Training Course on Educational Robotics and Coding Program Leadership

Professional Development Training Course Outline

Category	Educational Leadership and Management	**Duration**	10 Days
Base Fee	$3,000 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today’s rapidly evolving educational landscape, the integration of robotics and coding into K–12 learning is a critical driver of STEM excellence, digital innovation, and 21st-century learning skills. Training Course on Educational Robotics and Coding Program Leadership is designed for educators, administrators, and education leaders who are ready to lead transformative, tech-powered learning environments. Through strategic planning, curriculum alignment, and program evaluation, participants will gain the skills to manage, scale, and sustain robotics and coding programs that drive student engagement, creativity, and computational thinking.

With an emphasis on project-based learning, leadership in edtech, and equitable digital inclusion, this course empowers participants to develop school-wide initiatives that meet both global technology standards and local learning goals. The training combines hands-on coding experiences, best practices in robotics education, and data-informed leadership strategies. By the end of the course, participants will be equipped to spearhead robotics and coding initiatives that are future-ready, inclusive, and impactful.

Programme Curriculum

Training Course on Educational Robotics and Coding Program Leadership

Introduction

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Course Objectives

1. Define the core principles of educational robotics and coding integration.
2. Develop leadership skills for managing STEM programs in K–12 schools.
3. Align robotics curricula with national and global STEM standards.
4. Utilize emerging educational technology to boost learning outcomes.
5. Implement scalable and sustainable robotics teaching models.
6. Lead data-driven decision-making processes for program improvement.
7. Integrate project-based learning into robotics and coding curricula.
8. Foster student engagement through interactive coding challenges.
9. Promote equity and accessibility in tech-powered classrooms.
10. Evaluate learning outcomes using AI and robotics assessment tools.
11. Build partnerships with tech companies and STEM organizations.
12. Manage robotics labs, digital tools, and learning environments effectively.
13. Advocate for funding, policy support, and school-wide adoption.

Target Audiences

1. School Principals and Academic Coordinators
2. STEM Teachers and Curriculum Designers
3. ICT/EdTech Specialists
4. Robotics and Computer Science Coaches
5. District Education Officers
6. Private and Public School Administrators
7. Teacher Trainers and Mentors
8. NGOs and Education Technology Advocates

Course Duration: 10 days

Course Modules

Module 1: Introduction to Educational Robotics

- Understanding robotics in education
- History and evolution of robotics in K–12
- Benefits and challenges
- Hardware and software overview
- Safety and ethical considerations
- **Case Study: Implementing LEGO® Robotics in Primary School**

Module 2: Foundations of Coding for Education Leaders

- Coding literacy for non-coders
- Block vs. text-based coding
- Popular tools (Scratch, Python, Tynker)
- Creating basic coding lesson plans
- Assessing student coding skills
- **Case Study: Scratch Coding Club at an Urban Middle School**

Module 3: Leadership in Robotics and Coding Integration

- Vision setting and strategy planning
- Creating digital transformation roadmaps
- Building leadership teams
- Policy alignment and compliance
- Communication and change management
- **Case Study: District-Wide Robotics Integration in Texas**

Module 4: Curriculum Development & Alignment

- Mapping robotics to STEM outcomes
- Aligning with NGSS, ISTE, and CSTA standards
- Designing units and lesson templates
- Cross-curricular connections (STEAM)
- Teacher and student learning outcomes
- **Case Study: Robotics Curriculum in Finnish Schools**

Module 5: Instructional Strategies for Robotics Learning

- Inquiry-based and experiential learning
- Use of simulations and modeling
- Pair programming and collaboration
- Formative and summative assessment
- Gamification of robotics tasks
- **Case Study: MakerSpace in a Charter School**

Module 6: Student Engagement & Innovation

- Motivating students through robotics
- Hackathons, expos, and competitions
- Student-led coding clubs
- Building prototypes and projects
- Showcasing and publishing work
- **Case Study: Girl-Led Robotics Team in Nairobi**

Module 7: Diversity, Equity, and Inclusion in EdTech

- Gender and race disparities in STEM
- Inclusive design in robotics tools
- Accessibility for special education
- Culturally responsive teaching
- Equity audits and bias checks
- **Case Study: Equity-Based Robotics in Title I Schools**

Module 8: Assessment & Evaluation of Programs

- Setting KPIs and performance metrics
- Formative vs. summative evaluations
- Surveys, rubrics, and portfolios
- Digital dashboards and analytics
- Continuous improvement planning
- **Case Study: AI-Powered Assessment in Robotics Labs**

Module 9: Infrastructure, Tools & Procurement

- Selecting the right robotics kits

- Budgeting and cost-effectiveness
- Lab setup and space optimization
- Maintenance and upgrades
- Vendor partnerships
- **Case Study: Google for Education Robotics Grant**

Module 10: Professional Development for Teachers

- Needs assessment and PD planning
- Upskilling teachers in coding and robotics
- Peer coaching and mentoring
- Online courses and micro-credentials
- Building a PLC for robotics educators
- **Case Study: Teacher Bootcamp in Robotics Education**

Module 11: Partnerships & Community Engagement

- Collaborating with local universities
- Tech company mentorship programs
- Parental involvement strategies
- Community robotics events
- Volunteer engagement models
- **Case Study: IBM STEM Partnership with Local Schools**

Module 12: Project-Based Learning in Robotics

- Designing robotics challenges
- Real-world problem-solving
- Coding in context
- Team dynamics and roles
- Capstone project implementation
- **Case Study: Smart City Projects by High Schoolers**

Module 13: Funding & Grant Acquisition

- Identifying funding sources
- Writing winning grant proposals
- Managing donor expectations
- Budgeting and reporting
- Crowdfunding and local sponsorship
- **Case Study: Winning an NSF Robotics Education Grant**

Module 14: Digital Safety and Cybersecurity

- Risks in connected devices
- Cyber hygiene for students
- Classroom internet safety policies
- Digital rights and responsibilities
- Secure storage and data management
- **Case Study: Cybersecure Robotics Program in Florida**

Module 15: Scaling & Sustainability

- Institutionalizing robotics programs
- Succession planning for leadership
- Long-term community engagement

- Sustainable procurement and reuse
- Annual review and relaunch strategies
- **Case Study: 10-Year Robotics Journey of a School District**

Training Methodology

- Interactive lectures with multimedia presentations
- Hands-on coding and robotics lab sessions
- Group discussions and collaborative workshops
- Peer learning through role-play and simulations
- Personalized coaching and mentorship
- Capstone project and final leadership presentation

Register as a group from 3 participants for a Discount

Send us an email: info@fineskilltrainingcenter.org or call *+254769199797*

Certification

Upon successful completion of this training, participants will be issued with a globally- recognized certificate.

Tailor-Made Course

We also offer tailor-made courses based on your needs.

Key Notes

a. The participant must be conversant with English.

b. Upon completion of training the participant will be issued with an Authorized Training Certificate

c. Course duration is flexible and the contents can be modified to fit any number of days.

d. The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

e. One-year post-training support Consultation and Coaching provided after the course.

f. Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

Upcoming Scheduled Sessions

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Online	$2,000
23 Nov 2026	04 Dec 2026	Physical	$3,000
23 Nov 2026	04 Dec 2026	Physical	$6,000

Start Date	End Date	Location	Price
23 Nov 2026	04 Dec 2026	Physical	$6,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$9,000
23 Nov 2026	04 Dec 2026	Physical	$12,000
23 Nov 2026	04 Dec 2026	Physical	$12,000

Ready to enroll or request a customized program? Book online or contact us:

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