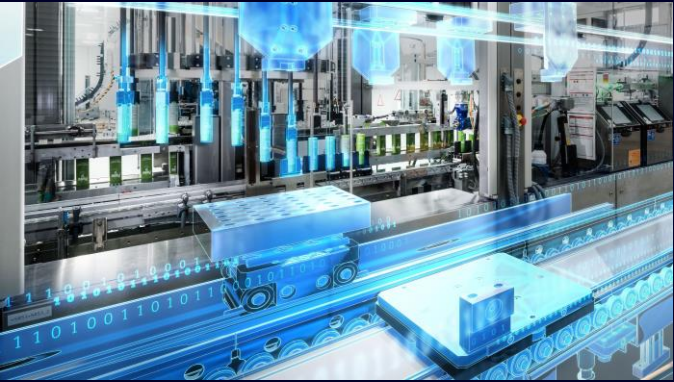


Building a brighter
tomorrow through
better **STEM**
education today



Siemens is a global leader in engineering and innovation



Industrial software and automation



Passenger trains, rail electrification and automation



Smart building and power grid technology



Medical equipment

175 years standing for engineering, excellence, innovation and quality

€78.9 billion in revenue 2025

317K+ employees

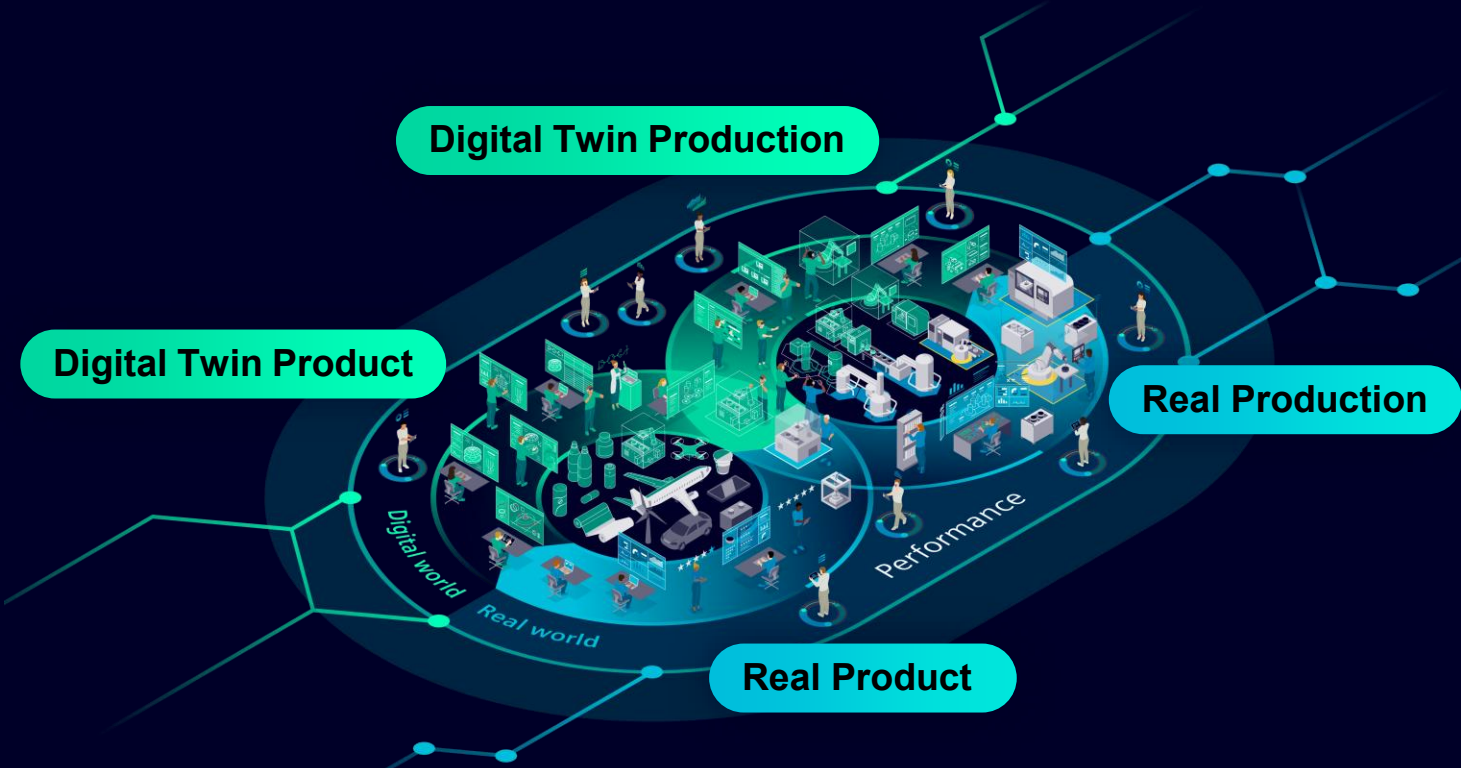
Digital technologies that revolutionize industries and help companies transform their businesses

