associated logistics for participation will be noted in Canvas. To ensure flexibility in your participation in this course, I will not monitor or mandate attendance during these synchronous discussions; parts of these sessions will be recorded and videos made available so that you can watch them later if you are unable to attend. However, if you are registered in the -001 section and/or are available at the designated course time, I strongly encourage you to attend and actively participate in the synchronous discussions. Office hours will be held weekly but will not be recorded. You may attend office hours either to ask us questions or to work with other students. You may also use Piazza to ask questions to your peers and the instructional team questions as you work through concepts and homeworks.

N : Lecture notes, lecture videos, videos of the synchronous discussions, and any course materials provided to you may not be distributed publicly or shared with individuals who are not registered in the course this semester without instructor consent. In addition, the information contained within this syllabus is subject to change as needed during the pandemic.

R c **:** ASEN 3200 or equivalent, or instructor permission required. As

Grading Policy

Take Home Exam 1: 25%

Take Home Exam 2: 25%

Homework: 50%

Important Dates

A course schedule including topics and assessment due dates will be made available on the course webpage. Exams are scheduled as follows:

Take Home Exam 1: assigned 9/30 and due 10/5

Take Home Exam 2: assigned 11/11 and due 11/16

N : Assessment dates are subject to change, if needed

Assessment Policies

H A

Homework assignments throughout the semester will feature a combination of derivations, analysis, calculations and creating simulations. Homework submissions will be graded on both the accuracy of the answers and the accompanying working/discussion. Homework submissions – including those that require implementing numerical procedures – require a clear and technically precise discussion that

requirements and all public health orders in place to reduce the risk of spreading infectious disease. Students who fail to adhere to these requirements will be asked to leave class, and

Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code academic integrity policy. Violations of the Honor Code may include, but are not limited to: plagiarism, cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work

Tentative List of Topics

*These topics may change throughout the semester

- Two-body problem
- Orbital elements
- Coordinate systems and transformations
- Time along an orbit
- f and g series
- Orbital transfers (impulsive)
- Lambert’s problem
- Interplanetary trajectories
- Groundtracks
- Perturbations
- Relative motion
- Initial orbit determination
- Introduction to the three-body problem