

**Project SMART Summer Institute**  
**June 28 – July 23, 2004**

**University of New Hampshire**  
**Durham, NH 03824**

**Legend**

B = Biotechnology Group

E = Environmental & Aquatic Science Group

**S = Space Science Group**

A = All Groups

## PROJECT SMART Program Outline - 2004

### *Week 1*

#### **Monday, June 28**

9:00 - 10:15 AM	Check-in and Registration ( <i>Lord Hall</i> )
10:30 - 11:30	Opening Ceremonies ( <i>Elliott Alumni Center</i> )
12:00 - 1:00	Lunch
1:15 - 2:00 PM	Tour of UNH Campus & Facilities (A)
2:00 - 2:15 PM	Staff Introductions – <i>G89 Rudman</i>
2:15 - 2:30 PM	Introductions GK12 Fellows– <i>G89 Rudman</i>
2:30 – 3:15 PM	Overview- Biotechnology – <i>G89 Rudman</i>
3:15 – 3:45 PM	<b>Overview – Space Science –<i>G89 Rudman</i></b>
3:50 – 4:20 PM	Overview – Environmental & Aquatic Science – <i>G89 Rudman</i>
5:00 - 6:30 PM	Dinner
7:00 PM	Meet with Residence Hall Staff

#### **Tuesday, June 29**

8:30 - 10:00 AM	<b>Space Science Lecture “It’s all a Matter of Scale”</b> <i>Dr. Jim Connell – Morse 241</i>
10:00 - 10:30AM	Break - Refreshments
10:30 - 12:00 noon	<b>SSC Project presentations, discussion – Morse 241</b>
12:00 - 1:00 PM	Lunch
1:15 - 3:00 PM	<i>Physics Lecture (HS teachers) – Morse 241</i>
3:00 – 4:30 PM	<i>Physics project (HS teachers) – Morse 241</i>
5:00 - 6:30 PM	Dinner
7:00 – 8:00 PM	Evening Lecture (A) – <i>Rudman G17</i> <b><i>Scientific Methods &amp; Processes - Dr. Barry Rock</i></b>

#### **Wednesday, June 30**

8:30 - 10:00 AM	<i>Physics Lecture (HS teachers) – Morse 241</i>
10:00 - 10:30 AM	Break - Refreshments
10:30 - 12:00 noon	<i>Physics project (HS teachers) – Morse 241</i>
12:00 - 1:00 PM	Lunch
1:15 - 2:45 PM	<b>Tour of Morse Hall</b>
2:45 - 3:15 PM	Tea – <i>Morse 241</i>
3:15 - 4:45 PM	<b>Individual team projects</b>
5:00 - 6:30 PM	Dinner
7:00 - 8:30 PM	Evening Lecture – (A) – <i>Rudman G51</i> <b><i>Introduction to Remote Sensing</i></b> <i>Dr. Barry Rock, Ryan Huntley, Shane Bradt</i>

#### **Thursday, July 1**

8:30 - 10:00 AM	<b>Space Science Lecture “Space Weather”</b> <i>Dr. Jimmy Raeder – Morse 241</i>
10:00 - 10:30 AM	Break - Refreshments
10:30 - 12:00 noon	<b>Individual team projects</b>
12:00 - 1:00 PM	Lunch
1:15 - 2:20 PM	Spectral Characterization of Aquatic Systems (A) <i>Spaulding 201 – Dr. James Haney, Shane Bradt</i>

2:20 - 3:25 PM Spectral Characterization of Terrestrial Systems (A)  
*Rudman G31 – Ryan Huntley*

3:25 – 3:40 PM Break

3:40 - 4:45 PM **Space Science Lecture “Neutron Monitor” (A)**  
*Dr. Cliff Lopate – Rudman G17*

5:00 - 6:30 PM Dinner

7:00 - 8:00 PM Evening Lecture (A) – *Rudman G17*  
***Aquatic Systems and Biotoxins*** – *Dr. James Haney*

