Training Course on STEM/STEAM Education Leadership and Curriculum Integration

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, STEM/STEAM education leadership plays a pivotal role in shaping future-ready learners. Training Course on STEM/STEAM Education Leadership and Curriculum Integration is meticulously designed for educators, administrators, and curriculum developers committed to leading innovative, interdisciplinary practices in Science, Technology, Engineering, Arts, and Mathematics (STEAM). With global emphasis on 21st-century skills, participants will be equipped with strategies to foster creativity, problem-solving, and critical thinking through integrated curriculum design and transformational leadership.

This course will empower educators to shift from traditional teaching models to project-based, equity-driven, and data-informed instruction. Emphasizing collaborative learning environments, technology integration, and inclusive pedagogies, participants will explore dynamic tools and actionable frameworks to implement sustainable and impactful STEM/STEAM programs. Through expert facilitation and practical modules, this course prepares educators to champion curricular innovation, influence policy, and ignite student passion in STEAM pathways.

Programme Curriculum

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Course Objectives

1. Understand the core principles of STEM/STEAM integration in K-12 education.
2. Develop transformational leadership skills tailored to STEAM program development.
3. Design interdisciplinary project-based learning (PBL) units aligned with learning standards.
4. Apply design thinking and inquiry-based learning approaches to curriculum planning.
5. Build inclusive, equitable classrooms through culturally responsive teaching strategies.
6. Explore emerging technologies (AI, robotics, AR/VR) in STEAM instruction.
7. Integrate digital tools for effective virtual and hybrid learning experiences.
8. Establish effective assessment strategies for interdisciplinary learning outcomes.
9. Promote teacher collaboration through Professional Learning Communities (PLCs).
10. Align STEAM initiatives with local, national, and global education policies.
11. Utilize data-driven decision-making for curriculum improvement.
12. Implement community partnerships and industry collaborations for authentic learning.
13. Foster a growth mindset in educators and students for lifelong STEAM engagement.

Target Audiences

1. K–12 Teachers
2. School Administrators
3. Curriculum Developers
4. Education Policy Makers
5. STEM/STEAM Coordinators
6. EdTech Specialists
7. Instructional Coaches
8. Nonprofit & NGO Education Leaders

Course Duration: 10 days

Course Modules

Module 1: Foundations of STEM/STEAM Integration

- Definitions and historical context
- Differences and similarities: STEM vs. STEAM
- Benefits of interdisciplinary teaching
- Core components of integration
- STEAM standards and learning outcomes
- *Case Study:* Integrating STEAM in early elementary classrooms

Module 2: Visionary STEAM Leadership

- Characteristics of transformational leaders
- Strategic visioning and goal-setting
- Leadership styles and educational impact
- Building and sustaining leadership teams
- Leading through change and innovation
- *Case Study:* Principal-led STEAM reform in a Title I school

Module 3: Curriculum Mapping and Backward Design

- Understanding curriculum frameworks
- Identifying essential questions and standards
- Creating interdisciplinary units
- Curriculum pacing and scope
- Alignment with Next Generation Science Standards (NGSS)
- *Case Study:* Backward design in a middle school STEAM unit

Module 4: Project-Based & Inquiry-Based Learning

- Principles of PBL and IBL
- Designing meaningful STEAM projects
- Role of student voice and choice
- Rubrics and authentic assessment
- Differentiation through PBL
- *Case Study:* Solar car engineering challenge in high school

Module 5: Inclusive and Equitable Practices

- Culturally responsive pedagogy
- Gender and racial equity in STEAM
- Universal Design for Learning (UDL)
- Accessibility in digital and physical environments
- Addressing bias in curriculum content
- *Case Study:* Equity audit in a district STEM program

Module 6: Technology Integration and Digital Literacy

- Choosing effective EdTech tools
- AI, robotics, coding, and maker spaces
- AR/VR for immersive learning
- Cybersecurity and digital citizenship
- Managing 1:1 and BYOD environments
- *Case Study:* STEAM and coding integration with micro:bit

Module 7: Arts as a Catalyst for STEM Learning

- Creativity and innovation in the STEAM framework
- Visual, performing, and media arts in projects
- Connecting art with math and science concepts
- Storytelling and visual design in engineering
- STEAM and student engagement
- *Case Study:* Merging physics and music through sound design

Module 8: Teacher Collaboration and PLCs

- Forming and sustaining PLCs
- Collaborative planning practices
- Coaching and mentorship models
- Shared leadership and peer observation
- Building professional capacity
- *Case Study:* District-wide STEAM PLC success story

Module 9: Assessment and Evaluation in STEAM

- Types of assessments in interdisciplinary learning

- Performance tasks and rubrics
- Student portfolios and exhibitions
- Formative vs. summative assessment tools
- Using assessment data for instruction
- *Case Study:* STEAM project showcase and rubrics in Grade 6

Module 10: Building Community & Industry Partnerships

- Partnering with STEM professionals
- School-business collaborations
- Guest speakers, mentors, and field trips
- Career readiness and real-world connections
- Engaging families in STEAM
- *Case Study:* STEM Career Day event planning and execution

Module 11: Policy, Advocacy, and Funding

- National and state education policies
- Advocacy for equitable STEAM access
- Writing grants and proposals
- Budgeting for STEAM initiatives
- Legal and ethical considerations
- *Case Study:* Grant-funded maker lab transformation

Module 12: Global Perspectives in STEAM

- Comparative education systems and practices
- Global STEAM challenges and solutions
- International collaborations and exchanges
- SDGs and global competencies
- Using STEAM for global problem-solving
- *Case Study:* International STEM fair participation

Module 13: Emotional Intelligence and Growth Mindset

- SEL integration in STEAM learning
- Encouraging perseverance and resilience
- Mindset theory and classroom application
- Student goal-setting and self-regulation
- Teacher well-being and burnout prevention
- *Case Study:* Growth mindset intervention in Grade 4

Module 14: Monitoring and Sustaining Innovation

- Data collection and reflection cycles
- Continuous improvement processes
- STEAM program audits and reviews
- Success metrics and KPIs
- Scaling small innovations system-wide
- *Case Study:* Sustainability of district-wide STEAM adoption

Module 15: Capstone Project and Implementation Planning

- Designing a personal or team STEAM initiative
- SMART goals and evaluation criteria
- Community presentation of capstone

- Peer feedback and expert critique
- Final implementation roadmap
- *Case Study:* Real-time implementation of a capstone STEAM unit

Training Methodology

- Interactive virtual and/or in-person sessions
- Hands-on workshops and collaborative design sprints
- Case study analysis and group discussions
- Expert guest speaker sessions
- Personalized feedback and coaching
- Capstone projects and real-world implementation planning

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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