

# **ESS 102: Space and Space Travel**

## **Course Topics**

### **Background Concepts**

- 1) Sizes and Scales in the Solar System:
- 2) Atoms and Light:

### **Our Sun**

- 3) Powering the Sun:
- 4) The Sun's Interior:
- 5) Stellar Diagnostics:
- 6) The Sun's Extended Atmosphere (Heliosphere):
- 7) The Sun-Planet Connection:

### **Propulsion and Space Travel**

- 8) Planetary Motion and Orbits:
- 9) Basics of Propulsion:
- 10) Rockets and their Limitations:
- 11) Advanced Propulsion Schemes:

### **Exploring our Solar System**

- 12) Formation of the Planetary Systems:
- 13) Exploration of Terrestrial Planets:
- 14) Exploration of the Giant Planets:
- 15) Exploration of Small Bodies (Comets/Asteroids)
- 16) Future of Space Exploration: