INSTITUTION **FAST National University Computer and Emerging Sciences, Karachi Campus**

BE EVALUATED Bachelor of Computer Science

A. Course Description

Course Code	EE(117)
Course Title	Applied Physics
Credit Hours	3
Prerequisites by Course(s) and Topics	None
Assessment Instruments with Weights (homework, quizzes, midterms, final, programming assignments, lab work, etc.)	**Midterm** 30% **Class Quizzes** 10% **Assignments/ projects** 10% **Final Exam** 50% **Total** 100%
Course Coordinator	Rabia Tabassum
URL (if any)	
Current Catalog Description	**Part A:** Adding Vectors, Components of Vectors, Unit Vectors, Vector & Scalar Products, Position & Displacement (2/3 dimensions), Average/Instantaneous Velocity/Acceleration, Projectile Motion, Uniform Circular Motion, Newton Laws of Motion, Forces (1D/2D/3D): Gravitational, Friction, Tension, Weight. **Part B:** Simple Harmonic Motion, the Force Law for SHM, Angular SHM, Simple Pendulum, Damped SHM, Circular Motion & SHM, Types of Waves, Sinusoidal Waves, Wavelength and Frequency **Part C:** Electric Charge, Coulomb's Law, Electric Field, Electric Field Due To Point Charge, Due To Electric Dipole, Gauss' Law, Flux Of Electric Field, Cylindrical/Planar/Spherical Symmetries, Capacitance, Parallel Plate/Cylindrical/Spherical Capacitors, Capacitors In Parallel And In Series, Electric Current, Current Density, Drift Speed, Resistance & Resistivity, Ohm's Law, Magnetic Fields And Field Lines, Hall Effect, Circulating Charge Particles, Magnetic Force On Current Carrying Wire, Magnetic Field Due To Current, Ampere's Law, Magnetic Field Inside/Outside Wire/Between Parallel Wires
Textbook (or **Laboratory Manual** for Laboratory Courses)	**Title** ***Halliday & Resnick*** **Fundamentals of Physics (Extended 10th Edition)** **Author(s)** Jearl Walker