

Aerospace & Aviation Academy

*2021 Sample Schedule**

Day One Arrival of Scholars

Host Campus Tours & Orientation
Introduction to Design Simulation
Mission V-log: Kickoff
Opening Keynote: The Business of Space

Day Two Design Thinking

Rice Faculty Lecture – Design Thinking/Engineering Design Process
Skills Workshop: Space Challenges & Designer Solutions
Simulation: Identifying the True Problem
Specialty Workshop I – OneOrbit presents Endeavor to the Next Level
Case Study: Career Profiles in Aerospace Engineering

Day Three Aerodynamics

Rice Faculty Lecture – Aerodynamics & Rocketry
Simulation: Initial Multi-phase Rocket Design
Specialty Workshop II – Aerofoil Design & Impact on Flight
Mission V-log: Initial Design Update
Government/Industry Field Excursion I – Airfield/Flight Training

Day Four Systems & Operations

Rice Faculty Lecture – Satellite Systems & Operations
Simulation: Satellite Mission Design
Simulation: Prototype Atmospheric Payload Design
Field Work: Solicit Feedback on Design
Evening Social: Texas-Sized BBQ
Speaker Seminar(s) I – Evening with the Experts - Discuss Issues with Space Travel

Day Five Orbital Mechanics

Rice Faculty Lecture – Orbital Mechanics
Skills Workshop: Communication Worlds Away
Simulation: Testing & Adapting Payload Design
Simulation: Design Launch Parameters

**This is a sample schedule of the types of events that may be included in a career focused program and is not intended to represent a specific schedule for the program. All events, speakers, and site visits are subject to confirmation, cancellation, and change by Envision without prior notice.*

Due to the coronavirus pandemic, we are in the process of evaluating certain program elements for 2021 to ensure that they meet the most current public health standards and guidance. The safety and security of our students is always our top priority.

Day Six Mission Control

Government/Industry Field Excursion II – Day at Space Center
Houston

Skills Workshop: Data Driven Prototyping

Simulation: Finalize Launch Strategy

Specialty Workshop III – Team building

Maker Portfolio: Prototype & Mission Updates

Day Seven Career Navigation

Rice Faculty Lecture – Rice Admissions

Rice Graduate Student Panel – Surviving Engineering School

Engineering Lab Tour Rotation – Rice Engineering

Simulation: Final Testing & Adapting Finalize Atmospheric

Payload Project Design

Day Eight Satellite Launch

Simulation: Launch Satellites

Simulation: Mission Monitoring & Data Tracking

Mission V-log: Document the Launch

Evening Out: Social Field Excursion to Kemah Boardwalk

Day Nine Rocket Build

Simulation: Satellite Data Review

Rocket Challenge: Entry, Decent, Landing

Rocket Challenge: Final Rocket Prototyping

Panel Speaker(s) – Careers in Aerospace

Simulation: Validating Rocket Design (Skype Crowdsourcing
Event)

Mission V-log: Crowdsourcing Feedback Captured

Rocket Challenge: Incorporating Feedback

Day Ten Rocket Launch

Rice Faculty Lecture – Reaching Beyond Earth's Atmosphere (and
Returning)

NASA Speaker – Space Innovations of the 21st Century

Government/Industry Field Excursion III – Space Industry

Corporate Tour & Briefing

Rocket Challenge: It's Go Time!

Mission V-log: Capturing the Launch

Day Eleven Mission Report Out

Skills Workshop: Presentation Skills

Simulation: Present Findings

Mission V-log: Edit/Polish and Present

Gallery Walk: Display Project Work and Findings

Closing Keynote – To Infinity and Beyond!

Day Twelve Farewell & Departure of Scholars