Code	Subject Title	Cr. Hrs	Semester
PHY-427	**PARTICLE PHYSICS-III**	**3**	**VIII**

Year	Discipline
4	**Physics**

Course Outlines:

Hadron Spectroscopy: Formation experiments, partial wave formalism and the optical theorem, the Breit-Wigner resonance formula, baryon resonances, phase space considerations, production experiments.

The Quark Model: The group SU (3), quarks, hadrons (baryons, mesons in quark model, heave meson spectroscopy, the quarkonium model.

The Standard Model (qualitative treatment only): Unification of weak and electromagnetic interactions Glashow-Salam-Weinberg Model.

Books Recommended:

1. *Nuclear and Particle Physics* by Burcham, E. E. and Jobes, M., Longman, (1995).
2. *Introduction to Nuclear and Particle Physics* by Das, A. and Ferbel, T., Johan Wiley and Sons, (1994).
3. *Concepts of Particle Physics* by Gottfried, K. and Weisskopt, F., Vol. 1, OxfordUniversity Press, (1986).
4. *Introduction of elementary Particles* by Griffiths, D., John Wiley and Sons, (1987).
5. *Nuclear and Particle Physics* by Williams, W.S.C., OxfordUniversity Press, (1995).
6. *A Modern Introduction to Particle Physics* by Fayyazudding and Riazuddin, World Scientific, (1992)
7. *Quarks and Leptons* by Halzen F and Martin A.D., Wiley, (1984).