

AY 401/501 CELESTIAL MECHANICS – GALAXY DYNAMICS

Spring 2007 --- MWF 10:00-10:50 am --- 328 Gallalee Hall --- Dr. Gene Byrd

AY401 will cover the dynamics of satellites, space probes, and solar system objects through stars and star clusters. It will end with the dynamics of galaxies and galaxy clusters. Use of computer calculations and simulations will be included.

Since this is a hybrid graduate/undergraduate course, we will start with basic material and consume some time in review. The subject matter of these portions will be seen from a sufficiently different viewpoint and conducted at an appropriate pace so all students will benefit. A background in calculus, differential equations and vectors is needed as well as an introductory course in mechanics.

Students with majors in physics, engineering and computer science will find this course interesting. It can apply to an astronomy minor for students in all these areas.

