

Intermediate Space Science Syllabus (Summer 2022)

Course Aims: The Intermediate Space Science Course is an intensive, 6-week long course that aims to prepare students for the NSB High School Regional and Middle School National Competitions. This course will teach the topics that most frequently show up in the Space Science subcategory and topics in the Energy category, which pertain to astronomy. Students should note that the course will be rigorous and fast-paced, but if one puts in the work, they will see significant improvement in their astronomy knowledge and Science Bowl skills.

Prerequisites: None

What's Included:

- Weekly lectures on Zoom
- List of recommended reading material and supplemental resources
- 1-on-1 advising about study planning (by appointment)
- Access to exclusive discord server
- Seminars about study tips, buzzing strategies, teamwork skills
- Weekly Office Hours
- Flashcard sets on important topics
- Packet readings to test retention of course material

Week 1:

- Inner Planets: Mercury, Venus, Moon, Mars
- Outer Planets: Jupiter, Saturn, Uranus, Neptune

Week 2:

- Asteroids, Comets, Kuiper Belt Objects
- Astrophysics: Kepler's Laws, Eclipses, Luminosity, Telescopes

Week 3:

- Spectroscopy + Light
- The Sun + HR-Diagram

Week 4:

- ISM+ Star Formation
- Stellar Evolution

Week 5:

- Supernova, Compact Objects
- Galaxies I

Week 6:

- Galaxies II
- Cosmology