

Special and General Relativity

Week 01	Kogut 1	Physics according to Newton
	Kogut 2	Physics according to Einstein
	EW 1	Space-time diagrams and foundations of relativity
Week 02	Kogut 3	Minkowski diagrams
	EW 2	Fundamentals of measurement
	EW 3.1-5	Measurements in flat space-times
Week 03	Kogut 4	Lorentz transformations and space-time interval
	EW 4.1-2	Lorentz transformations and space-time interval
Week 04	Kogut 5	Kinematic effects
	EW 3.6	Kinematic effects
	EW B1-3	4-Vectors
	Maudlin 2	Relativity and Space-time Structure
Week 05	Kogut 6	Relativistic dynamics
	EW 3.7	Relativistic dynamics
	EW B3-4	4-Vectors
Week 06	Kogut 7	Gentle introduction to general relativity
	EW 4.3	Some flat-space universes
	EW 5	Curved space-times
	EW B5	4-Vectors
Week 07	Kogut 8	Illustrations, problems and discussions in general relativity
	EW 6	Spherical and stellar collapse; black holes
	EW 7	Simple cosmological models

Quantum Mechanics

Week 08	Section 00	Classical breakdown
	Section 01	QM thoughts
	Section 02	Mathematics I
	Section 03	Superposition A
Week 09	Section 04	Mathematics II
	Section 05	Postulates
	Section 06	Quantum details
Week 10	Section 07	Superposition B
	Section 08	Polarization
Week 11	Section 09	QM derivation Schrodinger equation
	Section 10	QM simple systems
	Section 11	Heisenberg uncertainty principle
Week 12	Section 12	Whither collapse
	Section 13	Locality, EPR, Bell introduction
	Section 14	Bell theorem introduction
	Section 15	EPR, Bell details
	Maudlin 1	Bell's Theorem: The Price of Locality
	Maudlin 3	Superluminal Matter Transport
	Maudlin 4	Controlling the Connection: Signals
Week 13	Maudlin 5	Causation
	Maudlin 6	Secret Messages
	Maudlin 7	Points of View
	Maudlin 8	Life in Elastic Space-time
	Internet Research:	Schrodinger cats, Wigner friends, Quantum erasers, Watched pots