



GMAT Fundamentals  
Jason Laing and Mojtaba Abedin  
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NASA Goddard Space Flight Center

# Course Objectives

- Learn about:
  - The GMAT project
  - Software capabilities
  - How to use the graphical interface
  - How to use the script language
  - Example missions
- Use GMAT to:
  - Propagate an orbit
  - Design a Hohmann transfer
  - Target the B-plane
  - Design a finite maneuver
  - Optimize a multi-phase trajectory

# Agenda (AM)

Topic	Time
Training Overview	8:45–9:00
Introduction to the GMAT Project	9:00–9:15
Hello World: Simulating an Orbit	9:15–9:45
Break	9:45–10:00
Introduction to the GMAT Software	10:00–11:00
Tutorial: Simple Orbit Transfer	11:00–11:45
Extra Exercises & Discussion	11:45–12:00

# Agenda (PM)

Topic	Time
Lunch	12:00–1:00
Tutorial: Mars B-Plane Targeting	1:00–1:45
Tutorial: Finite Burn Targeting	1:45–2:45
Break	2:45–3:00
Tutorial: Optimal Lunar Flyby	3:00–4:15
Wrap-up	4:15–4:30

# Logistics

- Building 1 Training Facility
  - Restrooms out the door, up the stairs
  - Basement: Training rooms, Learning Center
  - Ground floor: food, ATM, etc.
- On your terminal:
  - GMAT R2014a
  - Tutorial scripts
  - Electronic copies of presentation materials

# Running GMAT

1. Log into terminal  
(see credentials on whiteboard)
2. Double-click “GMAT” shortcut:



# GMAT Training Series

- **GMAT Fundamentals:** introductory information, general usage tutorials
- Annual series in June
- Open to public
- All classes are recorded!
- Materials posted to:
  - Slides, files: <http://gmatcentral.org>
  - Videos: <https://www.youtube.com/channel/UCt-REODJNr2mB3t-xH6kbjg>