

ADVANCE SATELLITE MASTERCLASS				
Day	Topic	Day	Time	Date
Day 1	<b>Introduction to Orbital Mechanics</b>	Friday	5:00 to 7:00 Pm	22 Aug
	Kepler's Laws of Planetary Motion, Capra's Law (Orbital Energy Concepts), Orbital Elements & Coordinate Systems, Types of Orbits (LEO, MEO, GEO, HEO, SSO), Two-Body Problem & Perturbations			
Day 2	<b>Space Environment</b>	Saturday	5:00 to 7:00 Pm	23 Aug
	Vacuum & Microgravity Effects, Atomic Oxygen & Material Degradation, Radiation Belts (Van Allen Belts), Solar Activity and Space Weather, Charging, Outgassing, and Thermal Effects			
Day 3	<b>Spacecraft Structure</b>	Sunday	11:00 Am to 1:00 Pm	24 Aug
	Satellite Configuration & Load Paths, Structural Materials & Testing, Deployment Mechanisms (e.g. solar panels, antennas), Thermal Control Techniques, Vibration & Shock Management			
Day 4	<b>Payload Design</b>	Monday	5:00 to 7:00 Pm	25 Aug
	Payload Anatomy, History of Payload Design, Thermal Payload, Optical Payload, Mission Planning, Case Study - Oceansat			