

SYLLABUS: EART 118 Seismotectonics
 Winter, 2018 MWF 9:20-10:25 D250 E&MS
 Discussion Th 12:30-1:30 D250 E&MS (May evolve)

Day	Date	Topic
M Lect 1	Jan. 8	Introduction to Seismotectonics
W Lect 2	Jan. 10	Stress, Strain, Equation of Motion
Th Disc 1	Jan. 11	Introduction to Web Site Resources, Magnitude Distribution
F Lect 3	Jan. 12	Constitutive law, P and S Wave Behavior,
M Lect 4	Jan. 15	No Class – Martin Luther King Day
W Lect 5	Jan. 17	Wavefronts and Rays, Seismometers, Seismogram
Th Disc 2	Jan. 18	Earthquake Location – Least Squares method, S-P location activity
F Lect 6	Jan. 19	Travel Time Curves, Earthquake Location
M	Jan. 22	No Class – TL to DC
W Lect 7	Jan. 24	Earthquake Magnitudes, Surface Waves, Source Spectra, b-value
Th Disc 3	Jan. 25	Stereonet construction, P wave first motion mechanism activity
F Lect 8	Jan. 26	Double Couples, Equivalent Forces
M Lect 9	Jan. 29	Subduction Zones – Megathrust Faulting, 2004 Sumatra Event
W Lect 10	Jan. 31	Subduction Zones – 2011 Tohoku Case History
Th Disc 4	Feb. 1	Term Project Selection
F Lect 11	Feb. 2	Subduction Zones – Solomon Islands/Vanuatu Tectonics
M Lect 12	Feb. 5	Subduction Zones – Intraplate Faulting
W Lect 13	Feb. 7	Coulomb Stress Change
Th Disc 5	Feb. 8	Linux Commands and Computer Access
F Lect 14	Feb. 9	Subduction Zones - Slip Partitioning, Oblique Subduction
M Lect 15	Feb. 12	Subduction Zones – Intermediate and Deep Earthquakes
W Lect 16	Feb. 14	Subduction Zones – Metastable Olivine, Thermal Runaway
Th Disc 6	Feb. 15	GMT Plots
F Lect 17	Feb. 16	Slow slip and tremor on Megathrusts Oceanic Ridges
M	Feb. 19	No class – President's Day
W Lect 18	Feb. 21	Mid-Ocean Ridges
Th Disc 7	Feb. 22	Term Project Help
F Lect 19	Feb. 23	Transform Faults
M Lect 20	Feb. 26	Plate Motions
W Lect 21	Feb. 28	Oceanic Intraplate
Th Disc 8	Mar. 1	Term Project Help
F Lect 22	Mar. 2	Continental Rifts/Collisions
M Lect 23	Mar. 5	Intraplate Continental
W Lect 24	Mar. 7	Tomography
Th Disc 9	Mar. 8	Term Project Help
F Lect 25	Mar. 9	Anisotropy
M Lect 26	Mar. 12	Dynamic Triggering, Induced Earthquakes
W Lect 27	Mar. 14	Volcanic Earthquakes; Glacial Earthquakes
Th Disc 10	Mar. 15	Term Project Help
F Lect 28	Mar. 16	Term Projects Due. Student Presentations