

EE 227: Data Analysis**Name of Academic Unit:** Electrical Engineering**Level:** UG**Code assigned:** EE 227

i	Title of the course	Data Analysis
ii	Credit Structure (L-T-P-C)	(3-0-0-6)
iii	Level	UG
iv	Type of Course	UG Core course
v	Semester in which normally to be offered	Autumn
vi	Whether Full or Half Semester Course	Half Semester
vii	Pre-requisite(s), if any - specify course number(s)	Introduction to Probability
viii	Course Content	Graphical and numerical methods for describing and summarizing data. Sampling variability and sampling distributions. Central Limit Theorem and Convergence Estimators: point estimators, bias and consistency. Hypothesis testing and confidence intervals. Comparing two populations. Correlation and linear regression.
ix	Texts/References	Sheldon M. Ross, "Introduction to Probability and Statistics for Engineers and Scientists," Elsevier, New Delhi, 3rd edition (Indian), 1987. Papoulis and Pillai, "Probability, Random Variables and Stochastic processes," 4th Edition, Tata McGraw Hill, 1991. William Feller, "An Introduction to Probability Theory and Its Applications," Vol. 1, 3rd edition, John Wiley International, 1968.
x	Name(s) of Instructor(s)	Rahul Pandya
xi	Name(s) of other Departments/ Academic Units to whom the course is relevant	CSE, MMAE
xii	Is/Are there any course(s) in the same/ other academic unit(s) which is/ are equivalent to this course? If so, please give details.	None
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xiii	Justification/ Need for introducing the course	Analyzing data using statistical tools is required in many disciplines of engineering. This course also serves as a precursor to courses related to machine learning, statistical signal processing, communications, etc.
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