

## **Mars Evolution EPS 465/565 Mid-term Exam Spring 2009**

Answer each question for 100 pts full credit, total exam: 100 pts. This exam is worth 25% of your final grade.

Please turn in your answers as an email attachment (MS Word file or PDF) to [agee@unm.edu](mailto:agee@unm.edu). Limit your answers to 2-pages of text per question. You may include supplementary pages with figures if needed.

Exams are due before midnight on Thursday, March 26<sup>th</sup>.

1. Describe the merits of a Mars sample return mission, and also the challenges and pitfalls of such a mission.
2. Describe all the constraints we have on the make-up of the Martian mantle and core, and also how the constraints could be improved.
3. Describe the possible explanations for the Martian crustal dichotomy.
4. Describe the merits of a human mission to Mars, and also the challenges and pitfalls of such a mission.