2025 edition

Fab Learning Academy (FLA)

FAB LEARNING ACADEMY

Crafting the future of education

Distributed

Designed by:

FAB LAB BCN

FAB LAB

eduFAB

Partners:

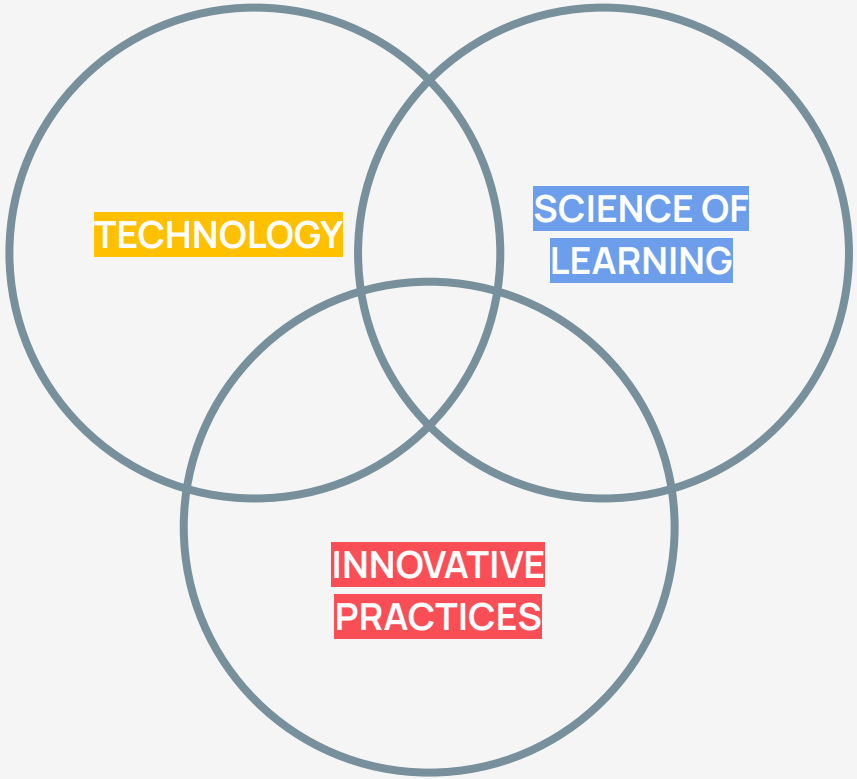
fabfoundation

WHAT IS Fab Learning academy?

through
Teaching ^ Digital Fabrication

Fab Learning Academy (FLA) is a distributed educational program that globally certifies educators to teach through the use of digital fabrication tools and technologies in education ecosystems.

AIM



SCIENCE OF LEARNING:

How do students learn?
How do we teach with technology?

INNOVATIVE PRACTICES:

What does teaching and learning through technology look like in a classroom?

TECHNOLOGY:

How do educators use digital fabrication technologies?
How do students use digital fabrication technologies?

FEATURES

Pedagogy & Technology Integration
Hands-On Project Work
In-Class Interventions (Assignments)
Professional Learning Community

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LEARNING
ACADEMY

Participating Teachers will spend 4-6 hrs per week

- Global Masterclasses (virtual)
- Hands-on instruction (local node)
- Weekly project work (local node)
- Real world talks (virtual)
- Asynchronous readings and videos

