DEPARTMENT OF MATHEMATICS,

UNIVERSITY OF KARACHI,

Course Outline

MATH 672: Relativity II

Course contents:

Section A: Solutions of Einstein field equations other than Swarzchild solutions

Section B: Lnon-relativity black holes, maximal extension and conformal compactification, charged black holes, rotating black holes

Section C: Linearized theory of gravity, cosmography, newtionian cosmology

Section D: Hubble's law, cosmological principle, relativistic cosmology

Books Recommended:

1. Golab, S., Tensor Calculus, North Holland, Amsterdam, 1974.
2. Lawden, D. F., An Introduction to Tensor Calculus, Relativity and Cosmology, John Wiley, New York, 1982.
3. Patharia, R. K., The Theory of Relativity, Second Edition, Pergamon, London, 1976.
4. Synge, J. L., Relativity: the Special Theory, North Holland, Amsterdam, 1976.
5. Synge, J. L., Relativity: the General Theory, North Holland, Amsterdam, 1980.