Partnerships with education to ensure students are prepared to succeed in our technology-focused world

Siemens Digital Industries Software

#1

Industrial software



Digital technology is transforming industry

Process industries

Hybrid industries

Discrete industries



Chemicals



Marine



Glass



Food & Beverage



Electronics



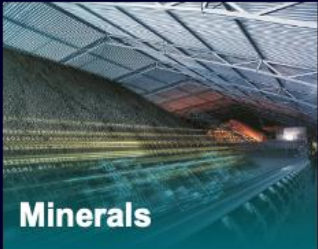
Aerospace



Automotive



Water & Wastewater



Minerals



Pharmaceuticals



Batteries



Wind



Machine building



Intralogistics



Oil & Gas



Power & Utilities



Fiber



Tire



Additive manufacturing



Cranes



Robotics

Siemens Partners with Education



The estimated global skilled worker shortage by 2030 is **85M**, potentially resulting in **\$8.5T in lost revenue**.

Source: Korn Ferry



Our world needs more **STEM** professionals and engineers

Educators need **easy to use** and **engaging tools** for learners

Siemens has **solutions**

Siemens workforce strategy addresses the entire student journey Solutions at every level of learning!



Primary & Secondary

- Learning application
- Project-based curriculum
- Industry Software
- Training & professional development
- Industry certification
- Micro credentials
- STEM Competitions

Higher Education

- Curated content
- Industry Software
- Software Training
- Industry Certification
- Micro credentials (ABET accredited)
- STEM Competitions
- Internships / Apprenticeships

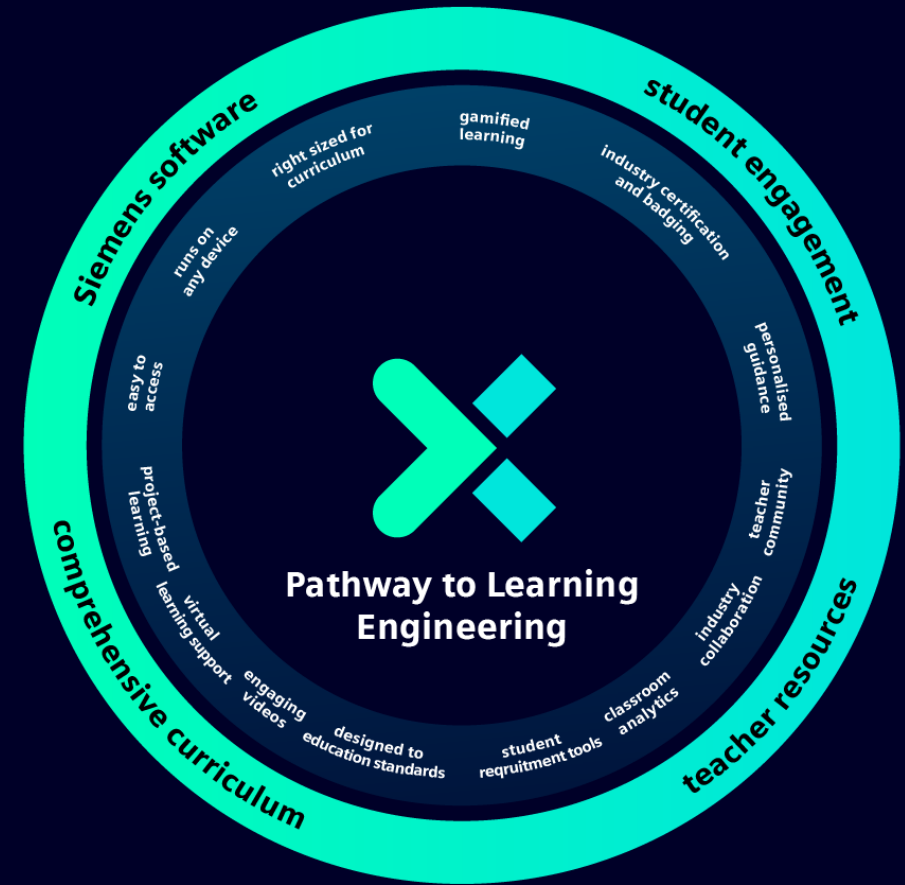
Workforce

- Industry Software
- Software Training
- Industry Certification
- Micro credentials (ABET accredited)
- Reskilling / Upskilling

