

# Indian Institute of Technology Madras

## Dual Degree (B.Tech. & M.Tech.) Transcript



Roll No: ME11B132 Name: KALE VINAY DINKAR

Department: Mechanical Engineering

Dual Degree (B.Tech & M.Tech) Mechanical Engineering Stream: Product Design

Course	Title	Cat	Cr	Gr	Att	Course	Title	Cat	Cr	Gr	Att
<b>First Semester (JUL-NOV 2011)</b>						<b>Sixth Semester (JAN-MAY 2014)</b>					
PH1030	Physics Laboratory I	SPH	2	A	VG	HS3002A	Principles of Economics	HSS	3	A	VG
CY1002	Chemistry Lab I	SCY	3	A	VG	AM5630	Foundation of Computational Fluid Dynamics	PMT	3	B	VG
ME1100	Thermodynamics	BET	3	B	VG	ME4180	Automobile Engineering	PMT	3	B	G
WS1010	Workshop I	BES	4	B	VG	MS3580	Industrial Engineering	MNS	3	B	VG
ID1100	Concepts in Engineering Design	BET	2	B	G	ME3250	Refrigeration & Airconditioning	PMT	3	C	G
PH1010	Physics I	SPH	3	C	VG	ME3260	Thermal Power Engineering	PMT	4	C	G
ME1110	Introduction to Mechanical Engineering	PMT	2	D	VG	ME3500	Summer Training	PIT	2	P	VG
MA1010	Calculus I Functions of One Variable	SMA	3	D	VG	ME3300	Mechanical Engg. Lab III	PML	2	S	VG
Earned Credit:22 GPA:7.64 CGPA:7.64						ME3280	Mechanical Engineering Lab II	PML	2	S	VG
<b>Second Semester (JAN-MAY 2012)</b>						Earned Credit:25 GPA:7.52 CGPA:8.16					
CY1001	Chemistry: Structure, Bonding & Reactivity	SCY	4	A	VG	<b>Seventh Semester (JUL-NOV 2014)</b>					
AM1100	Engineering Mechanics	BET	4	B	VG	ME6830	Principles of Product Design	PMT	3	A	VG
CS1100	Computational Engineering	BET	3	B	VG	ME6840	Design for Manufacture and Assembly	PMT	3	A	VG
ME1120	Engineering Drawing	BES	3	B	VG	HS1090+	German I	HSS	3	A	G
WS1020	Workshop II	BES	2	B	VG	ME6820	Fundamentals of Engineering Design	PMT	3	B	VG
MA1020	Calculus II Functions of Several Variables	SMA	3	B	G	MS3520	Operations Management I	MNS	3	B	VG
PH1020	Physics II	SPH	3	B	VG	HS3050	Professional Ethics	HPF	2	P	G
PH1040	Physics Laboratory II	SPH	2	S	VG	ME6800	Finite Element Analysis	PMT	3	S	G
NS1030	NSS	NSS	0	X	VG	Earned Credit:20 GPA:8.83 CGPA:8.24					
Earned Credit:24 GPA:8.33 CGPA:8						<b>Eighth Semester (JAN-MAY 2015)</b>					
<b>Third Semester (JUL-NOV 2012)</b>						ME6780	Design Synthesis	PMT	3	A	G
EE1100	Basic Electrical Engineering	BET	3	A	VG	ME7400	Mechatronic Systems	PMT	3	A	G
HS3090	Short Story Classics	HSS	3	A	VG	ME6870	CAD/CAM for Product Design	PMT	3	B	G
AM2200	Strength of Materials	PMT	4	B	VG	MS3590	Decision Models	HSS	3	B	VG
BT1010	Life Sciences	SLS	2	B	VG	AM5021	Materials, Mechanics and Design	PMT	3	B	VG
ID1200	Ecology and Environment	BET	2	B	VG	IL4040	Industrial Lecture	PIL	1	P	G
MA2020	Differential Equations	SMA	3	B	VG	ME6880	Product Design Lab	PML	2	S	VG
ME2050	Machine Drawing Practice	PML	5	B	VG	Earned Credit:18 GPA:8.59 CGPA:8.27					
Earned Credit:22 GPA:8.27 CGPA:8.09						<b>Ninth Semester (JUL-NOV 2015)</b>					
<b>Fourth Semester (JAN-MAY 2013)</b>						CH5350	Applied Time Series Analysis	PMT	3	C	VG
EN2100	Electrical Sciences	PMT	3	A	VG	ME7982	Viva Voce	PMP	2	C	G
AM2530	Foundations of Fluid Mechanics	PMT	4	B	VG	CS5011	Introduction to Machine Learning	PSS	4	D	VG
MA2030	Linear Algebra & Numerical Analysis	SMA	3	B	G	ME7980*	Project I (DD)	PMP	6	R	*
ME2220	Kinematics and Dynamics of Machinery	PMT	4	B	VG	Earned Credit:9 GPA:6.56 CGPA:8.19					
ME2240	Instrumentation and Control	PMT	4	B	VG	<b>Tenth Semester (JAN-MAY 2016)</b>					
ME2260	Materials and Design	PMT	4	B	VG	ME7980+	Project II	PMP	16	B	G
AM2540	Applied Mechanics Lab	PML	2	B	VG	CS6011	Kernel Methods for Pattern Analysis	PMT	4	C	G
ME2280	Manufacturing Technology	PMT	4	C	G	ME6850	Product Reliability	PMT	3	D	VG
Earned Credit:28 GPA:7.96 CGPA:8.05						Earned Credit:23 GPA:7.57 CGPA:8.12					
<b>Fifth Semester (JUL-NOV 2013)</b>											
ME3170	Heat Transfer	PMT	4	A	VG						
ME3190	Machine Tools & Metrology	PMT	4	A	VG						
ME3330	Internal Combustion Engines	PMT	3	A	G						
ME3350	Design of Machine Elements	PMT	4	A	VG						
ME3270	Mechanical Engg Lab I	PML	2	A	VG						
ME3310	Turbomachines	PMT	4	B	G						
MS3510#	Fundamentals of Operational Research	MNS	3	C	G						
Earned Credit:24 GPA:8.58 CGPA:8.16											



