



## Understanding Space Online

### An Introduction to Astronautics and Space Systems Engineering

TSTI's acclaimed Understanding Space Course is now available 100% online! Based on the award-winning text *Understanding Space: An Introduction to Astronautics*, this is the same course presented to over 20,000 space professionals from NASA, NRO, ESA, US Air Force, and major companies in the space industry. Previously this course was only available to aerospace organizations their personnel onsite. Now it is available to all space professionals and the general public through this unique online course!

This course is designed to make you "space smart," by building your understanding and appreciation for the complex requirements of space missions.

### Course Topics

#### Space in Our Lives

- Space in Our Lives
- Elements of a Space Mission
- A Brief History of Space
- The Space Enterprise
- Space Systems Engineering
- Mission Management, Space Operations
- Down to Earth Issues Exploring Space
- History of early explorers and the coming of the space age

#### Orbits & Trajectories

- The Space Environment
- Understanding Orbits
- 2-body Problem and Constants of Motion
- COEs, Ground Tracks and Basic Orbits
- Perturbations and Special Orbits
- Maneuvers, Rendezvous
- Launch & Reentry

#### Space Systems

- Observation Payloads
- Electrical Power
- Attitude and Orbit Control
- Communication, Data Handling
- Structures and Thermal
- Rockets, Launch Vehicles

### Your Space Adventure Starts Here!

**Space 101 (\$99):** Want a basic introduction to space?

- 24 guided lectures - presented by the author of *Understanding Space* - spanning every aspect of space mission design, development, technology and operations - nearly the equivalent of a semester-long course!
- Continuous feedback on your progress through study guides and quizzes
- Explore topics of interest with In-depth learning modules on a growing range of space issues, technologies and missions
- 100% self-paced - you have up to 4 months to complete the course on your own time when it is convenient for you!
- 24/7 access to all course material through our exclusive learning management system
- Certificate of Completion with 3 Continuing Education Units (CEUs)

**Space 102 (\$139):** Want to dive a bit deeper into astronautics?

- In addition to everything in Space 101, you also receive an electronic copy of the award-winning [Understanding Space](#) text (a \$50 value!) plus get 2 extra months, 6 months total, to complete the course.

**Space 105 (\$299):** Are you a Space Professional who needs to master basic astronautics?

In addition to everything in Space 102, you will also receive

- One-on-one mentoring from one of TSTI's award-winning instructors. Your Personal Course Mentor will guide you every step of the way to achieve your learning goals!
- A detailed mission design project to apply what you've learned each step of the way
- Certificate of Competence with 5 Continuing Education Units (CEUs)
- Optional LinkedIn endorsement of your astronautics skills

**Start Now! Go to: <http://www.tsti.net/online-courses/us-online>**