

***ASTE-523 — Spring, 2023***  
***Design of Low-Cost Space Missions***  
***A Near-Term,***  
***Income-Generating, Lunar Settlement***  
***Administrative Information***



**Dr. James R. Wertz**

**January, 2023**

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- **Class Participation** — 15%
  - Class participation is difficult in the televised class environment. It is also critical to getting the most out of the class and is required and will be graded
    - In class participants are strongly encouraged to ask questions and make comments
    - All participants are required to submit at least 3 questions or comments via E-mail within 48 hours after each class (send E-mails to [wertz523@smad.com](mailto:wertz523@smad.com) with cc to [ksampson@usc.edu](mailto:ksampson@usc.edu))
  - If your grade is borderline, class participation will be used as a decision criteria
- **Homework** — 25%
  - Due 1 week after it is assigned; can be 1 week late with 10% penalty
  - Is not accepted more than 1 week late
  - All homework should be submitted to [ksampson@usc.edu](mailto:ksampson@usc.edu)
- **Midterm** — 20%
  - Open book and open notes; will need calculator; computer is not allowed
  - Mostly numerical problems, short answers, or short essays
- **Final Report** — 40%
  - A substantial essay rather than a final exam
  - Intended to cover one of the course topics in more detail than occurred during the course
- **Class absences**
  - The press of work causes most of us to miss class from time to time
  - When that happens, it's your responsibility to make up what was missed by whatever process works best



- **There is no required text for the course**

- **Supplementary texts**

Moon Village Association, *The Lunar Commerce Portfolio*, first edition, 2022, electronic copy, no cost

NASA, *Lunar Exploration Objectives*, 2006, electronic copy, no cost

Wertz and Larson, *Reducing Space Mission Cost*, 1996. List \$60.00

Available to ASTE-523 participants for \$35\*

Wertz, Everett, and Puschell, *Space Mission Engineering*, 2011. List \$125.00

Available to ASTE-523 participants for \$60\*

Sarsfield, *The Cosmos on a Shoestring*, 1998. Available at no cost at:

<http://www.rand.org/publications/MR/MR864>

- **Course Notes** available only as electronic copy at no cost

**Note: The notes will be a challenge, as they will be created throughout the semester as the course proceeds. Most likely will be distributed electronically**

- \* Reduced price only for ASTE-523 participants available at the Microcosm Bookstore, [www.astrobooks.com](http://www.astrobooks.com) ([bookstore@smad.com](mailto:bookstore@smad.com) or 310-539-2306)

- Special price for course text/supplements as shown above
- 5% discount on all book prices
- Must identify yourself as an ASTE-523 participant
- Cost includes tax (for text and course notes only), but not shipping



## Government Policy on Space Exploration and Transportation

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- Four relevant documents on government policy on space exploration and transportation are:
  - US Space Exploration Policy (Jan. 13, 2004), available at <http://www.whitehouse.gov/news/releases/2004/01/20040114-3.html>
  - US Space Transportation Policy (Jan., 2005), available at <http://www.ostp.gov>
  - US National Space Policy (Oct. 6, 2006), available at <http://www.ostp.gov>
  - The DoD ORS Report to Congress (April 20, 2007), available at <http://www.responsivespace.com>



**Course Website (homework, grades, handouts):**

[www.smad.com/aste523](http://www.smad.com/aste523)

**E-mail addresses & Contact Numbers:**

Instructors: Dr. James R. Wertz (USC):	wertz523@smad.com Mobile: 310-529-2780
Dr. Shirley Dyke (Purdue):	sdyke@purdue.edu Off: 765-494-7434
Administrator (Julie Jackson):	jjackson@smad.com Tel: 310-539-2306
TA (Kevin Sampson):	ksampson@usc.edu Tel: 609-694-9103

**Homework** should be E-mailed directly to the TA at the E-mail address above

**Class Participation comments** should be E-mailed to **BOTH** J. Wertz and the TA at the E-mail addresses above



## Preliminary Course Schedule

- Jan. 12 5:00 – 7:40 First class session
- Jan. 19 5:00 – 7:40 Regular class session
- Jan. 26 5:00 – 7:40 Regular class session
- Feb. 2 5:00 – 7:40 Regular class session
- Feb. 9 5:00 – 7:40 Regular class session
- Feb. 16 5:00 – 7:40 Regular class session
- Feb. 23 5:00 – 7:40 Regular class session
- March 2 5:00 – 7:40 Regular class session
- March 9 TBD **Mid-Term — Process determined by DEN**
- March 16 TBD **Spring Break – No class 😊 (Defined by DEN)**
- March 23 5:00 – 7:40 Regular class session
- March 30 5:00 – 7:40 Regular class session
- April 6 5:00 – 7:40 Regular class session
- April 13 5:00 – 7:40 Regular class session
- April 20 5:00 – 7:40 Regular class session
- April 27 5:00 – 7:40 Final class session
- May 4 Time TBD **Final Exam — Process determined by DEN**

**Note: This class will have a final report and NOT a final exam**