PHY 1053 Topic	Intro Physics I Sub-Topics	M=Mandatory, O=Optional, R=Review, V=Overview M,O,R,V
Measurement and Vectors	Standard units (SI) - basic and derived units, unit conversions	M
	Vector operations - analytical and graphical solutions	M
	Distinguish between scalar and vector	M
	Curves, tangents to curves, vector field	V
Motion	Kinematics - velocity, constant acceleration, speed.	M
	Circular, harmonic, linear, projectile, 2-dimensional, rotational	M
	Graphical representation of motion	M
Mechanics	Dynamics - Newton's Laws (F=MA)	M
	Linear - forces, momentum, center of mass	M
	Rotation - torque, moment of inertia, angular momentum	M
	Static and dynamic fluids	M
	Newton's Law of Universal Gravitation - gravitational acceleration (orbital satellites).	M
Energy and Conservation Laws	Work energy theorem	M
	Work	M
	Collision and interaction (generic)	M
	Conservation of energy	M
	Kinetic and Potential energy	M
	Conservation of linear and angular momentum	M
Oscillations and Wave Motion	Sound	M (53/54)
	Simple harmonic motion	M (53/54)
	Superposition principle	M (53/54)
	Standing waves and resonance	M (53/54)
	Doppler effect	M (53/54)
Thermal	Equations of state	M (53/54)
	Heat transport	M (53/54)
	Specific heat, latent heat	M (53/54)
	Thermal expansion	M (53/54)
	Kinetic theory of gas	O
	3 laws of thermodynamics	M (53/54)