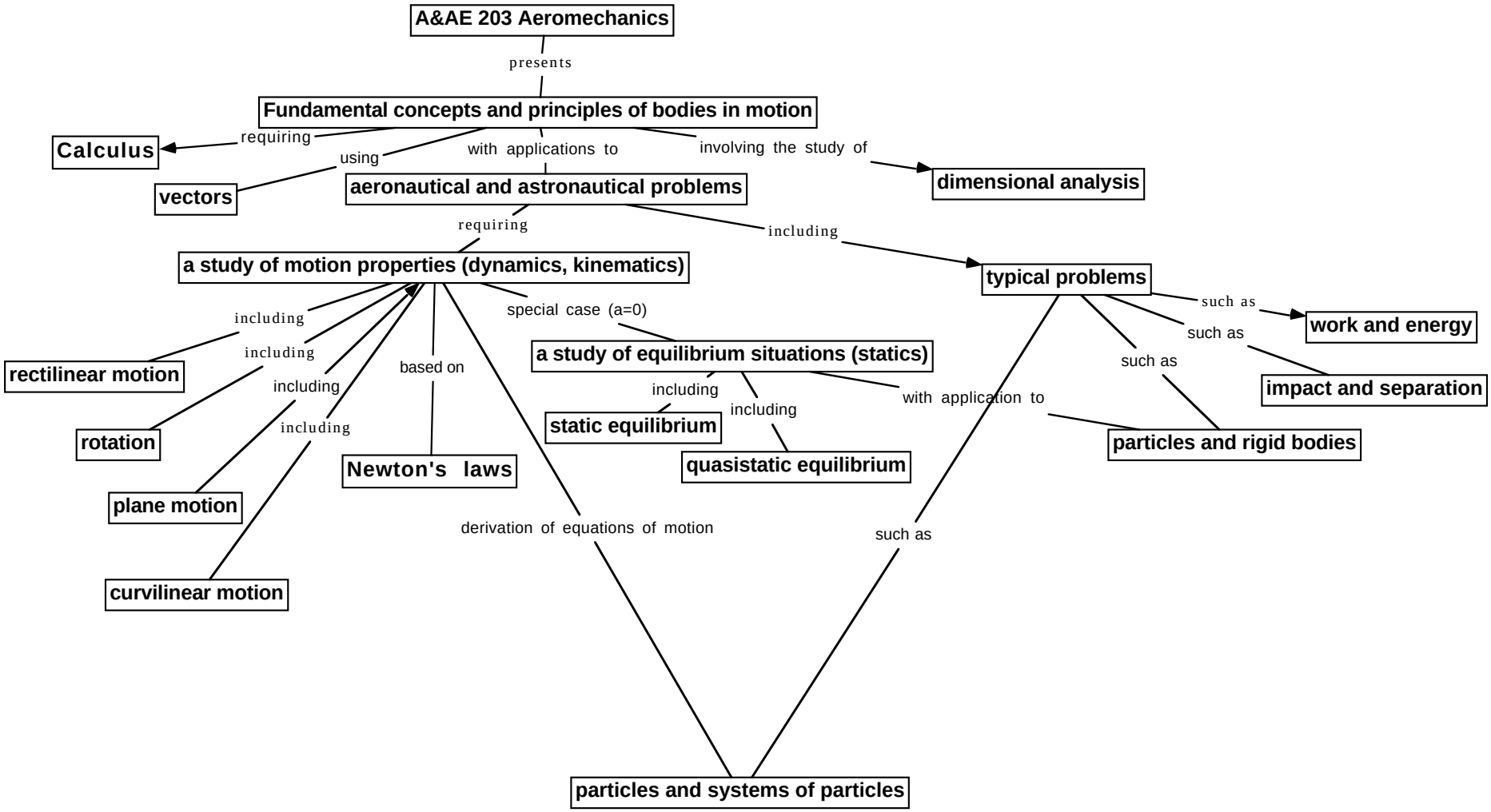
A&AE 203 Aeromechanics
presents
Fundamental concepts and principles of bodies in motion
requiring
Calculus
using
vectors
with applications to
aeronautical and astronautical problems
involving the study of
dimensional analysis
requiring
a study of motion properties (dynamics, kinematics)
including
typical problems
including
rectilinear motion
including
rotation
including
plane motion
including
curvilinear motion
based on
Newton's laws
special case (a=0)
a study of equilibrium situations (statics)
including
static equilibrium
including
quasistatic equilibrium
with application to
particles and rigid bodies
such as
work and energy
such as
impact and separation
such as
particles and rigid bodies
derivation of equations of motion
such as
particles and systems of particles