

**GEOLOGY 326**  
**GEOFYSICS & GEOTECTONICS**  
**Spring, 2008 - Tim Paulsen**

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***Tentative Schedule***

<u>Topic</u>	<u>Suggested Reading</u>
1) Introduction	Fowler-Chapter 1
2) Continental Drift	Fowler-Chapter 1
3) Paleomagnetism & Marine Geophysics	Fowler-Chapter 3
4) Magnetic Anomalies & Sea Floor Spreading	Fowler-Chapter 3
5) Plate Tectonics	Fowler-Chapter 2
6) Flat Plates	Fowler-Chapter 2
7) Plates on a Sphere	Fowler-Chapter 2
8) Triple Junctions	Fowler-Chapter 2, 3
<b>**EXAM 1</b>	
9) Aulacogens	
10) Seismic Reflection	Fowler-Chapter 4
11) Ridges	Fowler-Chapter 9
12) Seismic Refraction	Fowler-Chapters 4
13) Rifts	Fowler-Chapters 10
14) Gravity Anomalies & Isostasy	Fowler-Chapters 5 & 10
<b>**EXAM 2</b>	
12) Subduction Zones	Fowler-Chapter 9
13) Earthquake Sources	Fowler-Chapter 4
14) Double-Couple Model	Fowler-Chapter 4
15) Earthquake Size	Fowler-Chapter 4
16) Recording Earthquakes	Fowler-Chapter 4
17) Fault Plane Solutions	Fowler-Chapter 4
18) Fate of Subducted Slabs	Fowler-Chapter 9
19) Shallow Structure of Subduction Zones	Fowler-Chapter 9
<b>**EXAM 3 (cumulative; during last lab period)</b>	

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Lectures: M, W; 11:30-12:30; Room 217, Harrington

Laboratory: T; 9:10-12:30; Room 313, Harrington  
Weekly homework exercises will be assigned during lab.

Exams: Three hourly lecture exams

Grading: Lecture = 75% of total grade  
•1<sup>st</sup> exam = 20%  
•2<sup>nd</sup> exam = 25%  
•3<sup>rd</sup> exam = 30%

Laboratory = 25% of total grade  
•weekly lab assignments

Required Text: Fowler, C.M.R., *The Solid Earth*, Cambridge University Press.

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**GEOLOGY 326**  
**GOPHYSICS & GEOTECTONICS**  
**Spring, 2008 - LAB SYLLABUS**

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*Tentative Schedule*

<u>LAB</u>	<u>Topic</u>	<u>Reading</u>
Feb. 5	GPS, Interferometry, & Present-Day Plate Motion	TBD
Feb. 12	Presentations; Paleomagnetism & Rock Magnetism	Fowler Chapter 3
Feb. 19	Polar Wandering	Fowler Chapter 3
Feb. 26	2 Plates on a Flat Earth	
March 4	Triple Junctions on a Flat Earth	Fowler Chapter 2
March 11	Electromagnetic Surveying	
March 18	Magnetometer Exercise	
March 25	Spring Break	
April 1	Seismic Lab	Fowler Chapter 4
April 8	Introduction of Gravity Meter	
April 15	Gravity Project	
April 22	Gravity Anomalies/Isostasy, Analysis, & Write-up	
April 29	Earthquakes	Fowler Chapter 4
May 6	Fault Plane Solutions	Fowler Chapter 4
May 13	<i>Final Lecture Exam</i>	

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All lab assignments are due at the start of lecture on the Monday following a given lab.