WHO IS THIS FOR?

Eligibility & Fit Check

Before you begin your upskilling journey, your roots must be in:

- **Engineering / IT / Maths Background**

(OR)

- **Developing role** (Service-based company) (OR)

(OR)

- **Engineering role** (Product-based company)

Once you pass the eligibility criteria, let's find you a route:

Take the Scaler Entrance Test: 16 MCQs and see where you fit.

Start it from the Top:
BEGINNER BATCH

14 MONTH Journey

For learners with no coding experience

Hop on the Midway:
INTERMEDIATE BATCH

12 MONTH Journey

For learners with basic coding experience

Zoom to the Core:
ADVANCED BATCH

10 MONTH Journey

For learners with notable coding experience

Our Program ensures that you get equipped with the confidence and skills required to overcome the most formidable hurdles a Tech Expert may encounter in their journey ahead.

WORK EXPERIENCE NOT MANDATORY

SCALER

CURRICULUM OUTLINE

The Blueprint to Success

We will prepare you to tackle the toughest challenges you may face as you make headway in your career. Scaler's curriculum is custom-designed to fast-track your journey to becoming a better programmer.

BEGINNER
for Non-Coders

Introduction to Programming
Beginner Refresher - **4 Weeks***
(OR)
Beginner Complete - **8 Weeks***

INTERMEDIATE
for Basic Coders

Programming Constructs

ADVANCED
for Experienced Coders

Arithmetic Problem Solving &
DS with CS Fundamentals
Programming Language Internals
CS Fundamentals
Object Oriented Design (LLD)
System Design (HLD)

Specialisation

BACKEND & FULLSTACK ENGINEERING
8 Weeks

DATA ENGINEERING
8 Weeks

*There are two types of Beginner batches. "Introduction to Programming" module is 4 weeks long for Beginner Refresher and 8 weeks long for Beginner Complete.

CURRICULUM DEEPDRIVE

Program Timeline:

Introduction to Programming (Start point for Beginner Batch) - 4-8 Weeks*

Programming Fundamentals, Java Or Python	1-2 Weeks
Data Types and Operators, Loops, Conditional Statements	1-2 Weeks
Function, Methods, Recursion basics, Maths	1-2 Weeks
Arrays - 1D and 2D, Strings	1-2 Weeks

NOTE: There are two types of Beginner batches. "Introduction to Programming" module is 4 weeks long for Beginner Refresher and 8 weeks long for Beginner Complete.

Programming Constructs (Start point for Intermediate Batch) - 8 Weeks

Introduction to Problem Solving and Time complexity	1 Week
Array Techniques (prefix sum, carry forward, subarrays, 2D matrices)	2 Weeks
Bit Manipulations	1 Week
Maths, Sorting, Hashing	2 Weeks
Recursions and Data structure fundamentals - Stacks, Linked Lists, Trees	2 Weeks

CURRICULUM DEEPDRIVE

Advanced Problem Solving & Data Structures with CS Fundamentals (Start Point for Advanced Batch) - 17 weeks

Time complexity analysis, Arrays, Bit manipulation, Maths	3 Weeks
Recursion, Sorting, Binary Search, Two Pointers, Hashing, Pattern Matching Algorithms	4 Weeks
Linked Lists, Stacks, Queues, Deque	3 Weeks
Trees, Binary Search Trees, Tries, Heaps	3 Weeks
Greedy Algorithms, Backtracking, Dynamic Programming, Graphs	4 Weeks

Programming Language Internals (CS Fundamentals) - 1.5 Weeks

Language Basics - Data Types, Syntax, OOP etc	0.5 Week
Advanced Language Concepts and Popular Pitfalls/ Interview Questions: Concurrency, Standard Library etc.	1 Week

Computer Science Fundamentals (CS Fundamentals) - 3 Weeks

Database Management Systems, Computer Networks and Operating Systems Theory	2 Weeks
SQL	1 Week

CURRICULUM DEEPDRIVE

Object Oriented Design (LLD) - 6 weeks

OOP, Terminology, SOLID Principles	1 Week
Design Patterns (creational, structural, behavioural), UML Diagrams and Schema Design	2 Weeks
Concurrency	1 Week
LLD Problems, Design, Machine coding, Case Studies	2 Weeks

System Design (HLD) - 6 weeks

HLD Basics, Consistent Hashing, Caching, CAP Theorem, Mater-Slave	1 Week
Distributed Systems, Databases, SQL and NoSQL	1 Week
Zookeeper + Kafka, S3 + Quad Trees, Microservices, Containerisation, Case Studies	4 Weeks

CURRICULUM DEEPDRIVE

Specialisations:

(Only 1 Specialisation)

Backend and Fullstack - 8 weeks

MVC, REST APIs, ORM, SprintBoot, Views, Database	3 Weeks
Building a server, Web architecture, HTML, CSS, Javascript, Node.js, Backend architecture, MongoDB, React / Redux	4 Weeks
Project Deployment	1 Week

(OR) Data Engineering - 8 weeks

Advanced SQL, filtering, subqueries, aggregation functions, advanced constructs and structures	2 Weeks
Data Warehousing & Modelling, Data Lakes, OLAP, Data Processing - Big Data Hadoop & Spark	3 Weeks
Batch and Streaming - ETL pipelines, Workflow Orchestration, OLTP to OLAP systems, Distributed systems, Cloud Tech	2 Weeks
Project Deployment	1 Week