

# TRAINING OPPORTUNITIES

CUSTOMER CENTER



 **STUDER**

The Art of Grinding.

A member of the UNITED GRINDING Group



## Training opportunities at Fritz Studer AG Steffisburg



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## Training opportunities at Fritz Studer AG Skills Center for Internal Grinding, Biel



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# Standard courses

Category	Article number	Duration	Page
Basic course cylindrical grinding			
Basic seminar: "The Art of Grinding."	60026244	4 Days	7
Operation and programming			
StuderWIN Basic external grinding	60023351	3½ Days	9
StuderWIN Basic internal grinding	60023356	3½ Days	10
StuderWIN Basic Universal (external and internal grinding)	60023355	4½ Days	11
StuderWIN Advanced external grinding	60023352	2 Days	13
StuderWIN Advanced external grinding with special grinding wheel shapes	60023353	3 Days	14
StuderWIN Advanced internal grinding	60023357	2 Days	15
StuderWIN Advanced internal grinding with special grinding wheel shapes	60023358	3 Days	16
Paket StuderWIN Universal external and internal grinding (basic and advanced with special grinding wheel shapes)	60023354	7½ Days	17
Package: StuderWIN internal grinding (basic and advanced with special grinding wheel shapes)	60023359	6½ Days	18
StuderWIN Expert "Programming"	60023360	1 Day	20
StuderWIN Expert "The Art of Grinding."	60023361	2 Days	21
StuderWIN Expert "Measuring"	60023362	1 Day	22
Retraining StuderWIN (external or internal grinding)	60023349	3½ Days	23
Retraining StuderWIN Universal	60023350	4 Days	24
Operation and programming: Release X, machine S100	60027614	3 Days	25
Operation and programming Studer WireDress®	60020221	3 Days	26

Category	Article number	Duration	Page
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## Maintenance and service

<b>Maintenance</b>	60022749	3 Days	27
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## Integrated Tools for StuderWIN

<b>StuderDress integrated</b>	60008130	½ Day	28
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<b>StuderContourBasic integrated</b>	60021948	1½ Days	29
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<b>StuderContourPro integrated</b>	60021949	1½ Days	30
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<b>StuderThread integrated (machines without A-axis)</b>	60008132	1½ Days	31
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<b>StuderThread integrated (machines with A-axis)</b>	60016342	2 Days	32
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<b>StuderForm integrated</b>	60008133	2 Days	33
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<b>StuderFormHSM integrated</b>	60008134	3 Days	34
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<b>StuderPunch integrated</b>	60008412	2 Days	35
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<b>CAD-Programm Vector</b>	60008138	1 Day	36
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## Customer-specific courses

Category	Article number	Duration	Page
Instruction & consulting			
Instruction and consulting at Fritz Studer AG Thun or Biel (only with topics in agreement with the instructor)	60017812	2 Days	38
Instruction and consulting at Fritz Studer AG Thun or Biel (only with topics in agreement with the instructor)	60017813	3 Days	39
Instruction and consulting at customer location	A9904291	by agreement	40

## StuderSIM basic courses (Biel)

### Operation and programming

Operation and programming StuderSIM basic course	60016639	4½ Days	42
Operation and programming StuderSIM radius/taper grinding	60016643	2 Days	43
Operation and programming StuderSIM „Vector“ CAD program	60016645	1 Day	44
Operation and programming StuderSIM contour grinding	60016640	1 Day	45
Operation and programming StuderSIM thread grinding	60016641	3 Days	46
Operation and programming StuderSIM StuderFORM to StuderSIM	60016642	2 Days	47
Operation and programming StuderSIM sphere grinding	60016644	2½ Days	48





# STANDARD COURSES

Standard courses > Basic courses in cylindrical grinding

ORDER NO.  
**60026244**

# Basic course

## "The Art of Grinding."

### Course description:

This basic seminar aims to get you started in the world of cylindrical grinding. You'll get to know and understand the individual abrasives as well as the complex interrelationships between the various dressing tools and the different ways of combining them.

See and understand all possible ways of clamping a workpiece during cylindrical grinding. Learn how to apply grinding parameters in a practical way and how to adjust them to achieve your desired grinding result more quickly.

The seminar also includes a lot of interesting information on the subject of cooling and lubricating as well as on the wide field of measuring ground workpieces.

### Target group and course prerequisites

- The course is designed for operators and setup technicians of cylindrical grinding machines.
- The course is the ideal way to start experiencing the "Art of Cylindrical Grinding" and is also ideal for those changing or new to the field of cylindrical grinding.

