



**NMDC DAV POLYTECHNIC**  
**EDUCATION CITY JAWANGA, GEEDAM,**  
**DANTEWADA**

# **COURSE DETAILS**

**DEPARTMENT OF BASIC SCIENCE &  
HUMANITIES**

**Diploma in Engineering**

**Academic Session: Apr-May 2025**

**Branch: Electrical**

**Semester: 2**

**Name of Subject: APPLIED MECHANICS**

**Faculty Name: PANKAJ SHARMA**

**Designation: LECTURER (MECHANICAL)**



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# Time Table

Issue Date:	Applicable From:						
	1	2	3	4	5	6	7
Monday							
Tuesday							
Wednesday							
Thursday							
Friday							
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Issue Date:	Applicable From:						
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Friday							
Saturday							

## Book Plan

S. No.	Book Title	Author	Publication & Text / Ref.
1	APPLIED MECHANICS	R.S. KURMI	S. CHAND & CO. NEW DELHI
2	ENGG. MECHANICS	RAMAMRUTHAM S.J.	S. CHAND & CO. NEW DELHI
3	MADEEASY NOTES	MADEEASY PUBLICATION	MADEEASY PUBLICATION, NEW DELHI

## Unit wise Teaching Plan

Unit No.	Course Name	Sequence in which units are to be covered	Total Lectures Required	UNIT MARKS
1	FUNDAMENTAL & RESOLUTION OF FORCES	1	7	7
2	CENTROID & MOMENT OF INERTIA.	2	8	12
3	FRICTION	3	9	12
4	KINEMATICS AND KINETIC.	4	10	12
5	WORK, POWER & ENERGY.	5	9	12
6	SIMPLE LIFTING MACHINE & TRANSMISSION OF POWER	6	12	15
<b>Total</b>		6	55	70

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- A) Course Code : 2000275(0377)  
 B) Course Title : Applied Mechanics  
 C) Pre-requisite Course Code and Title :  
 D) Rationale :

Applied mechanics (Engineering mechanics) is a branch of the physical sciences that deals with the response of bodies (solids and fluids) or systems of bodies to external forces. To impart basic knowledge of Engineering Mechanics this course will help the student to develop basic know-how and awareness of the various laws of physics and it's real life applications in the various fields of engineering. After going through this course the student will be able to identify, convert and resolve real loads and couples into their theoretical counterparts. This course is a prerequisite to 'Strength of materials' and 'Theory of machines' courses in latter semesters.

**E) Course Outcomes:**

- CO-1 Identify the force systems for different conditions using concepts of mechanics.  
 CO-2 Find the Centroid and Centre of gravity of various engineering components.  
 CO-3 Estimate force of friction in various conditions.  
 CO-4 Estimate velocities and accelerations in various linear and curvilinear motions.  
 CO-5 Calculate power, torque and energy associated with various engineering applications.  
 CO-6 Select suitable power transmission mode, simple lifting machine and estimate related parameters for various situations.

**F) Scheme of Studies:**

S.No	Board of Study	Course Code	Course Title	Scheme of Studies (Hours/Week)			Total Credits(C) L+P+T
				L	P	T	
1	Mechanical Engineering	2000275 (0377)	Applied Mechanics	2	-	1	3
2	Mechanical Engineering	2000290 (0377)	Applied Mechanics (Lab)	-	2	-	1

Legend: L: Classroom instruction (Includes different instructional strategies i.e. Lecture and others), P: Laboratory Instruction (Includes Practical performances in laboratory workshop, field or other locations using different instructional strategies), T: Tutorial (Includes Sessional Work/PSW) (Assignment, seminar, mini project etc.) and Self Learning(SL), C:Credits

Note: SW and SL has to be planned and performed under the continuous guidance and feedback of teacher to ensure outcome of Learning

**G) Scheme of Assessment:**

S.No	Board of Study	Course Code	Course Title	Scheme of Examination				Total Marks
				ESE	CT	TA	ESE TA	
1.	Mechanical Engineering	2000275 (0377)	Applied Mechanics	70	20	30	-	120
2.	Mechanical Engineering	2000290 (0377)	Applied Mechanics (Lab)	-	-	-	30	30

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**O) Course Curriculum Map:**

PO & PSO No.	COs No. & Title.	SOs No.	Laboratory Instruction (P)	Classroom Instruction (L)	Self Learning (SL)
PO-1, 2,3,8,9,10 PSO---	CO-1 Solve the given problems of integration using suitable methods.	SO1.1 SO1.2 SO1.3 SO1.4		Unit-1.0 Integral Calculus 1.1, 1.2	1.1(a), 1.2(a)
PO-1, 2,3,8,9,10 PSO---	CO-2 Use the concept of integration to find area of given curves.	SO2.1 SO2.2 SO2.3 SO2.4		Unit-2.0 Applications of Integral Calculus 2.1, 2.2	2.1(a), 2.2(a)
PO-1, 2,3,8,9,10 PSO---	CO-3 Model the given engineering problems using the concept of differential equation.	SO3.1 SO3.2 SO3.3 SO3.4 SO3.5		Unit-3.0 Differential equations of first order and first degree 3.1, 3.2, 3.3	3.1(a), 3.2(a)
PO-1, 2,3,8,9,10 PSO---	CO-4 Utilize the concepts of numerical methods to solve given equations.	SO4.1 SO4.2 SO4.3		Unit-4.0 Numerical Solutions of Equations 4.1, 4.2, 4.3	4.1(a), 4.3(a)
PO-1, 2,3,8,9,10 PSO---	CO-5 Measure the area using the concept of numerical integration for civil engineering	SO5.1 SO5.2 SO5.3		Unit-5.0 Numerical Integration 5.1, 5.2, 5.3	5.1(a), 5.3(a)

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Note: i. Separate passing is must for TA component of Progressive assessment, both for theory and practical.  
 ii. Separate passing is must for End Semester Exam (Theory) and End Semester Exam (Practical).

**III) Course-Curriculum Detailing:**

This course curriculum detailing depicts learning outcomes at course level and session level and their attainment by the students through Classroom Instruction (L), Laboratory Instruction (P), T- Tutorial Includes Sessional Work (SW) and Self Learning (SL). Students are expected to demonstrate the attainment of Session Outcomes (SOs) and finally Course Outcomes (COs) upon the completion of course.