**Friday, July 2**

8:30 – 10:00 AM **Space Science Lecture “Ground Winds”**  
*Dr. James Ryan – Morse 241*

10:00 - 10:30 AM Tea – *Morse 241*

10:30-12:00 noon **Individual team projects**

12:00 - 1:00 PM Lunch

1:15 - 2:45 PM Introduction to Image Processing (Multispec) (A) –  
*Spaulding 201 - Ryan Huntley*

2:45 - 3:00 PM Break

3:00 - 4:45 PM Image Processing Applications (A) – *Spaulding 201*  
*Dr. Vania Jordanova, Ryan Huntley, Shane Bradt*

4:45 – 5:00 PM Discussion of Upcoming Field Trip (A)  
*Spaulding 201 - Ryan Huntley*

**5:00 PM Depart for the weekend**

## ***Week 2***

<b>Monday, July 5</b>	<b>6:00 - 8:00 PM</b>	<b>Return to Residence Hall</b>
<b>Tuesday, July 6</b>	8:00 - 9:00 AM 9:00-11:00 AM 11:30-12:30 12:45 - 1:00 PM  1:15 – 4:30 PM 7:00 – 8:00 PM	Pick Up Students at Residence Halls Travel to Mt. Moosilauke Ravine Lodge (A) Lunch Introduction to the Week Activities (A) <i>Ryan Huntley, Dr. James Haney</i> Sampling of Gorge Brook Lower Site (A) <a href="#">SSC Evening Lecture “The Earth's Aurora”</a> <i>Dr. Vania Jordanova</i>
<b>Wednesday, July 7</b>	8:30 – 12:30 PM 1:00 – 4:30 PM 7:00 – 8:30 PM	Hike to Mt. Moosilauke Summit (A) Sampling of Gorge Brook Upper & Middle Sites (A) VIRIS Demo & Scanning of Collected Samples (A) <i>Ryan Huntley</i>
<b>Thursday, July 8</b>	8:30 - 10:30 AM 10:30 - 11:30 AM 11:30 - 12:30 PM 12:30 - 4:00 PM  5:00 - 7:00 PM 7:30 – 9:00 PM	Drive To Mt. Washington Summit Tour of Observatory (A) – Observatory Staff Lunch Lake in the Clouds Hike & Sampling (A) <i>Dr. James Haney, Ryan Huntley</i> AMC Lodge for Dinner & Lecture (A) <a href="#">Tour of Ground Winds Observatory</a> <i>Dr. Ivan Dors</i>
<b>Friday, July 9</b>	8:30 - 10:00 AM  10:00 - 11:30 AM 11:30 – 1:00 PM 1:00 – 3:00 PM 3:00 – 3:30 PM <b>4:00 – 5:00 PM</b>	Data Organization & Analyses (A) <i>GK-12 Fellows</i> Student Presentations of Data Analyses (A) Lunch and Packing Vans (A) Travel to Durham (A) Arrive in Durham and unpack (A) <b>Depart for the weekend</b>