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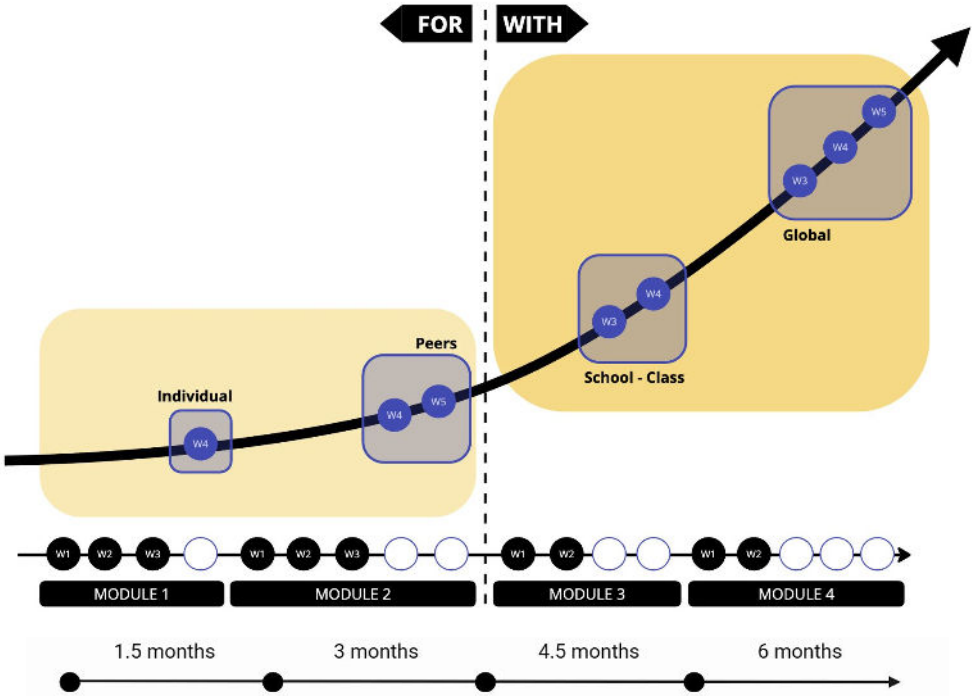

FLA consists of 4 Modules

- Each module concludes with a Field Activity / Intervention
- The Field Activity involves developing a lesson plan
  - Testing w/ students
  - Creating assessments
  - Co-development
  - Reflecting on the intervention

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THE SCHEDULE

The first full cohort of the Fab Learning Academy will run September, 2025 - March, 2026.

MODULES

The curriculum of Fab Learning Academy is organized around four modules, each with a duration of 4 to 6 weeks. Collectively, the program spans approximately 20 weeks, ensuring a comprehensive and in-depth learning experience for educators.

WEEKLY TASKS

Refer to the specific activities and assignments that participants engage in throughout each week of the program. These tasks are designed to align with the learning objectives, providing a structured framework for participants to acquire knowledge, develop skills, and apply concepts in a hands-on manner.

FIELD ACTIVITIES

To reinforce the integration of technology into classroom practices, the program includes in-class interventions or assignments. These assignments require educators to actively embed digital fabrication technologies into their teaching methods, creating a direct link between the training and their daily teaching activities.

Module 1

- Week 1: Sep 28, 2025
- Week 2: Oct 5, 2025
- Week 3: Oct 12, 2025
- Field activity 1: Oct 19, 2025

Module 2

- Week 4: Nov 2, 2025
- Week 5: Nov 9, 2025
- Week 6: Nov 16, 2025
- Field activity 2: Nov 23, 2025
- Field activity 2: Nov 30, 2025

Module 3

- Week 7: Jan 11, 2026
- Week 8: Jan 18, 2026
- Field activity 3: Jan 25, 2026
- Field activity 3: Feb 1, 2026

Module 4

- Week 9: Feb 15, 2026
- Week 10: Feb 22, 2026
- Field activity 4: Mar 1, 2026
- Field activity 4: Mar 8, 2026
- Field activity 4: Mar 15, 2026

Module 1 . Weeks 1-4

THE POSSIBILITIES OF DIGITAL FABRICATION IN K-12 EDUCATION

Create learning tools using digital fabrication

This introductory module lays the groundwork for educators seeking to integrate maker practices and digital fabrication processes into educational environments. Participating educators explore the maker mindset, understand its impact in education and examine different learning theories that support these practices.

SCIENCE OF LEARNING

- Maker Mindset
- TPACK (Technological Pedagogical Content Knowledge) vs FLA Educational Model
- Constructionism theory
- Socio emotional learning

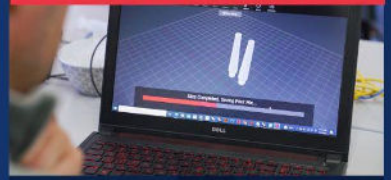
TECHNOLOGY

- Overview of Maker Movement
- 2D design
- First steps in digital fabrication: Vinyl Cutting and Laser Cutting)

INNOVATIVE PRACTICES:

- Digital Fabrication for kids.
- Structuring a project using design process model

Module 2 . Weeks 5-9



PEDAGOGIES AND SUSTAINABLE PRACTICES IN DIGITAL FABRICATION

Fostering Educational Communities

This module goes deeper in learning theories supporting digital fabrication providing foundations for a mindset change in the educational environment. Educators get tips on how to integrate 3d fabrication processes into their educational activities while considering sustainable practices.

