5th Semester	RCI5D005	**Pavement Design**	L-T-P 3-0-0	3 Credits

Module – I   **(08 Classes)**

Introduction: Classification of pavements, Difference between highway and runway pavements, Factors affecting structural design, Characteristics of traffic loading, Concept of VDF and Computation of design traffic.

Module – II   **(10 Classes)**

Principles of pavement design: Concepts of structural and functional failures, Performance criteria; Analysis of pavements: ESWL, Analysis of flexible and concrete pavements.

Module – III   **(10 Classes)**

Design of pavements: IRC, AASHTO and other important methods of design of bituminous and concrete pavements.

Module – IV   **(06 Classes)**

Pavement evaluation techniques: Benkelman beam, Falling weight deflectometer and other equipments.

Module – V   **(06 Classes)**

Concepts of pavement maintenance management.

Books:
1. Principles of Pavement Design, E. J. Yoder & M.W. Witzack, John Wiley
2. Pavement Design by R Srinivasa Kumar, Universities Press
3. Principles of Transportation Engineering, P. Chakroborty& A. Das, PHI Publication
4. Pavement Analysis and Design, Y. H. Huang, Prentice Hall

Digital Learning Resources:

Course Name	Advanced Transportation Engineering
Course Link	https://nptel.ac.in/courses/105/104/105104098/
Course Instructor	Prof. A. Das, Prof. ParthaChakraborty,IIT Kanpur,