Introducing **Siemens Pathway to Learning Engineering**

Siemens empowers educators

Pathway to Learning Engineering (PLE) is a **turnkey learning application empowering educators to inspire and engage students** to learn more about the field and fundamentals of engineering and STEM



Siemens Pathway to Learning Engineering

Empowering students to create, solve and lead



- **Comprehensive Curriculum**

Project-based curriculum and aligned learning pathways; age-appropriate modes for ages 10–18 and cross-curricular projects supporting creativity, design thinking and problem-solving.

- **Educator Resources**

Ready-to-deploy lesson plans with objectives and rubrics, formative/summative assessments, step-by-step teacher guides, tutorials and ongoing professional development from local partners to enable non-specialist teachers.

- **Siemens Software**

Industry-grade engineering tools, project management, and industry-recognized credentials providing a professional-level ecosystem that mirrors modern engineering to connect classroom learning and career readiness.

- **Industry Certification & Student Engagement**

Real-world hands-on projects and digital learning education trends bridge the digital skills gap and create a vibrant classroom where collaboration and problem-solving thrive.

K-12 Curriculum development tenets

Aligned to project-based learning gold standard and the Engineering Design Process

1. **Standards Aligned learning goals:** that integrate engineering practices, content knowledge and transferable skills
2. **Challenging Problems or questions:** grounded in an authentic engineering context with clear criteria and constraints
3. **Sustained inquiry:** planned through research, analysis, testing and iteration within the engineering design process
4. **Student Voice and Choice:** embedded in design decisions, solution pathway tools & presentation methods
5. **Planned instruction and scaffolding:** including targeted mini lessons, modeling and just-in-time skill development
6. **Authentic assessment:** aligned to performance evidence through prototyping, documentation, iteration, and communication



Secondary School Curriculum (*recommended ages 14-18*)

Four sequential, industry aligned, comprehensive and integrated courses



Engineering Design

- Students practice the full engineering design process and learn to frame engineering problems, run iterative design cycles, document decisions in an engineering notebook, and deliver team-tested prototypes ready for production using Designcenter NX.

Manufacturing & Automation

- Students design for manufacturability, generate CAM outputs, and architect automation sequences so designs move reliably from CAD to shop floor using Designcenter NX, NX CAM, and TIA Portal.

Mechatronics & Internet of Things

- Student integrate mechanical design, sensors, control logic and networking to build, program and troubleshoot intelligent connected systems used in modern industry tools using Designcenter NX, NX CAM, and TIA Portal.

