Université catholique de Louvain - Conceptual Physics with technical Applications - en-cours-2024-binge1243	
	Dot product, cross product, cartesian coordinates, rotations in the 2D plane.
	Chapter 4: Kinematics: motion in two dimensions
	Polar coordinates, Angular velocity, Uniform circular motion.
	Chapter 5: Dynamics: Newton's law of motion
	Free body diagram, forces, torques, linear and angular momentum, rolling on an inclined plane, gyroscope physic
	Chapter 6: Newton's third principle application - Drag
	Drag coefficient, terminal velocity, lift, rocket science.
	Chapter 7: Work-energy theorem
	Potential and kinetic energy, energy conservation, dissipation
	Chapter 8: Simple harmonic motions:
	Simple pendulum, spring, swing resonance, damping
	II) Electricity and magnetism - Chapter 9: Electric charge and electric field
	Fields, Static electricity, electrical charge, Coulomb's law, electric field, electrical potential energy - Chapter 10: Magnetism
	Compass physics, magnets, Lorentz force, cyclotron physics, cyclotron resonance (work-energy theorem)
nline resources	Complementary notes related to each course are communicated online each week.
Bibliography	Urone, P. P., & Hinrichs, R. (2012). College Physics (OpenStax). (Reference book) Hewitt, Paul G. Conceptual physics. Pearson Education, 2002.

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