



University of Karachi

Institute of Space and Planetary Astrophysics

Second Semester 2005

SPA 713: Space-Flight Dynamics

Tuesday, Thursday 1730h - 1910h

Course Supervisor: Dr. Syed Arif Kamal

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Course Objectives

To give the students sound background in the techniques and the methods of space-flight dynamics so that they can apply the ideas to different branches of science and engineering, *e. g.*, orbit computation for satellites and satellite-launch vehicles, stability consideration for launching of satellites, autopilot designing for spacecrafts and attitude control of satellites.

Recommended Books

- a) **R. Deusch, *Orbital Dynamics of Space Vehicles*, Prentice Hall, Englewood Cliffs, New Jersey, USA (1963)**
- b) **R. H. Battin, *An Introduction to the Mathematics and the Methods of Astrodynamics*, AIAA Education Series, New York (1987 & 1999)**

Weakly breakdown of course contents shall be available on my homepage by:

Monday, July 18, 2005