Going Forward...

- Reconfigure class into single design group with specialty assignments
  - Avionics
  - Crew Systems
  - Loads, Structures, and Mechanisms
  - Mission Planning and Analysis/Science Investigators
  - Power, Propulsion, and Thermal
  - Systems Integration

- ASU and UMd students will be incorporated into all groups
Avionics

- Control and command architecture
- Computers
  - Control
  - Data collection and management
- Communications
- Guidance and Navigation
- Sensors
- Software
Crew Systems

- Human control interfaces
- Controls and displays
- EVA interfaces
- Life support consumables transport and utilization
- Accommodations for transport of EVA crew
- Deployment and checkout
Loads, Structures, and Mechanisms

- Determination of loading conditions
- Structural design and analysis
  - Static
  - Dynamic
- Launch restraints and deployment mechanisms
- Actuators
- Suspension systems
Mission Planning and Analysis

• Science Investigators’ Team
  – Science instrument selection
  – Instrument integration and calibration
  – Science operations planning

• Mission Planning and Analysis
  – Development of CONOPS
  – Specific scenarios for lunar surface operations
  – Development of EVA support and autonomous mission concepts
Power, Propulsion, and Thermal

- Power generation
- Energy storage
- Electrical power budgets
- Thermal design and analysis
  - Internal power sources
  - External heating sources
- Terramechanics and wheel drive requirements
Systems Integration

- Overall configuration design
- Systems-level trade studies
- Configuration tracking
  - Mass budget
  - CG and moments of inertia
  - Cost budgeting
- Schedules
  - Schedules for project completion
  - Schedules for production and test of prototype
- Resolution of technical conflicts