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### Cumulative Grade Point Average (CGPA) Summary

Cat	BES	BET	HPF	HSS	MNS	PIL	PIT	PML	PMP	PMT	PPF	PSS	SCY	SMA	SPH	SLS	FRE	EXT	Total
Rq.Cr.	9	17	2	9	9	1	2	15	18	82	6	3	7	12	10	2	6	0	210
E.Cr.	9	17	2	9	9	1	2	15	18	88	0	4	7	12	10	2	10	0	215
CGPA	8	8.18	0	9	7.67	0	0	8.93	7.89	8.14	0	6	9	7.5	8.3	8	7.6	0	8.12

Cumulative grade point average secured considering only the successfully completed courses(credits) is 8.12

Courses with category HPF,PPF, and PIL carry credits, but are not assigned grade points and also are not included in calculation of CGPA

Rq.Cr. = Credits required for award of degree. E.Cr. = Earned credit till date of issue of grade card. NE = Non Effective Semester.

Courses Taken Under Free Electives:AM5630, CS6011, MS3590

Cumulative credits of project included in the final semester





**DUAL DEGREE (B.TECH. & M.TECH.) STUDENTS  
FOR 2009 - 2014 BATCH**

Sl. No.	Course Category	Code	Attendance Code w.e.f. Jul - Nov 2009		
1.	<b>HUMANITIES</b>	HSS	Attendance Rounded to %	Remarks	Code
	Pass / Fail option	HPF			
2.	<b>BASIC SCIENCES</b>		≥ 95%	Very Good	VG
	Physics	SPH	85 - 94%	Good	G
	Chemistry	SCY	< 85%	Poor	P
	Mathematics	SMA			
	Life Sciences	SLS			
3.	<b>BASIC ENGINEERING</b>		Grade		
	Theory	BET	Code	Points	Remarks
	Skills	BES			
4.	<b>PROFESSIONAL MAJOR</b>		S	10	
	Theory Courses	PMT	A	9	
	Laboratory	PML	B	8	
	Self - Study	PSS	C	7	
	Viva Voce	PMP	D	6	
	Project	PMP	E	4	
	Industrial Training	PIT	U	0	
	Pass / Fail Electives	PPF	P	0	Pass
	Industrial Lecture	PIL	F	0	Fail
5.	<b>MINOR ELECTIVES</b>	MNS	W	0	Failure due to insufficient attendance in course
6.	<b>FREE ELECTIVES</b>	FRE	R	0	Grade will be awarded in next semester
			X	0	Completed NSO / NCC / NSS requirements
			Y	0	Incomplete (in NSO / NCC / NSS)

**Grades 'S' to 'E', 'X' and 'P' indicate successful completion of course.**

The grade of course(s) under the Pass / Fail category are not included towards CGPA calculation

For award of Dual Degree (B.Tech. & M.Tech.), the student has to earn the minimum credits mentioned under the "Total" and also satisfy the category-wise credit requirement as per *CGPA summary table* in the front page.

B.Tech. (Honours) Students must earn 12 additional PMT credits

$$CGPA = \frac{\sum_i (C_i \times GP)}{\sum_i C_i}$$

where  $C_i$  is the credit of the Course

GP is the Grade Point for that Course, and

$\sum_i$  is the sum over all registered courses successfully cleared during all the semesters including those in which the student obtained 'U' and 'W' grades but not cleared.

**Note :** No class or Division is awarded at this Institute. However, Senate has approved the formula  
"PERCENTAGE = 55 + 10 (CGPA - 6)" for converting CGPA to percentage