DEPARTMENT OF MATHEMATICS,

UNIVERSITY OF KARACHI,

Course Outline

MATH 666: QUANTUM MECHANICS – II

Course contents:

Angular momentum. Motion in centrally symmetric field. Hydrogen atom Collision theory. Approximation methods. Identical particles and spin.

Books Recommended:

1. Dirac, P. A. M., The Principles of Quantum Mechanics, Clarendon, 1958.
2. Landu, L. D. and Lifshitz, E. M., Quantum Mechanics – Non-relativistic Theory, Pergamon, 1959.
3. Merzbacher, E., Quantum Mechanics John Wiley, 1970.
4. Schiffs, L. I., Quantum Mechanics, Third Edition, McGraw Hill, 1979.
5. Dicke, R. H. and Wittke, J.P., Introduction to Quantum Mechanics, Addison Wesley, 1978.
6. Messiah, A., Quantum Mechanics, Vols. I and II, North Holland, 1961 and 1983.
7. Mand, M. A., Quantum Mechanics, Butterworths, 1957.
8. Levine, I. N., Quantum Chemistry, Vols. I and II, Allyn and Benjamin, 1970
9. Anderson, J. M., Mathematics for Quantum Chemistry, Benjamin, 1966.
10. Histler, W., The Quantum Theory of Radiation, Clarendor, 1960.