**COURSE GOALS**

**GEOLOGICAL SCIENCES 0050 – Mars, Moon, and the Earth**

Semester 1 2012-2013, MWF 2:00-2:50 PM, MacMillan Hall 115

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**FIVE BASIC COURSE GOALS:**

1. **To understand the approach to scientific study and analysis: Science “appreciation”:**  
   - How does science work?  
   - Why is it important?  
   - How does it help us to understand our past and predict our future?

2. **To understand how the Earth works:**  
   - Geologic features: What do they mean?  
   - Processes: How do they work:  
   - Interior: What’s inside the Earth and what difference does it make?  
   - Past history and the future: Where have we been and where are we going?

3. **Where does Earth fit in the context of the Solar System?**  
   - We have a “terra-centric” view: How does this limit our thinking?  
   - Earth is a data point of one: We need perspective and context; other planetary bodies provide this.

4. **What are the basic themes in the formation and evolution of the planets?**  
   - Birth, formative years, middle age, death.  
   - What can we learn from other planets about where the Earth fits in this spectrum? Is the Earth middle-aged or near death?

5. **How does this perspective relate back to a better understanding of our own home planet, Earth?**  
   - Why is the Moon different than the Earth? Mars? Venus? Mercury?  
   - What about environmental change? Is it happening? Can we stop it?  