

## RobotStudio™

### Case Study: Fachhochschule Technikum Wien



With RobotStudio every student has the possibility to program the robot on their own PC.

Fachhochschule Technikum is the leading polytechnic university in Vienna capital and procures practical experiences and future orientated knowledge and methods on an academic level to their students.

#### Future programmers

In 1994 the first course was held at Fachhochschule Technikum in Vienna. Currently Technikum has ten technical courses and 1,400 students. At full capacity, Fachhochschule Technikum Wien will have about 2,000 students. It's a multicultural mix of students taking the Mechatronics/Robotics course in Vienna. Besides the Austrian students there are also students coming from Germany, Turkey, Ukraine and Bolivia.

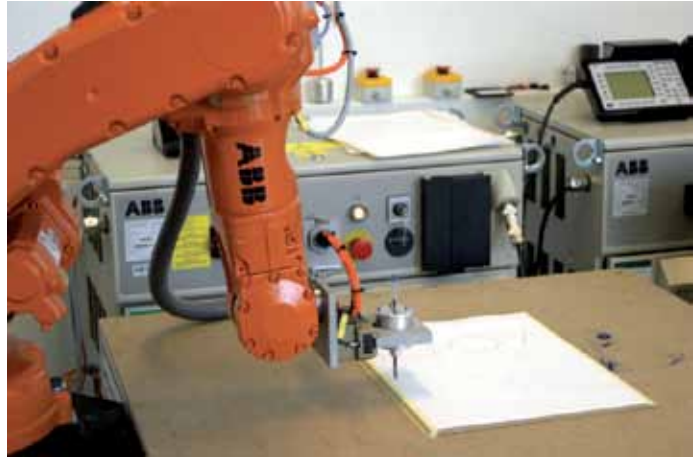
"Once the students have completed the course they are awarded the title of Certified Engineer FH and will have a future position as programmers, system attendants, or planners for entire systems", explains Viktorio Malisa, Chairman for the Division of Mechatronics/Robotics.

#### Only 2 robots for 48 students

Technikum has an IRB 140 and an IRB 2400 in their robotics laboratory, which means that there are two industrial robots for a group of 48 students. "I was aware from the beginning that we didn't have enough robots for such a large number of students. Most of the time the students didn't get to program the robot at all. I showed them how to program the robot on the teach pendant and then some of them could get the possibility to try it out. This was really a bottleneck and not an acceptable method. We needed to provide a better and more flexible way of robot training. To invest in offline programming was a necessity", says Viktorio Malisa.

## Teaching close to reality

Technikum chose RobotStudio because its an intuitive software with an easy-to-use interface and has a very good help function that orientates the students in a good way. "With RobotStudio we teach close to reality, that fits within the line of our University. Now each student has his own virtual robot, that is fantastic", says Viktorio Malisa. RobotStudio is learning by doing, nobody has to be afraid to test their programs. All mistakes can be made in RobotStudio without any harm. "The students really likes it, it's very motivating. We don't have any accidental break downs on the robots and the students don't have to wait for weeks to get to program a robot anymore", says Viktorio Malisa.



...downloading to the real robot

## Programming already during the first semester

"Offline programming in RobotStudio is simple. The students can quickly realize their own ideas and test different program versions. Programming with RobotStudio is a lot easier and faster than directly on the robot. We can only achieve the fact that all of our students are able to program a robot during the first semester because we are using RobotStudio, assures Viktorio Malisa."

## Well equipped students

"We will follow the development of RobotStudio and have our students equipped with the latest version of the software. It is important to me that the students always are working with state-of-the-art technology. To have the knowledge in the latest technology is really a plus when it comes to differentiation on the labor market. Our goal is that every student should be well equipped to meet the market demand," concludes Viktorio Malisa.

## ABB Robotics

[www.abb.com/roboticssoftware](http://www.abb.com/roboticssoftware)



Programming in RobotStudio...

## Planning of entire systems

It took Technikum about two weeks to develop the infrastructure in the robot laboratory and install RobotStudio. Then they immediately could begin with the exercises. "We use RobotStudio during the "Basics of Robotics" and "Robot Simulation" seminars for two hours per week. In upper semesters, we use RobotStudio for classes about planning of entire systems", says Viktorio Malisa and continues; "After taking a short introduction course the students are immediately able to build their own robot stations. I have found out that our students find the library of finished robot stations and elements especially important and useful."