### Objectives

- Based on the course materials, participants will be able to identify and select grinding wheel types and their area of application.
- They will know different dressing tools and what they are used for.
- They will be able to carry out simple grinding calculations and use them to positively influence the grinding result.
- They will know how to monitor and maintain the cooling lubricant.
- They will be able to select clamping methods according to requirements.

### Course contents

- Clamping options for workpieces during cylindrical grinding.
- Grinding wheel design, abrasives, clamping, balancing.
- Stationary and rotating dressing tools.
- Grinding calculations, grinding errors, and causes, influencing different parameters.
- Coolant supply. Maintaining the cooling lubricant.
- Measuring, measuring equipment, shape and position tolerances, surface quality.

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to 6 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 4 days

### Included in the price

- Course documents
- 4 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs

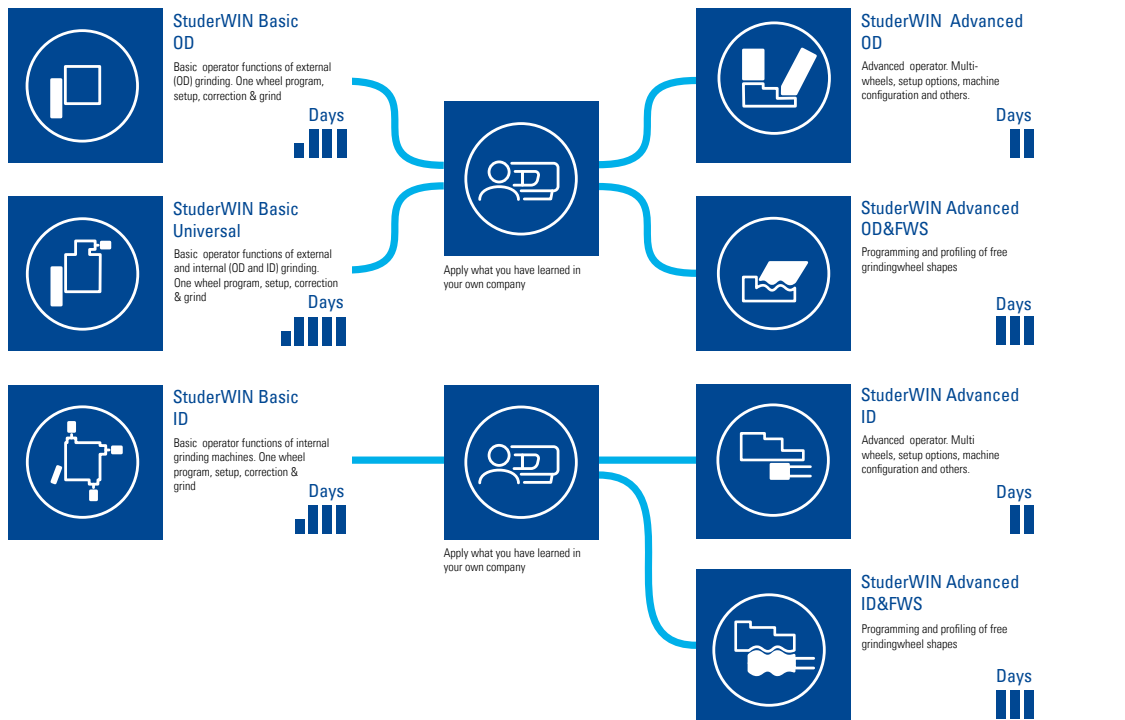
# Overview StuderWin Trainings

## BASIC

Operators with no experience on STUDER grinding machines

## ADVANCED

Only for operators who have attended a StuderWIN Basic training

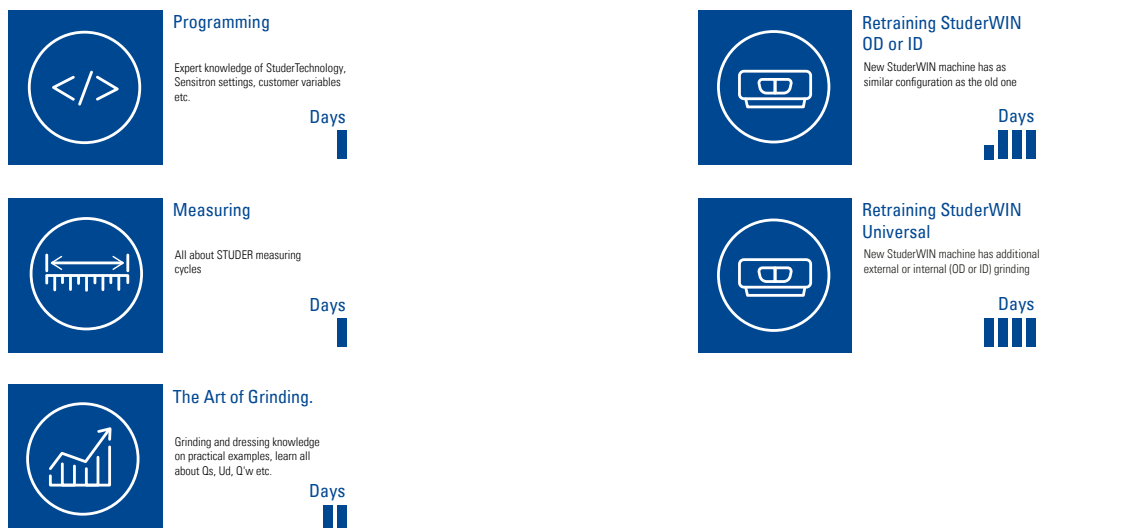


## EXPERT

Various target groups like operators, programmers and all other grinding experts

## RETRAINING

For Experienced STUDER Machine Operators





Standard courses &gt; Operation and programming

ORDER NO.  
**60023351**

# Operation and programming StuderWIN Basic

## External grinding

### Course description

In the StuderWIN Basic External Grinding course, you will learn to use the basic functions of your newly acquired STUDER cylindrical grinding machine correctly. Our experienced instructors will guide you step-by-step through its operation and programming, using a variety of teaching methods. Learn how to program simple round parts in a quiet and professional environment, first as an exercise on a computer and then on a STUDER cylindrical grinding machine in our Customer Center. Work with the rest of the group to set up the machine for cylindrical grinding between centres, while benefiting from valuable tips from our grinding experts. The group's programming and setup work culminates in the practical grinding of a workpiece, with all the necessary basic correction and reworking functions of the STUDER cylindrical grinding machine, including additional knowledge from "The Art of Grinding."

### Target group and course prerequisites

- The course is aimed at operators of STUDER cylindrical grinding machines.
- The course participants must have basic technical training.
- Basic computer skills are essential, and CNC skills are very beneficial.
- The participant must already have basic knowledge in cylindrical grinding. This can be acquired in our "Cylindrical Grinding basic" course.

### Objectives

- Using the course documentation, the participant can create simple workpiece projects and set up the machine accordingly.
