AERONAUTICAL &
ASTRONAUT. ENG. (AAE)

AAE 210. INTRODUCTION TO AEROSPACE ENGINEERING. (3 Credits)
Topics will include the engineering fundamentals of aeronautics and
astronautics, including an introduction to aerodynamics, propulsion,
structures, orbital mechanics and mission planning. Current industry
practices in aerospace vehicle specifications, manufacturing, flight
testing and certification will be presented.
Prerequisites: ENGR 211 with C or better

AAE 412. SPACE SYSTEMS ENGINEERING. (4 Credits)
Introduction to space systems engineering. Topics will include the
fundamentals of astronautics, orbital mechanics and trajectory design,
flight dynamics, guidance and navigation, stability and control of
spacecraft. Rocket propulsion concepts, including chemical rockets
(liquid, gas and solid propellants), hybrid rocket engines and modern
advances in satellite power systems will be discussed. Current design
practices in space systems engineering will be emphasized.
Prerequisites: (ME 317 with C or better or ME 317H with C or better) and
(ME 373 [C] or ME 373H [C])

AAE 512. SPACE SYSTEMS ENGINEERING. (4 Credits)
Introduction to space systems engineering. Topics will include the
fundamentals of astronautics, orbital mechanics and trajectory design,
flight dynamics, guidance and navigation, stability and control of
spacecraft. Rocket propulsion concepts, including chemical rockets
(liquid, gas and solid propellants), hybrid rocket engines and modern
advances in satellite power systems will be discussed. Current design
practices in space systems engineering will be emphasized.