**CO-1 Identify the force systems for different conditions using concepts of mechanics.**

Session Outcomes (SOs)	Laboratory Instruction (P)	Class room Instruction (L)	Self Learning (SL)
SO1.1 Explain basic terms related to mechanics.	LE1.1 Measure resultant force using law of Triangle of forces setup.	Unit-1.0 Fundamentals and Resolution of Forces 1.1 Definition of Mechanics, Statics, Dynamics- Kinetics, Kinematics. Concept of space, mass, particle, body, rigid body, scalar, vector, fundamental units, derived units.	• Unit system. • Graphical method of Composition and resolution of forces.
SO1.2 Identify the system of forces in the given situation with justification.	LE1.2 Measure resultant force using law of Parallelogram of forces setup.	1.2 Force-concept, definition, unit, graphical representation.	
SO1.3 Resolve and compose various forces acting on the given component.	LE1.3 Measure resultant force using law of Polygon of forces setup.	1.3 Concept of system of forces- non-coplanar, coplanar, concurrent, non-concurrent and parallel forces.	
SO1.4 Identify the moment or couple acting in the given system with justification.	LE1.4 Measure resultant force using Lami's Theorem using Jib crane setup.	1.4 Composition and Resolution of forces.	
SO1.5 Estimate forces and Couples acting on the given component.	LE1.5 Use Funicular diagram to demonstrate Non-concurrent, Non-Parallel forces.	1.5 Free body diagrams, law of parallelogram, Varignon's theorem. 1.6 Equilibrium of Coplanar concurrent forces, parallel forces and non-concurrent forces, Lami's Theorem.	
	LE1.6 Measure resultant moment using Law of Moments setup.	1.7 Moment of a force and Couple, properties of couple, conditions of equilibrium, applications.	

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**SW-1 Suggested Sessional Work (SW):**

- Assignments:
  - i. Solve two problems related to law of triangle and law of polygon of forces (each).

- Mini Project:

- i. Select two stationary components from day to day life and try to identify all the forces acting on them in magnitude and direction.

- Other Activities (Specify):

- i. Draw free body diagram of 'hanging rod' of a ceiling fan in running condition.
- ii. Draw free body diagram of brake lever of a bike.
- iii. Estimate force exerted by your body on each leg of the chair/bench on which you are sitting.

**CO-2 Find the Centroid and Centre of gravity of various engineering components.**

(Approx. Hrs: P+L+T = 11)

Session Outcomes (SOs)	Laboratory Instruction (P)	Class room Instruction (L)	Self Learning (SL)
SO2.1 Locate centroid of given regular plane and compound areas.	LE2.1 Determine centroid of a given lamina of any shape using any computer aided drafting software.	Unit-2.0 Centroid and Moment of Inertia 2.1 Location of Centroid and Center of Gravity.	• Calculation of CG of solid body. • Calculation of MJ of solid body.
SO2.2 Compute MI of a given plane areas.	LE2.2 Determine M.I of a given lamina any shape using any computer aided drafting software.	2.2 Centroid of regular plane and compound areas. 2.3 Center of Gravity of simple solids. 2.4 Moment of Inertia of plane areas.	
SO2.3 Use Perpendicular and Parallel Axis theorems to calculate MI about given axis of a given plane area.		2.5 Perpendicular and Parallel Axis theorems.	

**SW-2 Suggested Sessional Work (SW):**

- Assignments:
  - i. Find out Area Moment of Inertia of a solid circular wheel at the point of contact with road.
  - ii. Find out Area Moment of Inertia of any rectangular shaped calendar at the point of hinge/suspension on the wall.
  - iii. Locate CG and find out Area Moment of Inertia '30°-60° and 45°-45° solid Set Squares' used as drafting instruments about any side and hypotenuse.
  - iv. Verify all above using MI calculation facility of any computer aided drafting software.



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- CO-4 Estimate velocities and accelerations in various linear and curvilinear motions.
- Micro Project:
- Prepare a chart to show CGs locations of cross sections of different standard Mild steel pipe and rod sections available in the market.
  - Determine the location of CG of 'circle master' used as a drawing instrument.
- Other Activities (Specify):
- Prepare a list of at least five formulas related to Mechanical and Civil engineering in which use of area Moment of Inertia is required.

CO-3 Estimate force of friction in various conditions.

Session Outcomes (SOs)	Laboratory Instruction (P)	Class room Instruction (I)	Self Learning (SL)
SO3.1 Explain friction and related terms. SO3.2 Select coefficient of friction from data book for a given situation. SO3.3 Estimate coefficient of friction, angle of repose for given situation. SO3.4 Suggest ways to reduce friction.	LE3.1 Determine coefficient of friction for surfaces of different materials on a Horizontal Plane with given setup. LE3.2 Determine Coefficient of friction for surfaces of different materials with Inclined Plane apparatus.	Unit-3.0 Friction 3.1 Rough and Smooth surfaces, concept of friction. Types of friction, Coulomb's laws of friction 3.2 Co-efficient of friction, angle of friction, angle of repose. 3.3 Friction on horizontal and inclined plane, Method of reducing friction. 3.4 Screw and Nut friction, Bearing	(Approx. Hrs: L+P+T= 14) • Method of reducing friction. • Advantage and disadvantage of friction

SW-3 Suggested Sessional Work (SW) :

- Assignments:
- Solve numerical problems related to co-efficient of friction, angle of friction, angle of repose and force of friction in different situations.
- Micro Project:
- Prepare a list of engineering components where friction is desirable and undesirable also suggest ways to improve and reduce it respectively.
- Other Activities (Specify):
- Visit a nearby automobile workshop and collect details of the components and locations where oil and grease are applied to reduce the friction.

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CO-4 Estimate velocities and accelerations in various linear and curvilinear motions.