- With the help of the course documentation, the participant can apply workpiece corrections correctly in order to grind parts within the specified tolerances.
- The participant can create grinding programs with the help of the course documentation and the support of StuderTechnology, and knows the methods of applying them safely.

### Course contents

- Programming simple workpiece programs on the computer and machine
- Drawing and importing workpiece files
- Programming with StuderTechnology Integrated
- Mounting an external grinding wheel and the machine centres to clamp the workpiece between centres
- Setting up the machine (with QuickSet, if available) with an external grinding wheel and a dressing tool
- Learning ways of safely applying grinding programs
- Basic corrections (partial workpiece corrections and grinding wheel corrections)
- Grinding a workpiece with an external grinding wheel
- Length positioning (if available) and workpiece changeovers
- Assisted manual operation
- Saving programs

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 3½ Days

### Included in the price

- Course documents
- 3 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs

Standard courses > Operation and programming

ORDER NO.  
**60023356**

# Operation and programming StuderWIN Basic

## Internal grinding

### Course description

In the StuderWIN Basic Internal Grinding course, you will learn the correct use of the basic functions of your newly acquired STUDER machine for internal cylindrical grinding. Our experienced instructors will guide you step-by-step through its operation and programming, using a variety of teaching methods. Learn how to program simple round parts in a quiet and professional environment, first as an exercise on a computer and then on a STUDER machine for internal cylindrical grinding in our Customer Center. Work with the rest of the group to set up the machine for internal cylindrical grinding in chucks, while benefiting from valuable tips from our grinding experts. The group's programming and setup work culminates in the practical grinding of a workpiece, with all the necessary basic correction and reworking functions of the STUDER machine for internal cylindrical grinding, including additional knowledge from "The Art of Grinding."

### Target group and course prerequisites

- The course is aimed at operators of STUDER machines for internal cylindrical grinding.
- The course participants must have basic technical training.
- Basic computer skills are essential, and CNC skills are very beneficial.
- The participant must already have basic knowledge in cylindrical grinding. This can be acquired in our Cylindrical Grinding basic course.

### Objectives

- Using the course documentation, the participant can create simple workpiece projects and set up the machine accordingly.
- With the help of the course documentation, the participant is able to apply workpiece corrections correctly in order to grind parts within the specified tolerances.
- The participant can create grinding programs with the help of the course documentation and the support of StuderTechnology, and knows the methods of applying them safely.