### ***Week 3***

<b>Sunday, July 11</b>	<b>6:00 - 8:00 PM</b>	<b>Return to Residence Halls</b>
<b>Monday, July 12</b>	8:30 - 10:00 AM	Space Science Lecture “The Heliosphere” (A) <i>Dr. Bruce McKibben – Rudman G17</i>
	10:00 - 10:30 AM	Break - Refreshments
	10:30 - 12:00 noon	Biotech Lecture “Genetic Engineering” (A) <i>Dr. Subash Minocha – Rudman G17</i>
	12:00 - 1:00 PM	Lunch
	1:00 – 4:30 PM	<b>Individual team projects</b>
	5:00 - 6:30 PM	Dinner
<b>Tuesday, July 13</b>	8:30 – 4:30 PM	Isles of Shoals Day Trip (A)
<b>Wednesday, July 14</b>	8:30 - 10:00 AM	Biotech Lecture “Analytical Ultracentrifugation” (A) <i>Dr. Thomas Laue – Rudman G89</i>
	10:00 - 10:30 AM	View Instrumentation - <i>Rudman G51</i>
	10:30 - 10:40 AM	Break - Refreshments
	10:40 - 12:00 noon	Space Sci. Lecture “Planetary Magnetospheres” (A) <i>Dr. Lynn Kistler – Rudman G17</i>
	12:00 - 1:00 PM	Lunch
	1:00– 4:30 PM	<b>Individual team projects</b>
	5:00 - 6:30 PM	Picnic
<b>Thursday, July 15</b>	8:30 – 4:30 PM	AIRMAP (ICARTT) Day Trip to Pease
<b>Friday, July 16</b>	8:30 - 10:00 AM	Space Science Lecture “Turbulence” (A) <i>Dr. Amitava Bhattacharjee - Rudman G17</i>
	10:00 - 10:30 AM	Break - Refreshments
	10:30 - 12:00 noon	Biotech Lecture “Stem Cells and the Solution to Ageing” (A) <i>Dr. Subash Minocha – Rudman G51</i>
	12:00 - 1:00 PM	Lunch
	1:00 – 4:30 PM	<b>Individual team projects</b>
	<b>5:00 PM</b>	<b>Depart for the weekend</b>

## ***Week 4***

<b>Sunday, July 18</b>	<b>6:00 - 8:00 PM</b>	<b>Return to residence Halls</b>
<b>Monday, July 19</b>	8:30 - 10:00 AM	<b>Individual team projects</b>
	10:00 - 10:30 AM	Break- Refreshments
	10:30 - 12:00 noon	Lecture from Instructional Services (Powerpoint) (A) <i>Spaulding G70</i>
	12:00 - 1:00 PM	Lunch
	1:15 - 5:00 PM	<b>Individual team projects</b> (GK-12 Fellows Assist)
	5:00 - 6:30 PM	Dinner
<b>Tuesday, July 20</b>	8:30 - 10:00 AM	<b>Individual team projects</b>
	10:00 - 10:30 AM	Break- Refreshments
	10:30 - 12:00 noon	<b>Individual team projects</b>
	12:00 - 1:00 PM	Lunch
	1:15 - 5:00 PM	<b>Individual team projects</b> (GK-12 Fellows Assist)
	5:00 - 6:30 PM	Dinner
<b>Wednesday, July 21</b>	8:30 - 10:00 AM	<b>Individual team projects</b>
	10:00 - 10:30 AM	Break- Refreshments
	10:30 - 12:00 noon	<b>Individual team projects</b>
	12:00 - 1:00 PM	Lunch
	1:15 - 5:00 PM	<b>Individual team projects</b> (GK-12 Fellows Assist)
	5:00 - 6:30 PM	Picnic - Rocket launch
<b>Thursday, July 22</b>	8:30 - 10:00 AM	<b>Individual team projects</b>
	10:00 - 10:30 AM	Tea - <i>Morse 241</i>
	10:30 - 12:00 noon	<b>Work on Powerpoint &amp; Poster Presentations</b>
	12:00 - 1:00 PM	Lunch
	1:00 - 5:00 PM	<b>Finish Powerpoint &amp; Poster Presentations</b>
	5:00 - 6:30 PM	Dinner
<b>Friday, July 23</b>	8:30 - 9:30 AM	<b>Space Science General Discussion</b> - <i>Morse 241</i>
	10:00 - 12:00noon	Powerpoint Presentations to Parents - <i>Morse 241</i>
	12:00 - 1:00 PM	Lunch
	1:15 - 2:00 PM	Set up posters (Morse Hall Atrium) (A)
	2:00 - 4:00 PM	Poster viewing - farewell remarks, refreshments
	<b>4:30 - 5:30 PM</b>	<b>Goodbye and Departure</b>

**Have a wonderful summer!!!**