(Approx. Hrs: L+P+T=15)

Session Outcomes (SOs)	Laboratory Instruction (P)	Class room Instruction (I)	Self Learning (SL)
SO4.1 Compute velocity under the given uniform and non-uniform acceleration situation. SO4.2 Describe Newton's Laws of Motion with examples. SO4.3 Calculate force and momentum in the given situation.	LE4.1 Plot Velocity-Time diagrams for different combinations of Uniform and non uniform velocities.	Unit 4.0 Kinematics and Kinetics 4.1 Kinematics in Cartesian and polar coordinates. Concept of speed, velocity, acceleration, radial and transverse velocity. 4.2 Particle under uniform and non-uniform acceleration, tangential and normal acceleration. 4.3 Angular displacement, Angular Velocity, Angular Acceleration. 4.4 Motion under gravity. 4.5 Kinetics of particle, motion under constant force, Newton's Laws of Motion. 4.6 Momentum and energy principles, impulses and angular momentum.	• Velocity profile

SW-4 Suggested Sessional Work (SW):

- Assignments:
- Solve numerical problems related to velocity and acceleration
  - Solve numerical problems related to force and impulse.
- Micro Project:
- Collect information on engineering components/members subjected to tangential and normal acceleration and prepare a report.
- Other Activities (Specify):
- Calculate how much force is required to push a stationary Bicycle, Bike and Car and compare it. If we reduce the width of the car tires will the force reduce? Please comment.
  - Check how much gradually applied weight is required to press a nail in a wooden board and then compare the same with the weight of the hammer normally used to do the same thing. Please comment on why less weight hammer is capable of doing the same thing.

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CO-5 Calculate power, torque and energy associated with various engineering applications.

(Approx. Hrs: L+P+T=13)

Session Outcomes (SOs)	Laboratory Instruction (P)	Class room Instruction (L)	Self Learning (SL)
SOS.1 Define work, power, energy and their units of measurement	LES.1 Use dynamometer to calculate power in any rotating shaft/drum/pulley/wh eel.	Unit-5.0 Work, Power and Energy 5.1 Work- Definition and unit of work done, force displacement diagram, torque, work done by torque.	• Torque
SOS.2 Calculate IHP and BHP in the given condition.	LES.2 Use tachometer to calculate speed of any rotating shaft/drum/pulley/wh eel.	5.2 Power-Definition and unit of Power, I.H.P and B.H.P of engine, Equation of H.P. in terms of Torque and R.P.M.	
SOS.3 Calculate Kinetic and Potential energy of an object from the given data.		5.3 Energy- Definition and units of Energy, Kinetic and Potential energy.	
SOS.4 Establish relation between Work, Power and Energy.		5.4 Relation between Heat and Mechanical work, relation between Electrical and Mechanical energy	

**SW-5 Suggested Sessional Work (SW) :**

- **Assignments:**
  - i. Solve problems related to work, power and energy in different domestic and industrial situations.
  - ii. Solve numerical problem based on work done by force and torque.
  - iii. Solve numerical problem based on computation of IHP and BHP of engines.
  - iv. Solve numerical problem based on computation of Kinetic and Potential energy
  - v. Convert motor or engine horse power into watts/kilo watts
  - vi. In 'Electricity Bill' one UNIT consumption represents what?
- **Micro Project:**
  - i. Visit different labs of your institute and collect data related to power, torque and RPM of various actuators like electric motors and engines.
  - ii. In case of Electric motors and Batteries calculate electric power it can supply.
  - iii. Collect data of IHP and BHP related to two Bikes, Cars, Jeeps and Buses (each) of your locality.
- **Other Activities (Specify):**
  - i. Collect information on electric cars related to its battery power and correlate it theoretically to the torque and rpm available at wheel if the car is running at 30km/hr.

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**Semester-II**

CO-6 Select suitable power transmission mode, simple lifting machine and estimate related parameters for various situations.

(Approx. Hrs: L+P+T= 19)

Session Outcomes (SOs)	Laboratory Instruction (P)	Class room Instruction (L)	Self Learning (SL)
SOS.1 Describe Load, Effort, Mechanical advantage, Velocity ratio, Efficiency	LE6.1 Estimate Mechanical Ratio and Efficiency for Simple Screw Jack setup.	Unit-6.0 Simple Lifting Machines and Transmission of power 6.1 Load, Effort, Mechanical advantage, Velocity ratio, Efficiency and relation between them.	• Study of single and double purchase winch crab machine.
SOS.2 Compute Mechanical advantage, Velocity ratio of the given simple machine.	LE6.2 Estimate Mechanical Ratio and Efficiency for Differential Wheel and Axle setup.	6.2 Law of Machine, Reversibility of Lifting machine.	
SOS.3 Select suitable power transmission mode for the given situation.	LE6.3 Demonstration of use of inclined plane as a lifting machine. LE6.4 Estimate Velocity Ratio for a belt-pulley system, simple gear train, worm and worm wheel.	6.3 Study of Machines- Differential wheel and axle, Simple Screw Jack, Pulley block, System of pulleys, Simple and compound levers. 6.4 Transmission of power through Belt (flat belt, V-belt, Taper belt), Rope, Gears (Spur, Helical, worm and worm wheel, rack and pinion) and Gear trains (simple, compound, epicyclic); terminology, classification, salient features, area of application, velocity ratio and efficiency.	

**SW-6 Suggested Sessional Work (SW):**

- **Assignments:**
  - i. Solve numerical problem based on computation of Mechanical advantage, Velocity ratio, Efficiency of simple machines.
  - ii. Solve numerical problem based on law of machine.
- **Mini Project:**
  - i. Visit different labs of your institute or nearby workshop and collect information about various transmission modes used and related data. Estimate velocity ratio in each case and justify its use in that particular situation.
  - ii. Visit a nearby automobile repair shop and list the types of gears used in a bike/scooter/scooter.

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- Other Activities (Specify):
- Prepare a report on application of dimer belt and pulley through internet.
  - List the devices in which epicyclic gear trains are used.
  - Collect the photographs and details of different types of lifting jacks are available in market for lifting and car.

Note: Performance under Laboratory and Sessional work may appear in more than one CoS/SoS.

