMEC602	56.3	78.4	75.1	70.2	54.7	0.0	0.0	0.0	
15UMEL603	56.5	51.4	53.7	50.6	54.7	0.0	0.0	0.0	
15UMEL604	68.0	67.9	68.0	57.0	68.0	57.4			
15UMEL605									
15UMEE625	71.1	67.3	58.2	38.2	80.1	22.1	0.0	0.0	
15UMEE626	57.4	83.4	66.7	55.6	51.9	76.0	42.6	0.0	
15UMEE628	83.3	66.7	93.3	86.7	93.3	0.0	0.0		

15UMEE629	74.4	82.7	80.4	87.6	49.6	0.0	0.0		
15UMEE630	96.1	92.3	86.4	94.2	36.6	0.0	0.0		
VIII									
11UMEC800	51.1	77.3	86.2	64.0	63.9	51.6	0.0		
11UMEC801	88.9	78.5	92.5	97.0	83.9	89.7	0.0		
11UMEL802									
11UMEL803									
11UMEE804	90.0	75.8	36.5	81.2	78.0	0.0	0.0		
11UMEE807	93.9	93.1	95.0	93.1	95.1	80.2	0.0		
11UMEE809	92.0	44.8	70.4	77.6	48.0	81.6	75.2		
11UMEE810	94.1	92.3	95.2	84.7	65.1	65.7	94.1		

PO Attainment direct:

Academic year: 2017-18

PO target attainment level=70%

Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PO13	PO14
15UMAC300	63	62.1												
15UMEC300	74.5	74.9												
15UMEC301	63.6		54	56.2										
15UMEC302	72.9	76.3			73									
15UMEC303	54.4		50.9							60.6				
15UMEL304	62.5	71.2	56.8	62.5		71.2			62.5					
15UMEL305	80.4	80.1	79.9	81.1										
15UMEC306	80.4				81.2					80.4				
15UMEC500	86.2	86.5				83.2		84.7		84	82.4	82.7	79.7	
15UMEC501	60.5	59.7	70.2											
15UMEC502	65.6	66												
15UMEC503	80.4	79.4	79.1						81.6	80.4		79.5		
15UMEL504	74.3	74.2		74.7										
15UMEL505	84.1	84.1												
15UMEE526	81.9	81.5	80.5			87.9	77.2	82.2				80.4		
15UMEE527	74.3	75.9	70.4							66				
15UMEE530	80	84.3	84.3											
11UMEC700	79.2	79.8	72.7	65.7	82.7		54.3			54.3			62.3	
11UMEC701	80.3	83.4	83.4	79.1										
11UMEC702	61.7	68	73.5	59.4		56.2	59.7							
11UMEL703	75.7	76.1	78	74.7	53.4				78	77.8		53.4	53.4	53.4
11UMEL704	53.4	53.6	53.8	53.4	53.9	53.8	53.8	55.4	56.1	55.6	55.7	54.8	54.6	56.1
11UMEE706	86	94.5	94.5	91.2										
11UMEE708	94.8				94.5				84.8			84.8		
11UMEE713	52.7	51.9	55.4	55.2	43.7	45.5			45.5	55.2		55.2	47.5	
11UMEE714	57	55.6			58.7						52.3			
15UMAC400	72.5	78.7												
15UMEC400	66		62.3			65.7								
15UMEC401	70.2	68	63.8	71.1										
15UMEC402	82.3	81.8												
15UMEC403	76.4	76.4												
15UMEC404	68.4		62.4	62.7										
15UMEL405	60.5			60.1										
15UMEL406	75	73.2							67.6					

15UMEC600	80.8	80.8			54.8									54.8
15UMEC601	70.1	70.1												
15UMEC602	72	72	78.1											
15UMEL603	62.1	70.5												
15UMEL604	66.3	74.4		63.5	72.5				73					
15UMEL605	98.7	98.2	98.2	98.7	97.3	98.2	98.2	96.8	92.5	95.1	94.7	97.4	95.7	92.5
15UMEE625	74.9	64.3	63.6	71.6		72.5	55			33.6				
15UMEE626						77.9		80.7	84.5					
15UMEE628	69	70.6	65.4											
15UMEE629	84.3	84.3	77.3											
15UMEE630	88.9	86.4	70											
11UMEC800	75.5	70.8	71.7	68.3	66.6	67.6								
11UMEC801	87.7	92.9	92.9	88.3				87.6				87.7		
11UMEC802		92.6		84.5	88.2	75.7				82.6		96.8		
11UMEL803	95.5	94.2	93.9	95.5	92.3	93.9	93.9	81.3	85.5	83	83.4	85.8	88.7	85.5
11UMEE804	84.5	85.9	80.8											
11UMEE807	85	85	76.6											
11UMEE809	81.8	82.3	84.3		80.5									
11UMEE810	95.5	95.5	79.8		95.5	77.6	77.7		94.7	95.7		95.5		
Avg.	75.0	77.1	73.7	72.3	74.3	73.4	71.2	81.2	75.5	71.7	73.7	79.5	67.1	71.9

Final PO attainment calculations:

POs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO 10	PO 11	PO 12	PSO1	PSO2
Direct attainment	75.0	77.1	73.7	72.3	74.3	73.4	71.2	81.2	75.5	71.7	73.7	79.5	67.1	71.9
Graduate student exit survey	89.8	91.8	93.9	90.5	85	93.9	93.2	91.2	92.5	89.8	92.5	92.5	82.3	87.1
Total Attainment (0.80 x direct + 0.20 x indirect)	78.1	80.3	77.7	75.9	76.4	77.5	75.6	83.2	78.9	75.3	77.5	82.1	70.1	74.9

Ademas

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