SCIENCE OF LEARNING

- Metacognition and self-regulated learning
- Curriculum alignment

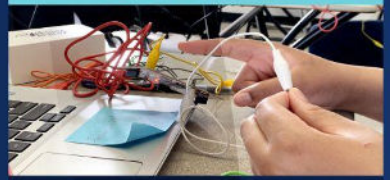
TECHNOLOGY

- 3D modelling
- Additive manufacturing
- Biomaterials

INNOVATIVE PRACTICES

- Sustainable practices in makerspaces
- Digital fabrication for/with kids continuum
- Problem-Based Learning / Project-Based Learning
- Practices and Knowledge transfer through peer-learning
- Building an educational portfolio

Module 3 . Weeks 10-13



DIVERSE CLASSROOMS: DIGITAL FABRICATION FOR ALL

Collaborative and inclusive learning activities bringing together digital fabrication, electronics and programming

This third module demonstrates how to integrate electronics and programming along with digital fabrication in order to create more engaging learning experiences. Discussing best practices, educators are given guidelines to build inclusive and collaborative learning environments in which students with different backgrounds and skills can learn together, emphasizing how digital fabrication facilitates the process. During the module educators are presented with several success stories of integrating makerspaces in schools.

SCIENCE OF LEARNING

- Universal Design Learning (UDL)
- Culturally reflective learning

TECHNOLOGY

- Introductory electronics
- Programming with blocks

INNOVATIVE PRACTICES

- Sustainable development goals
- Makerspaces in schools
- Assessment in digital fabrication projects
- Group work and collaboration

Module 4 . Weeks 14-18

MAKERSPACES IN SCHOOLS AND BEYOND THE CLASSROOM

Connecting Classrooms and communities around the world

This module explores the integration of multidisciplinary content and computational thinking through educational projects that use electronics to interact with the real world. Educators learn to configure and use simple educational development boards in their projects. As part of a global vision of education, participants reflect on how the activities can have a real impact in the society, by fostering collaborative partnerships with local communities. Finally, participants receive practical tips on how to effectively integrate and administer learning spaces in schools.

SCIENCE OF LEARNING

- Computation and system thinking
- Cocreation - Codesign methodologies

TECHNOLOGY

- Introduction to development boards. Inputs and ouputs
- Connecting devices: communication

INNOVATIVE PRACTICES

- Content integration and multidisciplinarity
- Making impact
- Creation & administration of makerspace in school.

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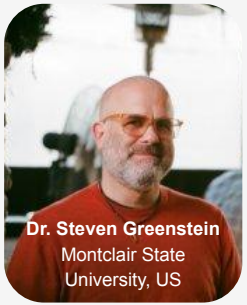
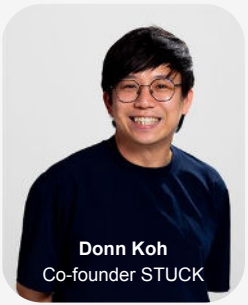
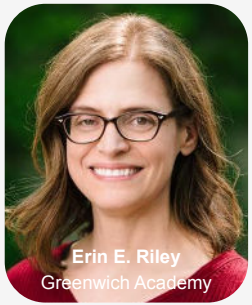
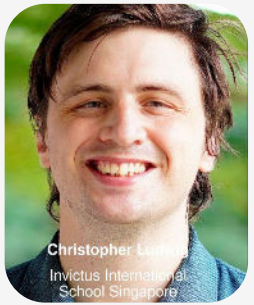
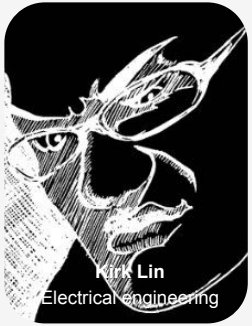
GLOBAL EXPERTISE (Hubs, Real world talks)