A) Suggested Specification Table (For ESE of Classroom Instruction):

Unit Number	Unit Titles	Marks Distribution					Total Marks
		R	U	A			
I	Fundamentals and Resolution of Forces	2	2	3			7
II	Centroid and Moment of Inertia	3	4	5			12
III	Friction	2	4	6			12
IV	Kinematics and Kinetics	3	4	5			12
V	Work, Power and Energy	3	4	5			12
VI	Simple Lifting Machines and Transmission of Power	4	5	6			15
<b>Total</b>		<b>17</b>	<b>23</b>	<b>30</b>			<b>70</b>

Legend: R: Remember, U: Understand, A: Apply and above

B) Suggested Specification Table (For ESE of Laboratory Instruction\*):

Laboratory Instruction Number	Short Laboratory Experiment Titles	Assessment of Laboratory Work (Marks)				Viva-Voice
		Performance		PDA		
		PRA	PDA			
LE1.1	Measure resultant force using law of Triangle of forces setup.	15	10		5	
LE1.2	Measure resultant force using law of Parallelogram of forces setup.	15	10		5	
LE1.3	Measure resultant force using law of Polygon of forces setup.	15	10		5	
LE1.4	Measure resultant force using Lami's Theorem using Jib crane setup.	15	10		5	
LE1.5	Use Funicular diagram to demonstrate Non-concurrent, Non-Parallel forces.	15	10		5	
LE1.6	Measure resultant moment using Law of Moments setup.	15	10		5	
LE2.1	Determine C.G. of a given lamina of any shape using any computer aided drafting software.	15	10		5	
LE2.2	Determine M.I of a given lamina any shape using any computer aided drafting software.	15	10		5	
LE 3.1	Determine coefficient of friction for surfaces of different materials on a Horizontal Plane with given setup.	15	10		5	
LE 3.2	Determine coefficient of friction for surfaces of different materials with Inclined Plane apparatus.	15	10		5	

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LE4.1	Plot Velocity - Time diagrams for different combinations of Uniform and non uniform velocities.	15	10	5
LE5.1	Use dynamometer to calculate power in any rotating shaft/drum/pulley/wheel.	15	10	5
LE5.2	Use tachometer to calculate speed of any rotating shaft/drum/pulley/wheel.	15	10	5
LE6.1	Estimate Mechanical advantage, Velocity Ratio and Efficiency for Simple Screw Jack setup.	15	10	5
LE6.2	Estimate Mechanical advantage, Velocity Ratio and Efficiency for Differential Wheel and Axle setup.	15	10	5
LE6.3	Demonstration of use of inclined plane as a lifting machine.	15	10	5
LE6.4	Estimate Velocity Ratio for a belt-pulley system, simple gear train, worm and worm wheel.	15	10	5

\*Assessment rubric, process and product check list with rating scale need to be prepared by the course wise teachers for each experiment for conduction and assessment of laboratory experiments/practicals.

Legend: PRA: Process Assessment, PDA: Product Assessment

Note: Only one experiment has to be performed at the End Semester Examination of 30 marks as per assessment scheme.

C) Suggested Instructional/Implementation Strategies:

- Improved Lecture
- Tutorial
- Case Method
- Group Discussion
- Industrial visits
- Industrial Training
- Field Trips
- Portfolio Based Learning
- Role Play
- Demonstration
- ICT Based Teaching Learning (Video Demonstration, CBT, Blog, Face book, Mobile)
- Brainstorming
- Others

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**D) Suggested Learning Resources:**

**(a) Books :**

S.No.	Titles	Author	Publisher and Edition*
1	Applied Mechanics	Khurmi, R.S.	S.Chand & Co. New Delhi 2014 ISBN: 9788121916431
2	Applied Mechanics	S.S.I. Patel	Dhanpat Rai & Company
3	Foundations and Applications of Applied Mechanics	Ram, H. D.; Chauhan, A. K.	Cambridge University Press, Thomson Press India Ltd., New Delhi, 2015, ISBN: 9781107499836
4	Engineering Mechanics- Statics, Vol. I	Meriam, J. L.; Kraige, L.G.	Wiley Publication, New Delhi, ISBN: 978-81-265-4396
5	Engineering Mechanics	Ramamurtham, S.	S.Chand & Co. New Delhi 2008 ISBN:9788187433514

\* Latest edition of all above books should be referred

**(b) Open source software and website address:**

1. <http://www.asnu.com.au>
2. [www.youtube.com](http://www.youtube.com) for videos regarding machines and applications, friction
3. [www.nptel.ac.in](http://www.nptel.ac.in)
4. [www.discoveryforengineers.com](http://www.discoveryforengineers.com)

**(c) Others :**

1. Learning Packages
2. Users' Guide
3. Manufacturers' Manual
4. Lab Manuals

**E) List of Major Laboratory Equipment and Tools:**

S. No.	Name of Equipment	Broad Specifications	Relevant Experiment Number
1.	Differential axle and wheel	Differential axle and wheel (wall mounted unit with the wheel of 40 cm diameter and axles are in steps of 20 cm and 10 cm reducing diameter.	LE6.2
2.	Universal Force Table	Universal Force Table (Consists of a circular 40 cm dia. Aluminum disc, graduated into 360 degrees.) with all accessories.	LE1.1, LE1.2, LE1.3,
3.	Jib crane setup.	Jib crane setup.	LE1.4
4.	Law of moments apparatus	Law of moments apparatus consisting of a stainless steel graduated beam 12.5 mm square in section, 1m long, pivoted at centre.	LE1.6
5.	Beam Reaction apparatus	Beam Reaction apparatus (The apparatus is with two circular dial type 10 kg.	LE1.1
6.	Models of geometrical figures.	Acrylic models of standard geometrical figures.	LE2.1, LE2.2

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S. No.	Name of Equipment	Broad Specifications	Relevant Experiment Number
7.	Latest educational version of AutoCAD software	Latest educational version of AutoCAD software	LE2.1, LE2.2
8.	Friction apparatus	Friction apparatus for motion along horizontal and inclined plane (base to which a sector with graduated arc and vertical scale is provided. The plane may be clamped at any angle up to 45 degrees. pan. Two weight boxes (each of 5 gm, 10 gm, 2-20 gm, 2-50 gm, 2-100 gm weight), Dynamometer and Tachometer	LE 3.1, LE 3.2, LE6.3
9.	Dynamometer and Tachometer	Dynamometer and Tachometer	LE5.1, LE5.2
10.	Simple screw Jack	Simple screw Jack (Table mounted metallic body, screw with a pitch of 5 mm carrying a double flanged turn table of 20 cm diameter.	LE5.1
11.	Worm and worm wheel	Worm and worm wheel (wall mounted unit with threaded spindle, load drum, effort wheel; with necessary slotted weights, hanger and thread)	LE5.4
12.	Single Purchase Crab winch	Single Purchase Crab winch (Table mounted heavy cast iron body. The effort wheel is of C.I. material of 25 cm diameter mounted on a shaft of about 40mm dia. On the same shaft a geared wheel of 15 cm dia.	LE5.1 to LE5.4
13.	Double Purchase Crab winch	Double Purchase Crab winch (Having assembly same as above but with double set of gearing arrangement)	LE5.2
14.	Weston's Differential pulley block	Weston's Differential pulley block (consisting of two pulleys; one bigger and other smaller.	LE5.2
15.	Weston's Differential worm geared pulley block	Weston's Differential worm geared pulley block (Consists of a metallic (preferably steel) cogged wheel of about 20 cm along with a protruded load drum of 10 cm dia to suspend the weights of 10 kg, 20 kg-2 weights and a 50 kg weights)	LE5.2

