

PS 303 - Schedule

| Lecture | day | date | Reading | Problems | Segre | Tests | lecture topics |
|---------|-----|--------|------------------------------|--------------------------|-------|---------|---|
| 1 | W | 11-Jan | Preface, How to Study, App A | | | | intro, syllabus, epistemology (Popper), math (binomial) |
| 2 | F | 13-Jan | TCP 1 | | | | energy, momentum, quantum |
| 3 | W | 18-Jan | TCP 2.1 | | Ch 1 | | elementary particles |
| 4 | F | 20-Jan | TCP 2.2 | 1-11 | | | charge, interactions, exchange particles, Heisenberg inequalities |
| 5 | M | 23-Jan | TCP App B | | | | Rutherford scattering |
| 6 | W | 25-Jan | TCP 2.3 | | Ch 2 | | spin, Pauli exclusion |
| 7 | F | 27-Jan | TCP 2.4 | 12-22 | | | magnetic moment, pe model |
| 8 | M | 30-Jan | TCP 2.5, 2.6 | | | | color force, strong force, weak force |
| 9 | W | 1-Feb | TCP 3.1-3.4 | 23-36* | Ch 3 | | nuclear mass, charge, color, size |
| 10 | F | 3-Feb | TCP 3.5, 3.6 | * 30, 32, 34, 36 are EC | | | spin, magnetic moment |
| 11 | M | 6-Feb | TCP App C | | | | Stern-Gerlach |
| 12 | W | 8-Feb | | 37-48 | | Test #1 | |
| 13 | F | 10-Feb | TCP App D | | Ch 4 | | Blackbody radiation |
| 14 | M | 13-Feb | TCP 3.7,3.8 | | | | radioactivity, alpha decay |
| 15 | W | 15-Feb | TCP 3.9 | | Ch 5 | | beta decay |
| 16 | F | 17-Feb | TCP App E | D1-3, 50-53, 56, 57 | | | Photoelectric effect |
| 17 | W | 22-Feb | TCP 4.1 | | Ch 6 | | atomic properties, dimensional analysis |
| 18 | F | 24-Feb | TCP 4.2, App F | E1, 58-60, 64-67 (61 EC) | | | Bohr model, reduced mass |
| 19 | M | 27-Feb | TCP 4.3 | | | | periodic table |
| 20 | W | 29-Feb | TCP 4.4 | | Ch 7 | | Moseley's law |
| 21 | F | 2-Mar | TCP 5.1, App H | 68,72,74,75,77-80,83 | | | introduction, time dilation, cosmic rays |
| 22 | M | 5-Mar | TCP 5.2 | | | | length contraction |
| 23 | W | 7-Mar | TCP 5.3 | | Ch 8 | | Lorentz transformation |
| 24 | F | 9-Mar | TCP 5.4 | 84-92 | | | twin paradox, etc. |
| 25 | M | 12-Mar | TCP 5.5, 5.6 | | | | more paradoxes, dynamics |
| 26 | W | 14-Mar | TCP 5.6 | | Ch 9 | | more dynamics |
| 27 | F | 16-Mar | | 97-101, 103-105 | | Test #2 | |
| 28 | M | 26-Mar | TCP App G | | | | Compton effect |
| 29 | W | 28-Mar | TCP 6.1, 6.2 | | Ch 10 | | wave particle duality, dispersion |
| 30 | F | 30-Mar | TCP 6.3, 6.4 | | | | Heisenberg relations, Bohr's Complementarity Principle |
| 31 | M | 2-Apr | | G3, 106-113 | | | |