


Summer Lunar Robotics Syllabus

Week 1

Monday	Tuesday	Wednesday	Thursday	Friday
<p>NASA Introduction</p> <p>Introduction to Google Docs</p> <p>Measurement Basics</p> <p>Crater Measurement</p>	<ul style="list-style-type: none"> • Post Crater Measurement Report <p>Crater Measurement Discussion</p> <p>PREP</p>	<p><i>I, Robot</i> Discussion</p> <p>Introduction to Mission: A Search for Lunar Ice</p> <p>Engineering Design Process: Introduction (Balloon Rockets)</p>	<p><i>I, Robot</i> Discussion</p> <p>Mission Plan Outline Discussion</p> <p>TopoBot Testing: Movement</p>	<p><i>I, Robot</i> Discussion</p> <p>Debate preparation</p> <p>Debates</p>
<p>Build Rover Bot</p> <p>Discuss <i>I, Robot</i> assignment</p> <ul style="list-style-type: none"> • Post Journal Day 1 	<p>Programming Basics</p> <p>RoverBot Testing: Movement</p> <ul style="list-style-type: none"> • Post Journal Day 2 	<p>Topography Basics I</p> <p>Design & Build TopoBots</p> <ul style="list-style-type: none"> • Post Journal Day 3 	<p>Topography Basics II</p> <p>Introduction to Debate Topics</p> <ul style="list-style-type: none"> • Post Journal Day 4 	<p>Introduction to Sensors (Ultrasound, Light): Data acquisition and retrieval</p> <p>TopoBot Testing: Movement + Sensor</p> <ul style="list-style-type: none"> • Post Journal Day 5
<p>HW: Complete Crater Measurement Report</p>	<p>HW: <i>I, Robot</i> Chapter 1</p>	<p>HW: <i>I, Robot</i> Chapter 2</p>	<p>HW: <i>I, Robot</i> Chapter 3</p> <p>Debate research</p>	<p>HW: <i>I, Robot</i> Chapters 4 & 5</p> <ul style="list-style-type: none"> • Post Debate Bibliography

Week 2

Monday	Tuesday	Wednesday	Thursday	Friday
<p><i>I, Robot</i> Discussion Topographic Maps of Lunar Land</p>	<p><i>I, Robot</i> Discussion – on the way to Goddard Trip to NASA Goddard Space Flight Center, Greenbelt, MD</p>	<p><i>I, Robot</i> Discussion GSFC Recap Mission Plan Discussion Topo & Rover Bots - improvements</p>	<p><i>I, Robot</i> Discussion Final preparations for Mission</p>	<p><i>I, Robot</i> Discussion Mission Challenge: Kick-off Mission (Student teams execute the Mission)</p>
<p>TopoMaps - continued RoverBot testing</p> <ul style="list-style-type: none"> • Post Journal Day 6 		<p>Topo & Rover Bots - improvements</p> <ul style="list-style-type: none"> • Post Journal Day 8 	<p>Final preparations for Mission</p> <ul style="list-style-type: none"> • Post Final Mission Plan • Post Journal Day 9 	<p>Mission (continued)</p> <ul style="list-style-type: none"> • Post Journal Day 10 <p>Wrap-up (Awards & Certificates)</p>
<p>HW: <i>I, Robot</i> Chapter 6</p> <ul style="list-style-type: none"> • Post Mission Plan Draft 	<p>HW: <i>I, Robot</i> Chapter 7</p>	<p>HW: <i>I, Robot</i> Chapter 8 Mission Plan</p>	<p>HW: <i>I, Robot</i> Chapter 9</p>	<p>HW: Have a great summer!</p>