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Semester-II

f) Mapping of POs and PCOs with COs:

Course Outcomes (CO)	Programme Outcomes (PO)													
	PO-1 Basic knowledge	PO-2 Discipline knowledge	PO-3 Experience based and practical	PO-4 Engineering Tools	PO-5 The Engineer and Society	PO-6 Environment and Sustainability	PO-7 Ethics	PO-8 Individual and team work	PO-9 Communication	PO-10 Life-long learning	Programme Specific Outcomes (PSO)			
											PSO-1	PSO-2	PSO-3	
CO-1 Identify the force systems for different conditions using concepts of	2	3	3	2	1	1	1	2	2	2	-	2	-	-
CO-2 Find the Centroid and Centre of Gravity of various engineering components.	3	2	1	2	1	1	1	2	2	2	2	1	1	1
CO-3 Estimate force of friction in various conditions.	3	2	2	1	1	1	1	2	2	2	-	2	-	1
CO-4 Estimate velocities and accelerations in linear and curvilinear motions.	2	2	2	1	1	1	1	2	2	2	1	2	1	1
CO-5 Calculate power, torque and energy associated with various engineering applications.	2	3	2	2	1	1	1	2	2	3	-	2	-	1
CO-6 Calculate power, torque and energy associated with simple lifting machine and estimate related parameters for various situations.	2	3	3	2	1	1	1	2	2	3	-	2	-	1

Legend: 1 - Low, 2 - Medium, 3 - High

Chhattisgarh Swami Vivekanand Technical University, Bilhal

Diploma in Civil/ Electrical/ EEE/ Mining & Mine Surveying (Group-A)

Semester-II

g) Course Curriculum Map:

PO & PSO No.	CO No. & Title	SD No.	Lecturer Instruction (L)	Classroom Instruction (C)	Self Learning (SL)
PO-1, 2, 3, 4, 5, 6, 7, 8, 9, 10 PSO-1, 2	CO-1 Identify the force systems for different conditions using concepts of mechanics.	SO1.1 SO1.2 SO1.3 SO1.4 SO1.5	LE1.1 LE1.2 LE1.3 LE1.4 LE1.5	Unit-1.0 Fundamentals and Revision of Forces 1.1, 2.1, 1.1, 1.1, 1.4, 1.7	
	CO-2 Find the Centroid and Centre of Gravity of various engineering components.	SO2.1 SO2.2 SO2.3	LE2.1 LE2.2	Unit-2.0 Centroid and Moment of Inertia 2.1, 2.2, 2.3, 2.4, 2.5	
	CO-3 Estimate force of friction in various conditions.	SO3.1 SO3.2 SO3.3 SO3.4	LE3.1 LE3.2 LE3.3	Unit-3.0 Friction 3.1, 3.2, 3.3, 3.4	As mentioned in relevant pages
	CO-4 Estimate velocities and accelerations in various linear and curvilinear motions.	SO4.1 SO4.2	LE4.1	Unit-4.0 Kinematics and Kinetics 4.1, 4.2, 4.3, 4.4, 4.5, 4.6	
	CO-5 Calculate power, torque and energy associated with various engineering applications.	SO5.1 SO5.2 SO5.3 SO5.4	LE5.1 LE5.2	Unit-5.0 Work, Power and Energy 5.1, 5.2, 5.3, 5.4	
PO-1, 2, 3, 4, 5, 6, 7, 8, 9, 10 PSO-1, 2, 3	CO-6 select suitable power lifting machine and estimate related parameters for various situations.	SO6.1 SO6.2 SO6.3	LE6.1 LE6.2 LE6.3 LE6.4	Unit-6.0 Simple Lifting Machine and Transmission of Power 6.1, 6.2, 6.3, 6.4	

## Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V
						Resource
1	1	BASIC CONCEPTS - static,dynamic,kinetic,kinematic, space,mass etc.	.....	1	.....	.....
2	1	Scalar and Vector Properties, Fundamental and Derived Units	.....	2-3	.....	.....
3	1	Force, System of Forces, GRAPHICAL REPRESENTATION	.....	4-5	.....	.....
4	1	FREE BODY DIAGRAM, TRIANGLE LAW, POLYGON LAW, PARALLELOGRAM LAW	.....	6-7	.....	.....
5	1	LAMI THEOREM, MOMENT, COMPOSITION & RESOLUTION OF FORCES	.....	8-9	.....	.....
6	1	SIMPLE NUMERICAL SOLUTIONS	.....	10-12	.....	.....
7	1	SIMPLE NUMERICAL SOLUTIONS	.....	13-14	.....	.....
8	2	CENTROID,CENTRE OF GRAVITY, MOMENT OF INERTIA	.....	15-17	.....	.....
9	2	CENTROID OF PLANES - RECTANGLE,TRIANGLE,CIRCLE,SEMICIRCLE	.....	18	.....	.....
10	2	PARALLEL AXIS THEOREM, MOMENT OF INERTIA OF RECTANGULAR PLANE.	.....	19-20	.....	.....
11	2	PERPENDICULAR AXIS THEOREM, MOMENT OF INERTIA OF CIRCULAR PLANE.	.....	21-22	.....	.....
12	2	SIMPLE NUMERICAL SOLUTIONS	.....	23-24	.....	.....
13	2	SIMPLE NUMERICAL SOLUTIONS	.....	25	.....	.....
14	2	SIMPLE NUMERICAL SOLUTIONS	.....	26	.....	.....
15	2	SIMPLE NUMERICAL SOLUTIONS	.....	27	.....	.....
16	3	FRICTION CONCEPTS , ROUGH AND SMOOTH SURFACE	.....	25-26	.....	.....
17	3	TYPES OF FRICTION, COULOMB'S LAW	.....	27-28	.....	.....
18	3	COEFFICIENT OF FRICTION, ANGLE OF FRICTION, ANGLE OF REPOSE	.....	29-30	.....	.....
19	3	FORCES ON HORIZONTAL AND INCLINED PLANE	.....	31-32	.....	.....
20	3	METHOD OF REDUCING FRICTION, SCREW NUT FRICTION	.....	33-34	.....	.....
21	3	FRICTION IN JOURNAL BEARINGS, APPLICATION OF FRICTION	.....	35-36	.....	.....
22	3	SIMPLE NUMERICAL SOLUTIONS	.....	25-36	.....	.....
23	3	SIMPLE NUMERICAL SOLUTIONS	.....	25-36	.....	.....
24	3	SIMPLE NUMERICAL SOLUTIONS	.....	25-36	.....	.....
25	4	COORDINATE SYSTEM, SPEED, ACCELERATION	.....	37-38	.....	.....
26	4	PARTICLES UNDER UNIFORM AND NON UNIFORM ACCELERATION	.....	39-40	.....	.....
27	4	TANGENTIAL AND NORMAL ACCELERATION, ANGULAR DISPLACEMENT	.....	39-40	.....	.....
28	4	MOTION UNDER GRAVITY, SIMPLE NUMERICAL	.....	41	.....	.....
29	4	NEWTON'S LAW OF MOTION	.....	42	.....	.....
30	4	MOMENTUM,IMPULSE,ANGULAR MOMENTUM	.....	43	.....	.....
31	4	ANGULAR VELOCITY,ANGULAR ACCELERATION	.....	44	.....	.....
32	4	SIMPLE NUMERICAL SOLUTIONS	.....	45	.....	.....
33	4	SIMPLE NUMERICAL SOLUTIONS	.....	46	.....	.....
34	4	SIMPLE NUMERICAL SOLUTIONS	.....	47	.....	.....

