Preliminary Lecture Plan for AS.171.646 (General Relativity)

Date	**Topic**
9/1	Newtonian gravity, hydrodynamics (PW 1.1, 1.2, 1.3, 1.4)
9/3	Conservation laws, virial theorem (PW 1.4)
9/8	Spherical and nearly spherical bodies (PW 1.5)
9/10	Motion of extended fluid bodies, Kepler problem (PW 1.6, PW 3)
9/15	Special relativity (PW 4.1)
9/17	Relativistic hydrodynamics, electrodynamics, point particles (PW 4.2)
9/22	Relativistic electrodynamics, point particles (4.3, 4.4)
9/24	Curved spacetime (PW 5.1, 5.2)
9/29	Mathematics of curved spacetime (PW 5.2)
10/1	Mathematics of curved spacetime (P 1)
10/6*	Mathematics of curved spacetime (P 1, PW 5.2)
10/8	The geodesic equation (P 1, PW 5.2)
10/13	Geodesic deviation, Riemann normal coordinates (PW 5.2)
10/15†	Physics in curved spacetime (PW 5.3)
10/20*	Linearized theory (PW 5.5)
10/27	Linearized theory (PW 5.5)
10/29	The Schwarzschild solution (C+notes)
11/3	Classic tests of GR (C+notes)
11/5	Classic tests of GR (C+notes)
11/10	Stellar structure and white dwarfs (ST+notes)
11/12	Stellar structure and white dwarfs (ST+notes)
11/17	Neutron stars (ST+notes)
11/19	Neutron stars (ST+notes)
Thanksgiving	Reading assignments
12/1	Black holes (ST+notes)
12/3	Black holes (ST+notes)
12/8	Black holes (ST+notes)
12/10	Black holes (ST+notes)

Legend: PW=Poisson-Will, P=Poisson, ST=Shapiro-Teukolsky, C=Carroll
Note: On dates marked with a * I expect to be on travel
Note: On dates marked with a †, we may have to move the class to a different time