

Wk	Day / Date	Topic	Reading To Do Before Class (notes posted on web). Reference Reading in Text Book	Assignment / Quiz
1	Tues 9/04	IMAGINE UBC		
	Thurs 9/06	Overview	<ul style="list-style-type: none"> Course Outline Assignments: what's expected Intro Material Blakely ch. 1	A1 out: Math review
2	Tues 9/11	Motivation and Intro	<ul style="list-style-type: none"> Math Background Bennu paper Blakely ch. 2	
	Thurs 9/13	Helmholtz Equation, Green's Functions	<ul style="list-style-type: none"> Math Background Blakely ch. 2	A1 due
3	Tues 9/18	Green's Identities Intro to Gravity	<ul style="list-style-type: none"> Intro to Gravity Extra notes on Gauss's Law Blakely ch. 2 / 3	A2 out: Gravity
	Thurs 9/20	Gravity Forward Problems	<ul style="list-style-type: none"> Gravity Forward Problems Green's Equivalent Layer Th^m Blakely ch. 2 / 3	
4	Tues 9/25	QUIZ #1: Fundamentals & gravity	<ul style="list-style-type: none"> Study for quiz 	QUIZ #1
	Thurs 9/27	Intro to Magnetism	<ul style="list-style-type: none"> Magnetism I Blakely ch. 4	A2 due A3 out: Magnetism
5	Tues 10/02	Magnetic susceptibility Magnetism Forward Problems	<ul style="list-style-type: none"> Magnetism II Blakely ch. 5	
	Thurs 10/04	Fourier transforms: analytical review	<ul style="list-style-type: none"> Fourier Transforms Blakely ch. 11 (pg. 258-271)	A3 due A4 out: Fourier Transforms
6	Tues 10/09	Fourier transforms: the MATLAB how to...	<ul style="list-style-type: none"> Fourier Transforms 	
	Thurs 10/11	QUIZ #2: Magnetism and Fourier Transforms Essentials	<ul style="list-style-type: none"> Study for quiz 	QUIZ #2: Magnetism / Fourier Transforms
7 CJ away	Tues 10/16	Solving Laplace's Equation: Cartesian coordinates. Upward & downward continuation	<ul style="list-style-type: none"> Laplace's Equation (review separation of variables derivation; we will focus on the FT derivation in class) 	A4 due A5 out: Spherical harmonics
	Thurs 10/18	Spherical Harmonics	<ul style="list-style-type: none"> Spherical Harmonics Blakely ch. 6	
8 CJ away	Tues 10/23	Upward / downward continuation - in class activity.	<ul style="list-style-type: none"> Spherical Harmonics Blakely ch. 6	
	Thurs 10/25	QUIZ #3: Laplace's Equation / FTs/ SH / Continuation	<ul style="list-style-type: none"> Study for quiz 	A5 due QUIZ #3

9	Tues 10/30	Global Gravity Reference Surfaces J2 and Moments of Inertia	<ul style="list-style-type: none"> Global Gravity: Reference Surfaces, J2 and Moments of Inertia. Blakeley: ch 7, sections 7.1, 7.2	A6 out: Interior structure
	Thurs 11/01	Global to Regional Gravity	<ul style="list-style-type: none"> Geoid, Free Air Gravity, Bouger Gravity Blakeley: ch 7, sections 7.3	
10	Tues 11/06	Regional Gravity: Isostacy	<ul style="list-style-type: none"> Isostacy 	A6 due A7 out: Isostacy & Flexure
	Thurs 11/08	QUIZ #4: Reference surfaces, MoI, Bouguer gravity, free air gravity	<ul style="list-style-type: none"> Study for quiz 	QUIZ #4 Capstone out
11	Tues 11/13	Geodynamics: Flexure I - Topography	<ul style="list-style-type: none"> Flexure 	
	Thurs 11/15	Geodynamics: Flexure II - Admittance	<ul style="list-style-type: none"> Admittance 	A7 due
12	Tues 11/20	Global Magnetic Fields	<ul style="list-style-type: none"> Reading from text: Blakeley: ch 8, sections 8.1, 8.2 	
	Thurs 11/22	Crustal Magnetic fields	<ul style="list-style-type: none"> Reading from text: Blakeley: ch 8, sections 8.3 	
13	Tues 11/27	Marine Magnetic Anomalies	<ul style="list-style-type: none"> Marine Magnetic Anomalies notes 	Capstone due
	Thurs 11/29	QUIZ #5: Flexure / Magnetism	<ul style="list-style-type: none"> Study for quiz 	QUIZ #5