## Detailed Teaching Plan

Lecture No.	Unit No.	Topic to be covered	Books & Page Nos.	Notes Page Nos.	Slide Nos.	A/V Resource	
35	5	WORK, FORCE, TORQUE	*****	48	*****	*****	*****
36	5	POWER, IHP, BHP, FP	*****	49	*****	*****	*****
37	5	ENERGY AND TYPES OF ENERGY - K.E., P.E., INTERNAL ENERGY	*****	50	*****	*****	*****
38	5	HEAT, SPECIFIC HEAT, SIGN CONVENTION FOR WORK & HEAT TRANSFER	*****	51	*****	*****	*****
39	5	2 & 4 STROKE PETROL ENGINE - WORKING AND CONSTRUCTION	*****	52	*****	*****	*****
40	5	2 & 4 STROKE DIESEL ENGINE - WORKING AND CONSTRUCTION	*****	53	*****	*****	*****
41	5	SIMPLE NUMERICAL SOLUTIONS	*****	48-53	*****	*****	*****
42	5	SIMPLE NUMERICAL SOLUTIONS	*****	54-55	*****	*****	*****
43	5	SIMPLE NUMERICAL SOLUTIONS	*****	54-55	*****	*****	*****
44	5	SIMPLE NUMERICAL SOLUTIONS	*****	56	*****	*****	*****
45	5	BELT DRIVE, ROPE DRIVE, GEAR DRIVE, SPEED OF SHAFTS	*****	57	*****	*****	*****
46	5	OPEN BELT DRIVE, CROSSED BELT DRIVE	*****	58	*****	*****	*****
47	5	SIMPLE NUMERICAL SOLUTIONS	*****	59	*****	*****	*****
48	6	DERIVATION - BELT FRICTION (RATIO OF TENSIONS)	*****	60	*****	*****	*****
49	6	CENTRIFUGAL TENSION, MAXIMUM TENSION, INITIAL TENSION, POWER	*****	61	*****	*****	*****
50	6	SIMPLE NUMERICAL SOLUTIONS	*****	62	*****	*****	*****
51	6	SIMPLE NUMERICAL SOLUTIONS	*****	63	*****	*****	*****
52	6	CLASSIFICATION OF GEARS AND GEAR TRAINS	*****	64	*****	*****	*****
53	6	LAW OF MACHINE, LOAD, EFFORT, MA, VR, NUMERICAL	*****	65	*****	*****	*****
54	6	REVERSIBILITY OF LIFTING MACHINE, DIFFERENTIAL WHEEL AND AXLE.	*****	66	*****	*****	*****
55	6	DIFFERENTIAL PULLEY BLOCK, SYSTEM OF PULLEYS, WINCH CRABE MACHINE	*****	67	*****	*****	*****

Signature of Lecturer

Signature of HOD

## Follow-up Register

Actual Lecture No.	Plan	Date of Lecture	Topic covered	Topic Left	Teaching Methodology	Reasons for Variation if Any	Action plan to Complete it	Remark
	(DTP) Lecture No							
1	1		BASIC CONCEPTS - static,dynamic,kinetic,kimematic, space,mass etc.	NO	Traditional	NO	.....	
2	2		Scalar and Vector Properties, Fundamnetal and Derived Units	NO	Traditional	NO	.....	
3	3		Force, System of Forces, GRAPHICAL REPRESENTATION	NO	Traditional	NO	.....	
4	4		FREE BODY DIAGRAM, TRIANGLE LAW, POLYGON LAW, PARALLELOGRAM LAW	NO	Traditional	NO	.....	
5	5		LAMI THEOREM, MOMENT, COMPOSITION & RESOLUTION OF FORCES	NO	Traditional	NO	.....	
6	6		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	.....	
7	7		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	.....	
8	8		CENTROID,CENTRE OF GRAVITY, MOMENT OF INERTIA	NO	Traditional	NO	.....	
9	9		CENTROID OF PLANES - RECTANGLE,TRIANGLE,CIRCLE,SEMICIRCLE	NO	Traditional	NO	.....	
10	10		PARALLEL AXIS THEOREM, MOMENT OF INERTIA OF RECTANGULAR PLANE.	NO	Traditional	NO	.....	
11	11		PERPENDICULAR AXIS THEOREM, MOMENT OF INERTIA OF CIRCULAR PLANE.	NO	Traditional	NO	.....	
12	12		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	.....	
13	13		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	.....	
14	14		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	.....	
15	15		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	.....	
16	16		FRICITION CONCEPTS , ROUGH AND SMOOTH SURFACE	NO	Traditional	NO	.....	
17	17		TYPES OF FRICTION, COLOUMB'S LAW	NO	Traditional	NO	.....	
18	18		COEFFICIENT OF FRICTION, ANGLE OF FRICTION, ANGLE OF REPOSE	NO	Traditional	NO	.....	
19	19		FORCES ON HORIZONTAL AND INCLINED PLANE	NO	Traditional	NO	.....	
20	20		METHOD OF REDUCING FRICTION, SCREW NUT FRICTION	NO	Traditional	NO	.....	
21	21		FRICTION IN JOURNAL BEARINGS, APPLICATION OF FRICTION	NO	Traditional	NO	.....	
22	22		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	.....	
23	23		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	.....	
24	24		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	.....	
25	25		COORDINATE SYSTEM, SPEED, ACCELERATION	NO	Traditional	NO	.....	
26	26		PARTICLES UNDER UNIFORM AND NON UNIFORM ACCELERATION	NO	Traditional	NO	.....	
27	27		TANGENTIAL AND NORMAL ACCELERATION, ANGULAR DISPLACEMENT	NO	Traditional	NO	.....	
28	28		MOTION UNDER GRAVITY, SIMPLE NUMERICAL	NO	Traditional	NO	.....	
29	29		MEWTON'S LAW OF MOTION	NO	Traditional	NO	.....	
30	30		MOMENTUM,IMPULSE,ANGULAR MOMENTUM	NO	Traditional	NO	.....	
31	31		ANGULAR VELOCITY,ANGULAR ACCELERATION	NO	Traditional	NO	.....	

