



QUIZ STUDY GUIDE

StellarXplorers Qualification Round 2 (QR2)

In each of the Qualifying Rounds of competition, teams can earn up to 20 points based on their completion of an online academic quiz. The quiz is taken as a team (not individually) and must be completed within the team's 6-hour competition window. There is no time limit on the quiz itself. The quiz is 20 questions (multiple choice, true/false, and/or matching) and each correct answer is worth 1 point. All questions are based on topics covered in **Nova Space's StellarXplorers Space Foundations course**.

Study guides are provided for each quiz to help teams prepare and maximize their quiz scores. The QR2 quiz covers the topics in the Space Systems Engineering Foundational Module:

Space Systems Engineering Foundational Module

Systems Engineering Overview

- Integrated Systems
- Verification and Validation
- Close to Flawless Design
- Major Subprocesses
- V Diagram

Space Systems

- Payload
- Spacecraft Bus and Subsystems
- Spacecraft Design Process

Payloads

- Remote Sensing
- Communications
- Position, Navigation, Timing Payloads
- Science and exploration
- Defense Industry
- Futures

Subsystems

- Structure and mechanisms
- Spacecraft Design
- Launch Environment
- Mechanisms

Specific Subsystems

- Command and Data Handling Subsystems
- Electrical Power Subsystems
- Thermal Control Subsystems

- Attitude Determination and Control Subsystems
- Telemetry, Tracking & Control Subsystems
- Environmental Control and Life Support Subsystems
- Propulsion