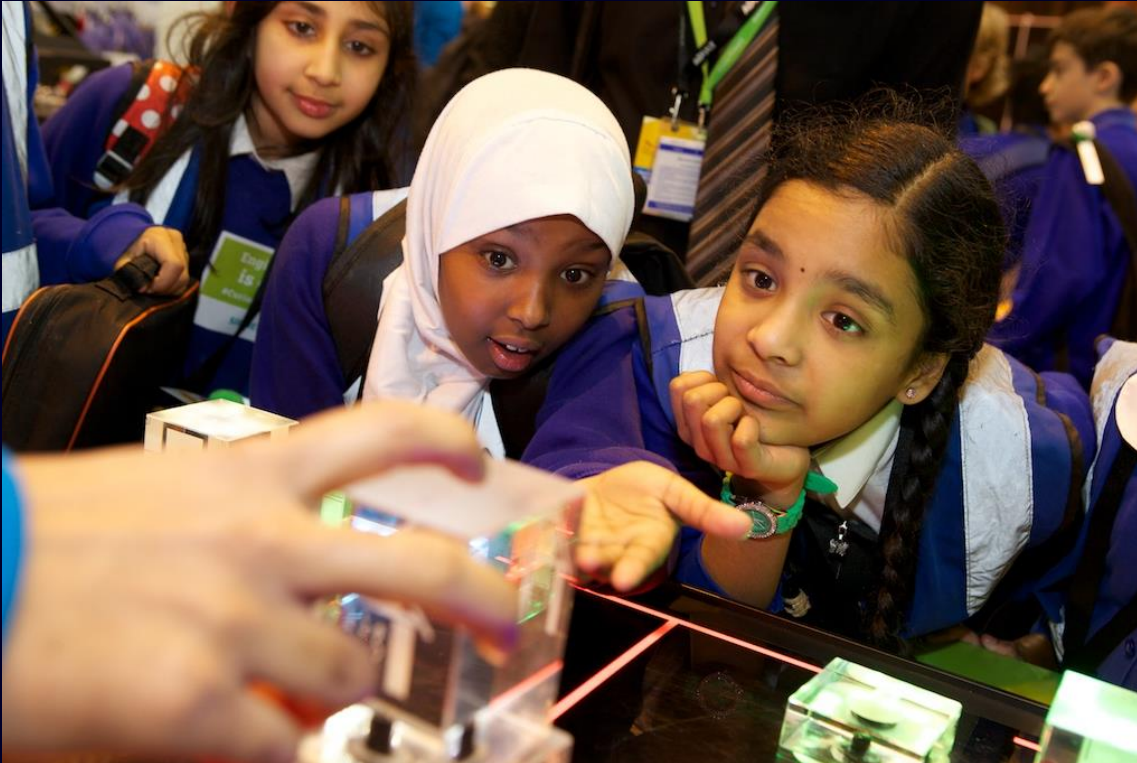
Engineering Research and Development

- Student teams run applied R&D: market & technical research, prototyping, process optimization with Lean/Six Sigma, business planning, and present capstone solutions to real stakeholders for external validation.

SIEMENS

Lower Secondary Curriculum (*recommended ages 10-14*)

Exploring the World of Engineering – coming in September 2026



The curriculum is organized into eight non-sequential courses. Each course includes *level 1, level 2, and level 3* projects that take between 10-16 hours to complete.

- **Designing the Future**
- **MFG Automation Technology**
- **Autonomous Electric Vehicles**
- **Aerospace Technology**
- **Energy Management**
- **Informatics**
- **Biomedical Manufacturing and Engineering**
- **Artificial Intelligence**



Educator resources

Empowering educators

Project-problem-based curriculum

Detailed course lesson plans and planning resources

Easy student onboarding

Professional development

Community of practice



Designcenter X NX Essentials

Any device access to essential
CAD, CAM and CAE tools

- Open/modify Designcenter models and models from other CAD systems on any device.
- Streamline design with AI-predictive modeling to create your own parts, assemblies and drawings.
- Integrated CAM and Simulation tools for physical and virtual prototyping to validate design performance.
- Access, edit and share data from anywhere at anytime, even away from your desk.

Pathway to Learning Engineering Demonstration

[Pathway to Learning Engineering | Siemens](#)

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Search

Pathway to Learning Engineering

[Overview](#) | [Pricing](#) | [Resources](#) | [Try now](#)

SIEMENS XCELERATOR FOR EDUCATION

Pathway to Learning Engineering

Pathway to Learning Engineering is a turnkey learning application that empowers educators to inspire and engage students to learn about engineering. The pathway includes a project-based curriculum, engineering design software, classroom management tools, and professional development resources.

[Try now](#)

[Buy now](#)



Professional learning opportunities:

[K-12 Teacher Development - Molinaroli College of Engineering and Computing
| University of South Carolina](#)

[Introduction to NX X Essentials | Siemens](#)

Curriculum:

State approved course, and numbers:

- Engineering Design 57R0
- Manufacturing and Automation 57R1
- Mechatronics and IoT 57R2
- Engineering Research and Development 57R3

Siemens Digital Industries Certifications:

- [Siemens Automation Fundamentals](#)
- Designcenter X Essentials Design Associates Certifications (coming soon!)