## Follow-up Register

Actual Lecture No.	Plan (DTP) Lecture No	Date of Lecture	Topic covered	Topic Left	Teaching Methodology	Reasons for Variation if Any	Action plan to Complete it	Remark
32	32		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	*****	
33	33		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	*****	
34	34		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	*****	
35	35		WORK, FORCE, TORQUE	NO	Traditional	NO	*****	
36	36		POWER, IHP, BHP, FP	NO	Traditional	NO	*****	
37	37		ENERGY AND TYPES OF ENERGY - K.E., P.E., INTERNAL ENERGY	NO	Traditional	NO	*****	
38	38		HEAT, SPECIFIC HEAT, SIGN CONVENTION FOR WORK & HEAT TRANSFER	NO	Traditional	NO	*****	
39	39		2 & 4 STROKE PETROL ENGINE - WORKING AND CONSTRUCTION	NO	Traditional	NO	*****	
40	40		2 & 4 STROKE DIESEL ENGINE - WORKING AND CONSTRUCTION	NO	Traditional	NO	*****	
41	41		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	*****	
42	42		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	*****	
43	43		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	*****	
44	44		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	*****	
45	45		BELT DRIVE, ROPE DRIVE, GEAR DRIVE, SPEED OF SHAFTS	NO	Traditional	NO	*****	
46	46		OPEN BELT DRIVE , CROSSED BELT DRIVE	NO	Traditional	NO	*****	
47	47		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	*****	
48	48		DERIVATION - BELT FRICTION (RATIO OF TENSIONS)	NO	Traditional	NO	*****	
49	49		CENTRIFUGAL TENSION, MAXIMUM TENSION, INITIAL TENSION, POWER	NO	Traditional	NO	*****	
50	50		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	*****	
51	51		SIMPLE NUMERICAL SOLUTIONS	NO	Traditional	NO	*****	
52	52		CLASSIFICATION OF GEARS AND GEAR TRAINS	NO	Traditional	NO	*****	
53	53		LAW OF MACHINE, LOAD , EFFORT , MA, VR, NUMERICAL	NO	Traditional	NO	*****	
54	54		REVERSIBILITY OF LIFTING MAHINE, DIFFERENTIAL WHEEL AND AXLE.	NO	Traditional	NO	*****	
55	55		DIFFERENTIAL PULLEY BLOCK, SYSTEM OF PULLEYS, WINCH CRABE MACHINE	NO	Traditional	NO	*****	

Signature of Lecturer

Signature of HOD



### Assignment Questions – 1

Q. No.	Questions
1.	The forces 20N, 30N, 40N, 50N & 60N are acting at one of the angular points of a regular hexagon towards, the other five angular points taken in order. Find the magnitude and direction of the resultant force?
2.	Explain polygon Law of Forces??
3.	Three forces of magnitude 40 KN, 15 KN and 20 KN are acting at a point the angle made by the 40 KN, 15 KN and 20 KN forces with x axis are $60^\circ$ , $120^\circ$ and $240^\circ$ respectively. Determine the magnitude and direction of the resultant force.?
4.	Define fundamental units and derived units. Write units of discharge, moment and angular acceleration?

### Assignment Questions – 1

Q. No.	Questions
1.	The forces 20N, 30N, 40N, 50N & 60N are acting at one of the angular points of a regular hexagon towards, the other five angular points taken in order. Find the magnitude and direction of the resultant force?
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4.	Define fundamental units and derived units. Write units of discharge, moment and angular acceleration?

## Assignment Questions – 2

Q. No.	Questions
1.	Find the moment of Inertia of a T section about x x axis through centre of gravity of the section. The Dimensions of the t section consist 150 mm and 50 mm of flange, 50mm and 150 mm for Web.?
2.	Determine the position of centroid of an I section with following detail - Top flange - 100x20 mm, web 80x20mm and bottom flange is 150x20 mm.?
3.	Define – 1. Centroid 2. Moment of inertia 3. Centre of gravity?

### Assignment Questions – 3

Q. No.	Questions
1.	A force of 40 Newton Pulls weight of 60 N up an inclined plane, the force being applied parallel to the plane. If the inclination of the plane is 30 degree. find the coefficient of friction.
2.	Write advantages and disadvantages of friction. A body of weight 500 N is resting on a horizontal floor. It is pushed by a force making an angle of 30 degree with the horizontal. if the coefficient of friction is 0.22 than find the magnitude of the force.?
3.	Define- (a) Angle of Repose (b) Dynamic Friction (c) Cone of Friction.

### Assignment Questions – 4

Q. No.	Questions
1.	A ball is thrown vertically upwards with a velocity of 30m/s. Determine its velocity and position after 2 second.?
2.	A projectile is projected at an angle of $30^\circ$ with a velocity of 200 m per second from horizontal. Find maximum height of projectile and time of flight? ?
3.	Define Angular velocity , Angular displacement and Angular acceleration ?
4.	Explain Newton's Law of Motion?

