Quantum mechanics (Q.M.)/ second course

1. Introduction to Q.M.
2. Wave properties
3. De Broglie wave
4. Atoms
5. Photoelectric effect
6. Einstein's quantum theory of the photoelectric effect
7. Compton scattering
8. The uncertainty principle
9. Introduction to wave equation
10. Linear superposition of sinusoidal waves
11. Operators
12. Schrodinger equation
13. Expectation value
14. Eigen value& Eigen function
15. Orthonormalize condition
16. Variance
17. Parity
18. Degeneracy
19. Dirac notation
20. Wave function properties
21. Q.M. applications

References:

1. Introduction to Quantum Mechanics
   By A.c.Phillips
2. Introduction to Quantum Mechanics
   By David Griffiths
3. Quantum Mechanics
   By David McMahon
4. 101 Quantum Questions
   By Kenneth W. Ford
5. الميكانيك الكمي
   د.جاسم الحسيني و د. عبد السلام عبد الامير
6. مقدمة في الميكانيك الكمي
   د.هاشم عبود قاسم و د.ضياء احمد حسين