EART 163 PLANETARY SURFACES
Spring 2019 Class Notes

All files are in Microsoft PowerPoint (.ppt) or Word (.doc) format unless otherwise indicated

Email Prof. Nimmo (fnimmo@es.ucsc.edu) if you have problems accessing them

Course Syllabus

Timing/Location: Tu/Th from **1:30** to **3:05** in E&MS D258

Office hours: Monday 3-4pm & Thurs 3:05-4:05pm in E&MS A219 (or by appointment)

Course Goals: To provide an introduction into how we use remote-sensing observations and modeling to obtain a quantitative understanding of the processes governing the formation and modification of planetary surfaces.

Course Outline: see below

Text: H.J. Melosh, *Planetary Surface Processes*, Cambridge Univ. Press (2011), available in the bookstore.

Approximate Grading Scheme:
30% Weekly homeworks (due each Tuesday)
20% Midterm
50% Final

Late homework will be penalized at 10% per day.

Prerequisites:
EART160 is a prerequisite.
I am also going to assume some familiarity with ordinary differential equations.

Plagiarism:
Collaboration on homework assignments is permitted and encouraged. But the work that you hand in must be your own i.e. if I ask you to reproduce your work on the board without your notes, you must be able to do so. If you are ever unsure about the appropriate level of collaboration, please ask.

If you use the textbook or other outside sources (such as web sites) then you must cite the source that you use.

Disability:
If you qualify for classroom accommodations because of a disability, please get an Accommodation Authorization from the Disability Resource Center (DRC) and submit it to me in person outside of class (e.g. office hour) within the **first two weeks** of the quarter. Contact DRC at (831) 459-2089.

Course Outline

Week 1 (April 2): Overview, planetary shapes.
Powerpoint slides. PDF slides.

Week 2 (April 8): Strength and rheology.
Powerpoint slides. PDF slides.

Week 3 (April 15): Tectonics.
Powerpoint slides. PDF slides.

Week 4 (April 22): Volcanism and cryovolcanism.
Powerpoint slides. PDF slides.

Midterm (Tues Apr 30th).

Weeks 5 & 6 (April 30): Impacts.
Powerpoint slides. PDF slides.

Week 7 (May 14): Mass movements.
Powerpoint slides. PDF slides.

Week 8 (May 21): Wind.
Powerpoint slides. PDF slides.

Week 9 (May 28): Fluvial.
Powerpoint slides. PDF slides.

Week 10 (June 4): Ice; Recap.
Powerpoint slides. PDF slides.

Final (Weds 12th June 12-3pm). Equation sheet.