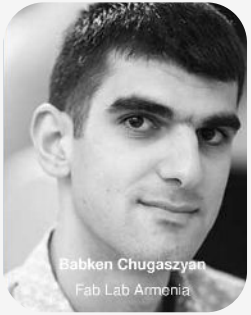


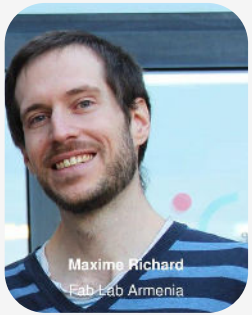












23 Students - 10 Nodes - 5 Hubs

2024-25

Fab Lab Armenia (Armenia)
Syuzanna Martirosyan
Arevik Mkrtchyan

Edufab (USA)
Kristin Burrus
David Raabe
Victoria Lane
Erica Vaskevicius
Adam Devitt
Jac Cohn

Franklin Fab Lab (USA)
Sarah Eli Judd
Lauren Kartzman
Cara Mawson

RDF Lab FIU (USA)
Shyan Tyrrell

ISA Innovation Centre Liwan (Singapore)
Xinxin Chen
Juan Jose Zuniga Soto
Daniel Laspina

Kamp-Lintfort (Germany)
Pierre Rößner
Marc Kohlen
Frank Nix
Bernd Maaßen

Fab Lab Oulu (Finland)
Alicia Fenner Knight

Vestmannaeyjar (Iceland)
Jónatan Guðni Jónsson

Fab Lab Barcelona (Spain)
Selena Pere

Fab Lab ESAN (Perú)
Carlos Luna

FAB LEARNING ACADEMY


EDUCATORS
Teachers
Educators
Researchers
Policy makers
Instructors & Makers
School directors
NAME IS
PRIAA
I AM A
BIOLOGY AND
SCIENCE
TEACHER
HEART
DISSECT
TIEZERK
TIEZERK
TIEZERK
TikTok
@haoren
FBT
Pulsa Esc para salir del modo de pantalla completa
FAB
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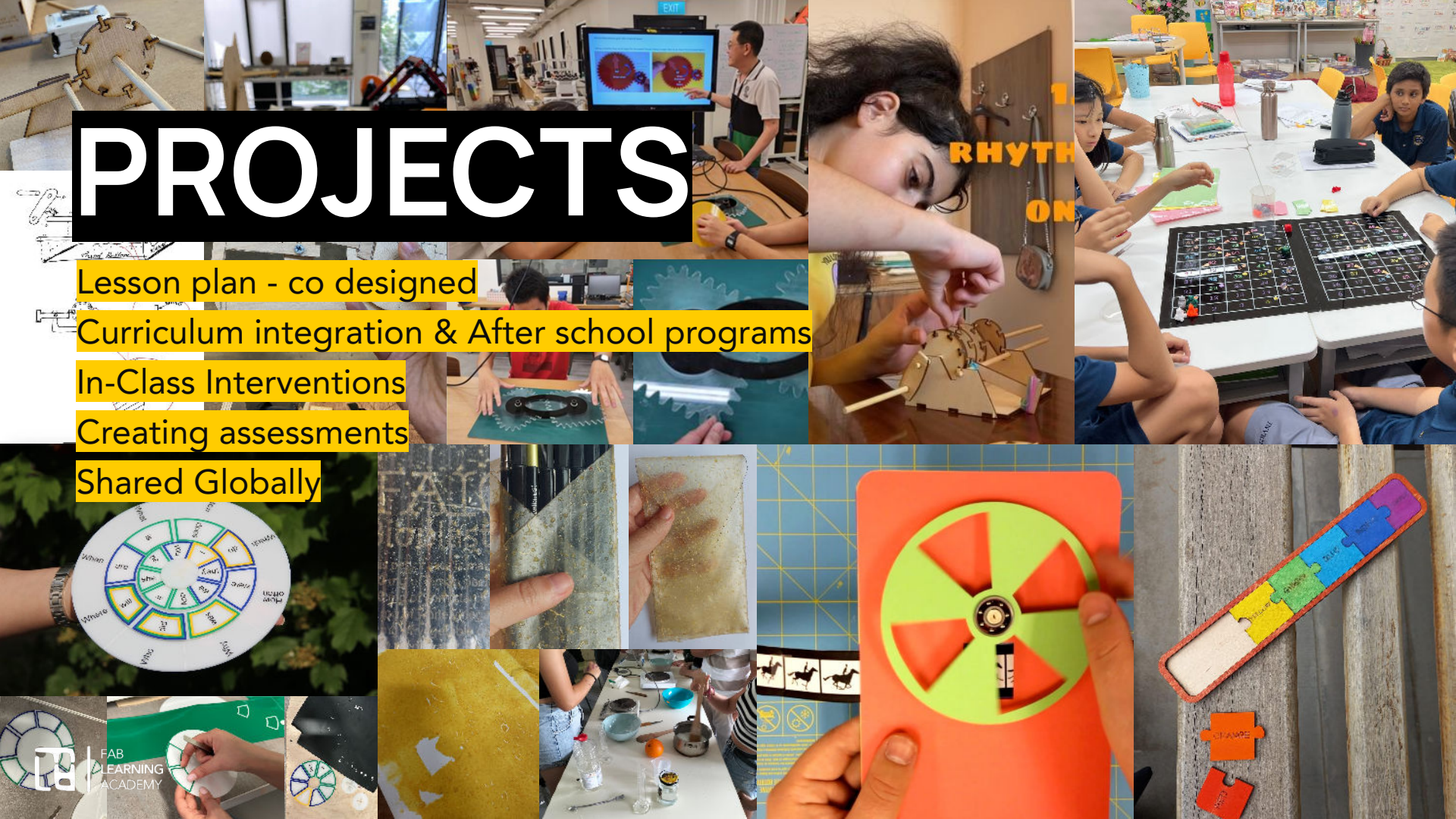
PROJECTS
Lesson plan - co designed
Curriculum integration & After school programs
In-Class Interventions
Creating assessments
Shared Globally
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PROGRAM FEES

