

New Institute Core

ESOXXX: Fundamentals of Data Engineering

Department Compulsory

IS201: Probability and Statistics for ML

IS202: Signals, Systems & Networks (EE200)

IS203: Fundamentals of Data Engineering - Part II (Things)

IS204: Control Systems Analysis (EE250)

IS205: Introduction to Machine Learning (CS771)

IS301: AI Ethics (New)

IS302: Fundamentals of Data Engineering - Part III (OPS)

IS303: Principles of Communication (EE320)

IS304: Robotics (ME381)

Department Electives

Of these seven DE courses, **five** must be from one of the tracks. The other two courses can be taken from any track.

Digital Basket (D Basket):

IS611: Probabilistic Machine Learning (CS772)

IS612: Modern Cryptography (CS641)

IS613: Human-AI Interaction (CS698Y)

IS614: Software Engineering for Intelligent Systems

IS615: Deep Learning

IS616: Generative AI

Cyber Physical System Basket (C Basket)

IS621: Embedded and Cyber-Physical Systems (CS637)

IS622: Computer-Aided Verification (CS652)

IS623: Convex Optimization (EE609)

IS624: Basics of Modern Control Systems (EE650)

IS625: Reinforcement Learning

IS626: Dynamics

Undergraduate Projects

IS496: Undergraduate Project 1

IS497: Undergraduate Project 2

IS498: Undergraduate Project 3

IS499: Undergraduate Project 4

Color Code:

Blue: Courses from other departments

Red: New Courses already designed

Purple: Courses need to be designed from scratch