Institute of Space Technology (Islamabad)

ASTRODYNAMICS FOR SPACE TECHNOLOGISTS

Professional-Development-Short Course

August 22-26, 2005

Instructor

Professor Dr. Syed Arif Kamal

Member AIAA

Chairman Convener

Department of Mathematics
Faculty of Science
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National Curriculum Revision
Committee for Mathematics
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Introduction of the Participants, Instructor & Program

Evaluation Form

• Learning-Evaluation Questionnaire

Day	Date	#	Topic
Monday	August 22, 2005	1	Projectile Dynamics, Orbital and Escape Velocities
		2	Down-Range and Cross-Range Error for Short-
			Range Projectiles
Tuesday	August 23, 2005	3	Geostationary and Polar Satellites, Satellite-Launch
	-		Vehicle (SLV), Satellite and. SLV Orbits
		4	Review of Lagrangian and Hamiltonian Dynamics
Wednesday	August 24, 2005	5	Two-Body Problem in Plane-Polar-Coördinate Mesh
		6	Two-Body Problem in Elliptic-Astrodynamical-
			Coördinate Mesh
Thursday	August 25, 2005	7	Hohmann-Transfer Orbit
		8	Three-Body Problem and Stability of Satellites
Friday	August 26, 2005	9	Explicit-Guidance Schemes
	•	10	Control Laws: Extended-Cross-Product Steering and
			Dot-Product Steering

Web address of this document: https://www.ngds-ku.org/Astrodynamics/IST1.pdf