EART 110C/N — The Dynamic Earth
Syllabus for Spring 2015

Instructor: Doug Hemingway (djheming@ucsc.edu), Office Hours: Mon 1–3pm, A101

TAs: Grace Barcheck (cbarchec@ucsc.edu), Office Hours: Wed 3–5pm, C332
     Qingjun Meng (qimeng@ucsc.edu), Office Hours: Wed Noon–2pm, C332
     Danica Roth (dloroth@ucsc.edu), Office Hours: Thu 10–11am, 3rd floor knuckle

MSI Tutor: Steven Dibb (sdibb@ucsc.edu), website: http://www2.ucsc.edu/lss/msi.shtml

Course meetings:
Lecture: Engineering 2, Room 194, Tuesdays & Thursdays, Noon–1:45pm
Labs: E&MS D258, Tuesdays 5:30pm–8:30pm –OR– E&MS D258, Wednesdays 6:30pm–9:30pm

Grading for 110C (5 units):
20% Problem Sets (8 in total, lowest score dropped)
20% Midterm 1 (April 21)
20% Midterm 2 (May 14)
40% Final Exam (June 8)

Grading for 110N (2 units):
100% Individual Lab Reports (9 in total, lowest score dropped)

Grading policy: Labs due at start of next lab period. Problem Sets due in class on dates indicated on the schedule. Guaranteed to be graded only if turned in on time.

Prerequisites: Calculus, Classical Mechanics

Materials:
• Course Textbook: Turcotte & Schubert, Geodynamics, 3rd edition, 2014
• Both textbooks are on reserve in the Science and Engineering Library
• Required Software: Matlab (available in campus PC labs, or buy your own copy for $99 at http://www.mathworks.com/academia/student_version)
• Calculator: needed for exams, problem sets, and labs
• eCommons: check your grades, get labs, problem sets, lecture notes and links
• www.socrative.com room; 6e10f764

Purpose and value of this course:
• Apply your math and physics skills to solve problems in earth & planetary sciences
• Get experience with four of the major tools of geophysics: gravity, elasticity, fluid mechanics, and heat transport
• Get experience using Matlab as a tool for solving geophysics problems

How to succeed in this course:
• Don’t rush the problem sets! Start early and take your time to make sure you understand the material thoroughly. Collaboration is encouraged, but make sure what you turn in is your own work (if asked, could you reproduce it on your own?). If you really understand the problem sets, you will be in great shape for the exams!
• Take advantage of TA and Instructor office hours to make sure you are getting a full understanding of the material.
<table>
<thead>
<tr>
<th>Week</th>
<th>Tuesday Class</th>
<th>Tue/Wed Lab</th>
<th>Thursday Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>31-Mar Interior Structure</td>
<td>31-Mar Mystery Planets</td>
<td>2-Apr Moments of Inertia</td>
</tr>
<tr>
<td></td>
<td>7-Apr Gravity</td>
<td>7-Apr 8-Apr Gravity / Isostasy</td>
<td>9-Apr Isostasy</td>
</tr>
<tr>
<td>Week 2</td>
<td>14-Apr Elasticity</td>
<td>14-Apr 15-Apr Elasticity</td>
<td>16-Apr Flexure</td>
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<tr>
<td></td>
<td>21-Apr Midterm 1</td>
<td>21-Apr 22-Apr Matlab</td>
<td>23-Apr Faults/Friction</td>
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<tr>
<td>Week 3</td>
<td>28-Apr Earthquakes</td>
<td>28-Apr 29-Apr Earthquakes</td>
<td>30-Apr Waves</td>
</tr>
<tr>
<td>Week 4</td>
<td>5-May Seismology</td>
<td>5-May 6-May Waves</td>
<td>7-May Viscosity</td>
</tr>
<tr>
<td>Week 5</td>
<td>12-May Navier-Stokes</td>
<td>12-May 13-May Viscosity</td>
<td>14-May Midterm 2</td>
</tr>
<tr>
<td>Week 6</td>
<td>19-May Viscoelasticity</td>
<td>19-May 20-May Bubbles</td>
<td>21-May Heat Transfer</td>
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<tr>
<td>Week 7</td>
<td>26-May Diffusion</td>
<td>26-May 27-May Diffusion</td>
<td>28-May Convection</td>
</tr>
<tr>
<td>Week 8</td>
<td>2-Jun Geodynamo</td>
<td>2-Jun 3-Jun Review</td>
<td>4-Jun Review</td>
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Final Exam: Monday, June 8, 7:30–10:30pm