

ROBOTICS

ABB Robotics Education Package

Unlock the potential of STEM education with robots



About the Package

The ABB Robotics Education Package is a ready-to-use training kit that equips students with key skills and knowledge in robotics and automation, preparing them to excel in a future of work where robots are as common as laptops today.

Featuring a collaborative robot cell, studentfriendly coursework, and a globally recognized STEM certification, the package empowers both educators as well as students, anywhere in the world, to get hands-on experience in real-life robotics applications.

Designed by experts at ABB in collaboration with educators, the ABB Robotics Education Package provides a strong foundation in STEM (Science, Technology, Engineering, and Math), no matter the student's educational background.

80% of educators in a recent survey believe robots will shape the future of employment in the next decade.

Yet only **1 in 4** currently use robots in their teaching program, creating a crucial skills gap.

With the ABB Robotics Education Package, we aim to close this gap by providing a powerful, yet easy-to-use tool that students worldwide can train with to prepare for the future of work.



What's in the package?



1. Easy to Use Education Cell



2. Comprehensive course materials



3. Globally recognized STEM certificate

1. Easy-to-Use Education Cell – This turnkey STEM education cell is ideal for technical training at universities, trade schools, and workforce development organizations.

Components

- GoFa CRB 15000 robot with OmniCore controller
- Education desk
- Electric gripper
- STEM Education Activity Tabletop
- 3D Printed STEM Education Activity Kit

Options

- Conveyor System
- Integrated vision system
- **2. Comprehensive Course Material** A broad array of real-world robotics concepts and applications, designed for both students and teachers.

Components

- Instructor materials
- · Student materials
- Online training modules
- Fun lab exercises
- RobotStudio simulations/pack and go files
- Education cells that are available in a virtual computer format as identical replicas of the real cell
- · Question bank with over 400 tests and answer keys
- 100 free premium RobotStudio licenses per school
- **3. STEM certification programs –** A globally recognized training certificate that boosts students' employment prospects across the world and increases appeal of the education institute.

Components

- Teacher certification
- · Student certification

Benefits of the Education Package



Bridge the skills gap

Designed by experts at ABB in collaboration with educators, the package is an easy-to-understand interface for students to discover and learn industrial concepts and skills.



Empower your educators

The ready-to-use turnkey package allows educators to swiftly integrate high-quality robotics training into your existing programs, allowing you to focus on delivering instructions that meet the needs of your students.



Learn from the leaders

Access a world-class portfolio of hardware and software and learn from the best in robotics through comprehensive training and support.



Create careers out of curiosity

Easy-to-use cobots and intuitive software encourage students from all streams of education to explore the possibilities of robotics.



Customize curriculum

Additional advanced training lessons are included in the package so teachers can adapt the course to match students' skill levels.



Enhance employment opportunities

Students receive training in real-life industrial applications and pick up occupational skills that make them more marketable to potential employers.



Technical Specification



Reference Key		
1	CRB 15000 GoFa	Articulated 6-axis robot, designed for flexible robot-based automation
2	Vision Camera	Enables robot or machine to "see" and interpret its environment
3	Gripper	Schunk C64 Electric Gripper
4	Blocks	Three 3D printed blocks with round tips to support lab activities
5	Block holder	Five block holders to support lab activities
6	Wave Plate	One wave plate to support lab activities
7	Controller	ABB OmniCore controller (enclosed)
8	Pointer Tool	One pointer tool to support learning about tool center points
9	Dice	Two 3D printed dice to support lab activities
10	Education Activity Tabletop	Plastic detachable platform to conduct lab exercises
11	Conveyor	To be integrated with training desk (optional)
12	FlexPendant	Handheld operator unit used to run programs, jog manipulator, and modify programs
13	Education desk	Mobile desk to put robot on and easily move around in classroom

Education Cell		
Machine dimensions (L x W x H)	1143 mm x 838,2 mm x 863,6 mm	
Weight	300 kg	
Connection data		
Electrical connection	110 V single-phase three-wire supply with a NEMA 5-15 plug	
Connected load	7,2 amp	
Electrical control voltage	24 VDC	

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Frequently Asked Questions (1/2)



1. Why should I choose ABB?

One of the world's leading robotics and machine automation suppliers, ABB Robotics has extensive experience in providing the products, support, and training needed to incorporate real-world robotics applications into learning programs. We work with schools, colleges, and universities in more than 40 countries to ensure students learn the fundamentals of robot programming and operation, enhancing their future employment prospects.

We believe building and sustaining strong relationships with educators and students is the foundation for success. We strive to provide the best experience which is one reason so many schools choose to partner with us.

2. What is in the package?

With the Robotics Education Package, you will receive:

- A truly collaborative education cell featuring our award-winning GoFa cobot
- Comprehensive education course materials developed in collaboration with teachers to help students easily learn industrial concepts
- A globally recognized STEM certification program that can be presented to future employers worldwide

We also give out free premium licenses of RobotStudio – our popular software for offline programming to help students get started with training in robotics. You don't need to own an ABB robot to use RobotStudio, so contact your local sales manager today!

3. How can my school buy the Education Package?

You can reach out to your local ABB Robotics sales representative who can guide you on the buying process. If you do not know whom to contact, get in touch with us by filling out <u>this</u> simple form.

4. I do not have much experience in robotics, how do I get started?

The Education Package has been designed to enable teachers and students from any educational background to get hands-on training in robotics. The package includes everything you need to set up training programs.



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Frequently Asked Questions (2/2)



5. What do students learn with the Education Package?

Starting from the basics such as types of robots and safety procedures, to real-world industrial applications including material handling and offline simulation, the Education Package enables students to receive hands-on training in robotics.

6. How does my school benefit from the Education Package?

Training students in real-life industrial applications can enhance their employment opportunities, thereby increasing the appeal of your school to prospective students.

7. What can students do with the STEM.Org global certification?

STEM.Org is an educational research and credentialing organization with affiliates in over 80 countries. As an accredited partner of STEM.Org, ABB Robotics can provide educators and students with globally recognized STEM certification, which can be presented at multiple educational institutions, governmental and non-governmental agencies globally. So, your certificate is valid even if the student relocates to a different country.

8. What training courses do you recommend I take to teach with the Education Package?

We have a great training team here to support you! The best courses to start with are Programming I and RobotStudio I. The bonus to taking these two courses is that it will get you one step closer to obtaining Globally Recognized STEM certification.

9. Where can I learn more about your offerings for education?

Check out our dedicated Robotics in Education microsite to learn more about our offerings Robotics in Education – Industries | ABB Robotics

10. I'm planning to order the Education Package, what should I do next?

We are excited to hear you are investing in this remarkable solution. We have created a <u>checklist</u> to help you get started.

11. How does ABB support students to enter the workforce?

ABB provides opportunities for internships, co-op programs, and career opportunities for students who nearing graduation or has graduated. To learn more about our job opportunities talk to your local sales manager or visit careers.abb/global.

