

TOT Program

Course Syllabus

Course Title: AI - TOT Course Syllabus

Prerequisites: none

Credit hours:

Level 1 - 15 hours

Level 2 - 18 hours

Level 3 - 20 hours

Target audience: Trainers and Teachers

Course Description:

This course aims to qualify and empower educators with artificial intelligence principles and programming concepts, enabling them to teach children and youth in a simplified, interactive, and engaging way. The course is divided into three progressive age-based levels:

1. Level 1 for teaching (Ages 8–11): Introduces children to AI basics through hands-on activities using Scratch, Machine Learning for Kids, and ChatGPT.
2. Level 2 for teaching (Ages 12–15): Develops programming skills using Python and introduces simple projects using Thunkable and AI tools.
3. Level 3 for teaching (Ages 16–18): Focuses on implementing advanced projects that

This course combines programming and AI to integrate models into real-world apps such as Thunkable and Roblox. The course emphasizes practical work to encourage creativity, critical thinking, and problem-solving, making learning a fun and realistic experience.

Level 1: Young Beginners (Ages 8–11) - Total: 15 hours

Theoretical Part

- Unit 1 – What is Artificial Intelligence? (Theory + Intro Activities): 2 hours

Practical Part

- Unit 2 – Scratch: Programming for Kids: 7 hours
- Unit 3 – Machine Learning for Kids: 4 hours
- Train a model: recognize fruits/animals/emotions
- Project: Emotion or Image Classification Game
- Unit 4 – ChatGPT for Kids: 2 hours

Level 2: Intermediate Group (Ages 12–15) - Total: 18 hours

Theoretical Part

- Unit 1 – Introduction to Artificial Intelligence: 2 hours

Practical Part

- Unit 2 – Simplified Python Programming: 7 hours
- Unit 3 – Advanced Machine Learning for Kids: 5 hours
- Unit 4 – Creative ChatGPT: 2 hours
- Unit 5 – Thunkable: No-code App Building: 2 hours

Level 3: Advanced Group (Ages 16–18) - Total: 20 hours

Theoretical Part

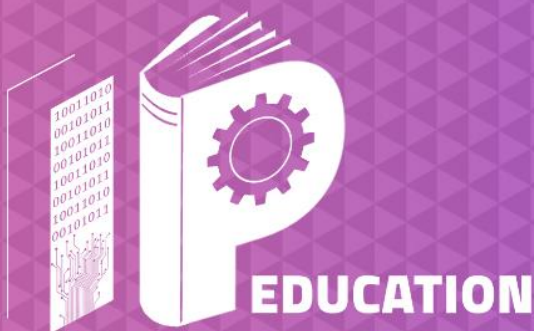
- Unit 1 – Advanced AI Concepts: 2 hours

Practical Part

- Unit 2 – Advanced Python Programming: 7 hours
- Unit 3 – Integrated Machine Learning Project: 3 hours
- Unit 4 – Thunkable and Smart Model Integration: 4 hours
- Unit 5 – ChatGPT + Roblox Studio: 4 hours

Learning Outcomes: by the end of the course, the trainer/educator will have:

- The ability to explain basic AI and programming concepts.
- A ready-to-use project guide for each age group.
- Printable tools and activities to use in the classroom or workshops.
- A flexible lesson plan adaptable to each group's needs.



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