

No	Topic	Subtopics / Description
1	Introduction to NumPy	Definition, Installation, Importing, NumPy vs List, Version Check
2	NumPy Arrays (ndarray)	Creation, Attributes (ndim, shape, size, dtype), astype()
3	Array Creation Routines	zeros, ones, full, arange, linspace, logspace, random, fromfunction
4	Indexing and Slicing	1D & 2D indexing, Negative index, Fancy & Boolean indexing
5	Array Operations	Arithmetic, Comparison, Logical, Broadcasting, Universal Functions
6	Aggregate & Statistical Functions	sum, mean, median, std, var, cumsum, cumprod, corcoef
7	Reshaping & Transposing	reshape, resize, ravel, flatten, transpose, expand_dims, squeeze
8	Stacking & Splitting	hstack, vstack, dstack, concatenate, split, hsplit, vsplit
9	Copying & Memory	Assignment vs copy, view(), base, Memory sharing
10	Sorting & Searching	sort, argsort, where, nonzero, unique, count_nonzero, isin
11	Linear Algebra	dot, matmul, det, inv, eig, solve, norm, trace
12	Random Module	rand, randn, randint, choice, seed, distributions
13	File I/O	save, load, savez, savetxt, loadtxt, genfromtxt, memmap
14	Advanced Indexing & Masking	where, diag, diagflat, conditional assignment
15	Broadcasting (Advanced)	Rules, compatible shapes, examples, pitfalls
16	Structured & Record Arrays	dtype with fields, recarray, mixed-type data
17	Math & Statistics Utilities	clip, ptp, percentile, histogram, gradient, trapz
18	Bitwise & Logical Operations	bitwise_and, logical_and, greater_equal, less_equal