Siemens is ready to partner with you
To inspire and enable your students to lead our futures



Engineers
build our world

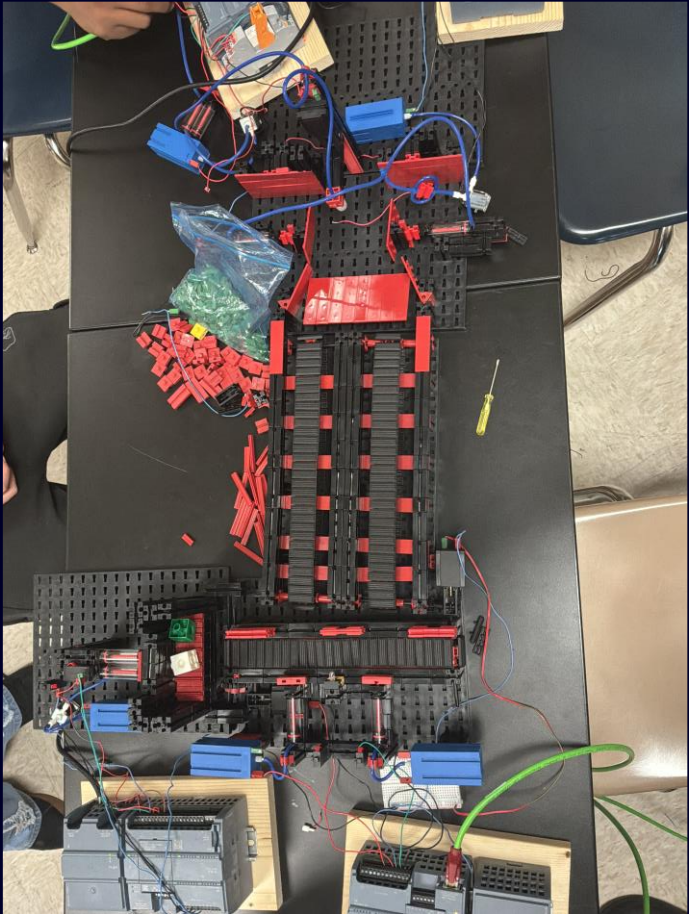
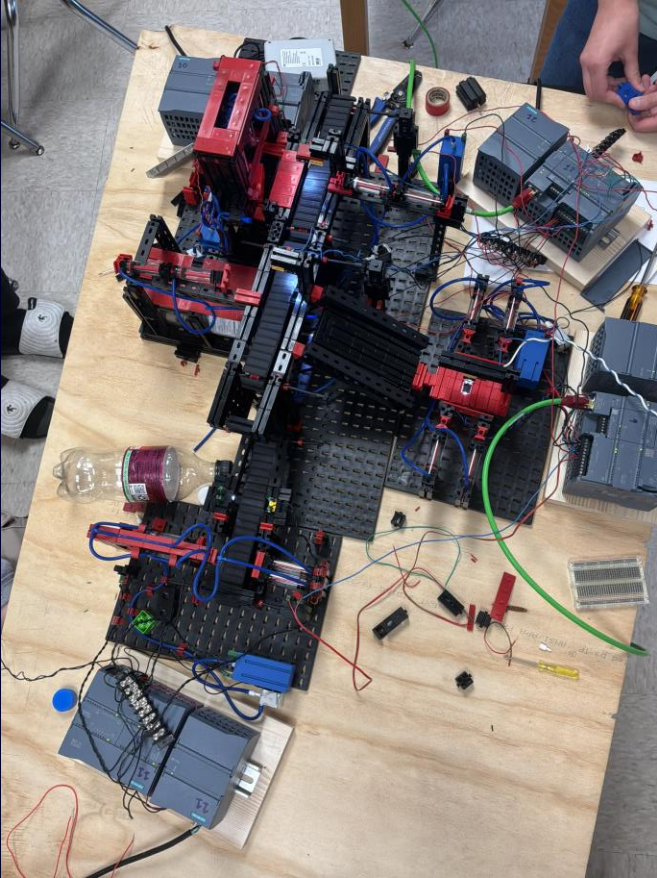


Educators
provide the foundation



Siemens
is ready to partner with
you to inspire and enable
your students to lead
our futures

Student Side



Student Success

Industry Certifications:

- Solid Edge Mechanical Associate
- Six Sigma – Yellow Belt
- OSHA-10

Best Practices

- Participate in the trainings
- Obtain certification
- Be flexible
- Organized chaos

Student Take aways

- Love the hands-on approach
- Certifications for future jobs
- Collaboration with peers and businesses
- Connections made with teachers, students and industry

Questions or interested in learning more?

<https://bit.ly/49MhREv>



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