Dynamical systems is a very active area of research in Mathematics today. This school provides an opportunity to young researchers to learn various foundational courses that make up the theory of Dynamical systems and Ergodic theory.

In this workshop, we intend to cover topics from real dynamics, topological dynamics, symbolic dynamics and complex dynamics. One of the interesting aspects is the re-ordering of positive integers by Sharkovskii, that explains the chaotic behaviour of certain real dynamical systems. Recurrence is one of the underlying aspects that describes any kind of dynamics which forms the core of Topological Dynamics. Having studied various dynamical systems, it is essential to understand the distribution of various kinds of orbits of points; thus naturally paving way for Ergodic theory. And a useful tool to study most dynamics - Symbolic Dynamics. We intend to lecture not only on discrete-time dynamical systems but also on continuous time dynamical systems. In the last week of the workshop, we shall look at Complex Dynamics wherein we discuss the Fatou-Julia dichotomy of rational functions and transcendental functions based on Montel’s normality criterion. The workshop culminates with a course on arithmetic dynamics; where we discuss Manin’s conjecture for group varieties and optimal distribution of points following Lubotzky-Phillips-Sarnak and Clozel’s results.