



GRADE 5–8

FROM BLOCKS TO REAL CODE

Python Programming

Course Snapshot

DURATION

45 Days

CLASSES

45 Classes (1/day, 60 min)

FORMAT

Live Online & In-Person (Kathmandu)

BATCH SIZE

Maximum 8 Students

PLATFORM & TOOLS

Python (repl.it / Thonny) · Turtle · Pygame · Tkinter

DEVICE NEEDED

Laptop or Desktop, Stable Internet

CERTIFICATE

YCA Python Completion Certificate

Our Teaching Approach

- Live, instructor-led classes that move step by step from typed code basics to real projects.
- Hands-on practice every session — every topic paired with a fun coding activity.
- Project-based learning — seven real programs and apps your child builds and keeps.



SYLLABUS



Python Foundation Course

45 days · 7 modules · 1 class a day — from the first line of code to a finished app.

MODULE 1 Python Basics

Day 1–12

DAY	TOPIC	FUN ACTIVITY
1	Introduction to Computers and Coding	Robot Instructor Game
2	First Python Program, print()	Funny Message Challenge
3	Variables in Python	Create Your Digital ID Card
4	Data Types (String, Integer, Float, Boolean)	Guess the Data Type
5	User Input, input()	Interview Your Friend Program
6	Typcasting	Calculator Fixing Game
7	String Operations	Secret Name Decorator
8	Arithmetic Operators	Mini Math Quiz Program
9	Comparison and Logical Operators	True or False Battle
10	If Statements	Pass or Fail Checker
11	If-Else and Elif	Pizza Ordering Machine
12	Challenge Day, Revision	Coding Treasure Hunt

MODULE 2 Loops & Turtle Graphics

Day 13–19

DAY	TOPIC	FUN ACTIVITY
13	Introduction to Loops	Clap 10 Times Game
14	While Loop	Countdown Rocket Launch
15	For Loop and range()	Multiplication Table Generator
16	Nested Loops	Star Pattern Competition
17	Pattern Design	Pattern Art Contest
18	Introduction to Turtle Graphics	Draw Your Dream House
19	Turtle Project, Animated Name Art	Best Design Showcase

MODULE 3 Functions & Modules

Day 20–27

DAY	TOPIC	FUN ACTIVITY
20	Introduction to Functions	Magic Function Creator
21	Function Arguments	Greeting Generator
22	Return Statements	Mini Calculator Function
23	break, continue, pass	Loop Escape Challenge
24	Error Handling (try-except)	Bug Detective Game
25	Random Module	Dice Roller Program
26	Math and Time Modules	Age Calculator
27	Mini Project, Magic 8-Ball Game	Ask the Magic Ball

MODULE 4 Data Structures

Day 28–34

DAY	TOPIC	FUN ACTIVITY
28	Lists	Shopping List Program
29	List Operations (sorting, looping)	Top 5 Favourite Games List
30	Tuples	Birthday Storage Program
31	Dictionaries	Student Report Card
32	Sets	Unique Number Finder
33	List Comprehension	Fast Coding Challenge
34	Project, Virtual Pet Simulator	Pet Naming Contest

MODULE 5 Object-Oriented Programming

Day 35–39

DAY	TOPIC	FUN ACTIVITY
35	Introduction to OOP	Object Hunt Around Classroom
36	Classes and Objects	Create a Cartoon Character
37	Inheritance	Animal Family Program
38	Encapsulation and Polymorphism	Superhero Power System
39	OOP Project, Superhero Profile Generator	Superhero Presentation

MODULE 6 Game Development with Pygame

Day 40–43

DAY	TOPIC	FUN ACTIVITY
40	Introduction to Pygame	Create Your First Game Screen
41	Player Movement	Move the Character Race
42	Collision and Sound	Catch the Ball Game
43	Game Project, Dodge the Falling Objects	Class Game Tournament

MODULE 7 Tkinter GUI Development

Day 44–45

DAY	TOPIC	FUN ACTIVITY
44	Introduction to Tkinter (Buttons, Labels)	Design Your Own App Window
45	Final Project and Graduation (Colour Mixer / Pocket Money Tracker / Music Player)	Certificate Ceremony, Coding Quiz, Student Showcase

DAY 45 · GRADUATION

A Finished App, A Certificate, A Showcase

Every student graduates with a working Tkinter app of their own — a Colour Mixer, Pocket Money Tracker, or Music Player — presented at a certificate ceremony and student showcase.