### Assignment Questions – 5

Q. No.	Questions
1.	Find the power required for the pump to lift water at the rate of $2 \text{ m}^3 / \text{sec}$ from a 20 m deep well.?
2.	A train of 125 tons mass runs in a 1:100 inclination track by a constant speed of 18 kmph. If frictional resistance is 51.9 N/Tonnes. find the power of the engine.?
3.	Define 1. Simple gear train 2. Compound gear train 3. Diverted gear train?
4.	In a belt drive 600 mm diameter Pulley runs at 200 RPM, coefficient of friction between belt and pulley is 0.25 and angle of lap is $160^\circ$ . if maximum tension in belt is 2500 Newton, find kilowatt power required.?

**LIST OF EXPERIMENT AS PER CSVTU**  
**Branch-~~Mechanical~~ <sup>ELECTRICAL</sup> Jan-June 2025**

S.NO	EXPERIMENT TITLE	Date of
1	Introduction to lab safety & Equipment	<del>22-8-25</del> 27-3-25
2	To measure the pH of different solution.	16-06-25
3	To Determine the total Hardness of given water sample by EDTA method.	7-4-25
4	To find out type of alkalinity and estimate alkalinity present in the given water sample.	1-5-25
5	To determine the total dissolved and suspended solids(TDS) in the given water sample with the stipulation.	22-5-25
6	Determination of the amount /percentage of iron(Fe) in an iron ore solution by (KmnO <sub>4</sub> ) redox (Reduction-oxidation) titration.	15-5-25
7	Study of working principal of bomb calorimeter for the determination of calorific value of given fuel.	16-06-25
8	The determination of cloud and pour point of heavy liquid petroleum products.	17-07-25
9	To determine the flash and Fire points of the given sample of oil using cleveland open-cup apparatus.	26-06-25
10	To determine the Daniel cell converts chemical energy into electric energy .	29-5-25
11	Study of proximate analysis of sample of Coal.	03-7-25
12	To determine conductometric titration. (Acid Base)	31-7-25
13	To determine percentage of copper in a given sample by Brass titration.	15-5-25
14	Fractional distillation of unknown mixture.	17-7-25
15	To determine the turbidity of the given water sample with the stipulations.	8-5-25
16	To determine BOD value for bio-degradability of solution.	5-6-25
17	To determination of viscosity by Redwood Viscometer.	19-06-25
18	Conductivity of water sample Determine	12-8-25

Lab incharge



NMDC DAV POLYTECHNIC DANTEWADA  
ATTENDANCE RECORD

Branch: Electrical Sem: 2

Month: March

Session: Apr-May 2025

Subject: Applied Mechanics, 2<sup>g</sup>

SN	Roll No.	Student Name	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Att(%)	% Age
1	207502424001	AKASH SAMADDAR										P	P	P	P							P	P	P									9	100	
2	207502424002	ALPHIYA SIDDIQUI										A	A	A	A							A	A	A									0	0	
3	207502424003	AMZAD ALI										A	A	A	A							A	A	A									0	0	
4	207502424004	ANIL VEK										A	A	A	A							A	A	A									0	0	
5	207502424005	ARVIND KASHYAP										P	P	P	P							P	P	P									0	0	
6	207502424006	ASHOK MARKAM										P	P	P	P							P	P	P									8	89	
7	207502424007	AYUSH KUMAR VERMA										P	P	P	P							P	P	P									9	100	
8	207502424008	BHARTI KUNJAM										P	P	P	P							P	P	P									8	89	
9	207502424009	BHISHMDEV KORETI										A	A	A	A							A	A	A									0	0	
10	207502424010	BHUNESHWARI KORSA										A	A	A	A							A	A	A									0	0	
11	207502424011	BHUPENDRA KUMAR										A	A	A	A							A	A	A									0	0	
12	207502424012	CHANDRAKANT DAS										A	A	A	A							A	A	A									0	0	
13	207502424013	DIPESH										A	A	A	A							A	A	A									0	0	
14	207502424014	DIPESH KUMAR										A	A	A	A							A	A	A									0	0	
15	207502424015	DUSHYANT SAHU										A	A	A	A							A	A	A									1	11	
16	207502424016	GEETESH KAUSHIK										A	A	A	A							A	A	A									1	11	
17	207502424019	K VENU RAO										A	A	A	A							A	A	A									0	0	
18	207502424020	KAILASH KHORA										A	A	A	A							A	A	A									1	11	
19	207502424021	KOMAL KACHCHHAP										A	A	A	A							A	A	A									0	0	
20	207502424022	KUNAL VIMAL										A	A	A	A							A	A	A									0	0	
21	207502424023	LIKHENDRA SINGH MANDAVI										A	A	A	A							A	A	A									7	78	
22	207502424024	MANTHAN ACHALA										A	A	A	A							A	A	A									0	0	

Signature of Faculty



VMDC DAV POLYTECHNIC DANTEWADA  
ATTENDANCE RECORD

Month: April

Sem: 2

Branch: Electrical

Session: Apr-May 2025

Subject: Applied Mechanics

SN	Roll No.	Student Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Att.	% Age
1	207502424001	AKASH SAMADDAR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	16	80	
2	207502424002	ALPHIYA SIDDIQUI	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	6	30	
3	207502424003	AMZAD ALI	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	16	80	
4	207502424004	ANIL VEK	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	3	15		
5	207502424005	ARVIND KASHYAP	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	9	45		
6	207502424006	ASHOK MARKAM	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	5	15		
7	207502424007	AYUSH KUMAR VERMA	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	16	80		
8	207502424008	BHARTI KUNJAM	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	0	0	
9	207502424009	BHISHMDEV KORETI	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	11	55	
10	207502424010	BHUNESHWARI KORSA	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	19	95	
11	207502424011	BHUPENDRA KUMAR	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0		
12	207502424012	CHANDRAKANT DAS	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	14	70	
13	207502424013	DIPESH	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	11	55	
14	207502424014	DIPESH KUMAR	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	0	0	
15	207502424015	DUSHYANT SAHU	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	19	95	
16	207502424016	GEETESH KAUSHIK	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	9	45	
17	207502424019	K VENU RAO	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	6	30	
18	207502424020	KAILASH KHORA	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	9	45	
19	207502424021	KOMAL KACHCHHAP	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	0	0	
20	207502424022	KUNAL VIMAL	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	0	0	
21	207502424023	LIKHENDRA SINGH MANDAVI	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	0	0	
22	207502424024	MANTHAN ACHALA	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	12	60
																																	13	65	

Signature of Faculty



















