

Rationale:

The ability to decipher and plot using coordinate systems enables recognition of patterns in the sky, in time, and in various astronomical objects. Students will practice organizing pherivations and practical paradictions and practical process of quantitations and process of quantitations and practical process of quantitations and practical process of quantitations and process of quantitations are processed in the process of quantitations and process of quantitations are processed in the process of quantitations and process of quantitations are processed in the process

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m	. Course Outline		
	Lab 1: Interpreting planetary surfaces	2 hours	
	Lab 2: Constellations, Part I	2 hours	
	Lab 3: Seasons	2 hours	
	Lab 4: Celestial Coordinates	2 hours	
	Lab 5: Telescopes	2 hours	
	Lab 6: Surface of the Moon	2 hours	
	Lab 7: Exam One	2 hours	
	Lab 8: Phases of the Moon	2 hours	
	Lab G. I hases of the wood		
		2 hours	
	Lab 9: Planetary size and orbits Lab 10: Sunspots and solar activity	2 hours 2 hours	
F	Lab 9: Planetary size and orbits		

	IX. Bibliography In addition to the required textbooks and and lab manual, the following will be used to develop
	the course curriculum:
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	Columbia University Press, 244 p.
	Moche, D. L., 2009, Astronomy: A self-teaching guide, 7th edition: John Wiley, 388 p. Ridpath, I., 2004, Norton's star atlas, 20th edition: Pi Press, 195 p.
	Royal Astronomical Society of Canada, 2011, Observer's Handbook (issued annually), 352 p. Seasonal Star Charts, 2008: Hubbard Scientific, 21 p.
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4. OLD SYLLABUS OF RECORD

GS 106 Exploring the Universe Lab

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GS 106 Exploring the Universe Lab

1 credit 2 lab hours (0c-2l-1sh)

Prerequisites: No Geoscience Majors/Minors Corequisites: Enrollment in GS 105

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IV. Evaluation Methods
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Liberal Studies Course Approval General Information

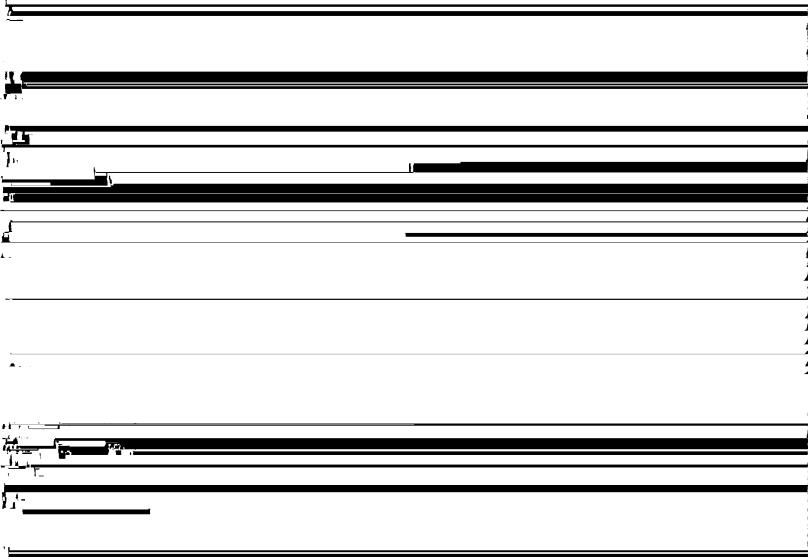
	1. This course has been taught by one or two instructors each semester it has been offered, generally taught in one section. Each instructor may teach one or multiple sections. Instructors use an identical lab
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Example Assignment and Grading Rubric

Lab 1: Making maps of Mars (attached)

Lab Grading Rubric

	Excellent	Good	Unsatisfactory
Numerical data	Student answers all coordinate and scale questions correctly and	Student answers all coordinate and scale questions with only	Student answers coordinate and scale questions incorrectly or



Name
Day and Time of Your Lab:
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GEOS 106 Introductory Lab Exercise

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from orbit is a young science. You can interpret what you see in the same way a professional planetary scientist does.

PART 1

Note: Please take care of these maps! We only have one copy of each, and many of them are now out of print. They will be unfolded and you are asked to leave them that way. Repeated folding wears them out faster. Thank you.

You will examine the maps with a small group. You may discuss your ideas, but each of you should write your own answers in your own words.

Look at one of the Shaded Relief Maps.

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•	Explain the process.
	Give the coordinates (in latitude and longitude along the edges of the map) for an
	example of this feature. If it has a name on the map, give the name also.
	A Care factions seem an agree of planeta ware fixet applied "winder videos" Find those or
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* 61	
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example	e of overlap of units.
overlapp	e a piece of tracing paper and a pencil to trace the region you are examining for sing relation ships. Outline the units and give their relationship (which is on top ger, etc.). Colored pencils may be helpful for this.
PART 2	
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	What is their origin?
	9. Find the overlapping units you looked at before. What units are overlapping?
	Which unit is younger?
	Add the unit names, if any, to your tracing paper from question 5.
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