REGULAR EDUCATORS

TOTAL 3,500 US$

This fee is split into two parts:

Central Costs: $1,600 USD (fixed)
- Global content and curriculum
- Coordination and evaluation
- Academic services and digital infrastructure

Local Costs: $1,900 USD (variable)
Goes directly to the Local Learning Node to cover:
- Local instructors and mentoring
- Access to lab, equipment and materials
- Space and operational costs

⚠️ *Note: Local Costs can be adjusted by each Node to reflect local realities and availability of resources.*

ACADEMANY ALUMNI

TOTAL 2,000 US$

Available for Fab Academy or Fabricademy graduates, this reduced fee is designed for those who already have:

- Technical skills
- Access to a Fab Lab or makerspace (without requiring technical support or infrastructure)

This fee only includes Central Costs and extra services for this track, such as:

- Access to all online content and documentation platforms
- Participation in Field Activities
- Global evaluation and feedback
- Dedicated HUB support

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AT A GLANCE

COURSE LENGTH
6-months
Sep 2025 - March 2026

CAMPUS
5 Education Hubs
11 nodes

GLOBAL CERTIFICATION
Field Activities
Each Successfully adjudicated intervention earns a microcredential
With 4 microcredentials students receive the Fab Learning Academy Diploma

LANGUAGE
Global Classes are in English

DEDICATION TIME
Participants are expected to spend 4-8 hours a week in synchronous and asynchronous learning.

TUITION FEES

REGULAR EDUCATORS

TOTAL 3,500 US$

Includes:
- Central Costs
- Infrastructure
- Materials
- Local Instructor: tutorials, support
- Local Instructor: evaluation

ACADEMANY ALUMNI

TOTAL 2,000 US$

Includes:
- Central Costs
- HUB support extra, evaluation

27 new Pre-applicants From 17 countries

FAB LEARNING ACADEMY

Fab Learning Academy

Applications are OPEN!

Learning NODES Registration

2025-26 ACADEMIC YEAR

NODE Application

Deadline August 1st

Student Application

Deadline September 15th

is taught in English.

Learning Nodes (LN)

Learning Nodes or Nodes provide local, hands-on, and practical learning experience for FLA program participants.
Nodes can opt to participate on a year-by-year basis.

First Name

Last Name

Date

Country of residence *

Crafting the future of education

If you are interested in, please contact us:

fla@fabfoundation.org

More info

Designed by:

FAB LAB BCN

eduFAB

UNIVERSITY OF OULU

Partner:

fabfoundation