### Course contents

- Programming simple workpiece programs on the computer and machine
- Drawing and importing workpiece files
- Programming with StuderTechnology Integrated
- Mounting internal grinding wheels and the three-jaw chuck to clamp the workpiece
- Setting up the machine (with QuickSet, if available) with internal grinding wheels and a dressing tool
- Learning ways of safely applying grinding programs
- Basic corrections (partial workpiece corrections and grinding wheel corrections)
- Grinding a workpiece with an internal grinding wheel
- Length positioning (if available) and workpiece changeovers
- Assisted manual operation
- Saving programs

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 3½ Days

### Included in the price

- Course documents
- 3 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs

Standard courses &gt; Operation and programming

ORDER NO.  
**60023355**

# Operation and programming StuderWIN Basic

## Universal external and internal grinding

### Course description

In the StuderWIN Basic Universal (External and Internal Grinding) course, you will learn to use the basic functions of your newly acquired STUDER cylindrical grinding machine correctly. Our experienced instructors will guide you step-by-step through its operation and programming, using a variety of teaching methods. Learn how to program simple round parts in a quiet and professional environment, first as an exercise on a computer and then on a STUDER cylindrical grinding machine in our Customer Center.

Work with the rest of the group to set up the machine for cylindrical grinding between centres and in the three-jaw chuck. In doing so, benefit from valuable tips from our grinding experts. The group's programming and setup work culminates in the practical grinding of a workpiece, with all the necessary basic correction and reworking functions of the STUDER cylindrical grinding machine, including additional knowledge from "The Art of Grinding."

### Target group and course prerequisites

- The course is aimed at operators of STUDER cylindrical grinding machines.
- The course participants should have basic technical training.
- Basic computer skills are essential, and CNC skills are very beneficial.
- The participant must already have basic knowledge in cylindrical grinding. This can be acquired in our "The Art of Grinding" basic course.

### Objectives

- Using the course documentation, the participant can create simple workpiece projects and set up the machine accordingly.
- With the help of the course documentation, the participant is able to correctly apply workpiece corrections in order to grind parts within specified tolerances.
- The participant can create grinding programs with the help of the course documentation and the support of StuderTechnology, and knows the methods of applying them safely.

### Course contents

- Programming simple workpiece programs on the computer and machine
- Drawing and importing workpiece files
- Programming with StuderTechnology Integrated
- Mounting an external grinding wheel and the machine centres to clamp the workpiece between centres
- Setting up the machine (with QuickSet, if available) with an external grinding wheel and a dressing tool
- Learning ways of safely applying grinding programs
- Basic corrections (partial workpiece corrections and grinding wheel corrections)
- grinding a workpiece with an external wheel
- Length positioning (if available) and workpiece changeovers
- Assisted manual operation
- Saving programs
- Programming, setting up, and grinding a workpiece with an internal grinding wheel

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 4½ Days

### Included in the price

- Course documents
- 4 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs





Standard courses &gt; Operation and programming

ORDER NO.  
**60023352**

# Operation and programming StuderWIN Advanced

## External grinding

### Course description

In the StuderWIN Advanced External Grinding course, you will expand on your knowledge gained in the StuderWIN Basic course and your practical experience on your STUDER cylindrical grinding machine. Share ideas with other participants during group programming and set-up work. Tell our instructors and the other course participants about your experiences and get valuable practical tips.

Learn more about additional settings and other things that your STUDER cylindrical grinding machine can do. Learn to retool more quickly, thus further increasing the productivity of your machine.

### Target group and course prerequisites

- The course is aimed at operators of STUDER cylindrical grinding machines who have attended the StuderWIN Basic External Grinding or Universal courses within the past 24 months.

### Objectives

- Using the course documentation, the participant can create workpiece projects and set up the machine with multiple tools accordingly.
- With the help of the course documentation, the participant is able to apply workpiece corrections correctly in order to grind parts within the specified tolerances.
- The participant can create grinding programs with the help of the course documentation and the support of StuderTechnology, and knows the methods of applying them safely.
- The participant knows about additional correction possibilities and other machine settings, to help them use the STUDER cylindrical grinding machine more efficiently and tailored to their needs.

### Course contents

- Programming workpiece programs with multiple grinding tools on the machine
- Discussion and troubleshooting when setting up
- Settings and optimization of Sensitron
- Various options for reworking workpieces
- Various machine and PCU settings
- More efficient workpiece changes with QuickSet
- More efficient procedures for grinding wheel changes
- Reprofile standard grinding wheel shapes without StuderDress Integrated
- Grinding cycle InOne Grind CG0001
- Radius grinding cycle G9213

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 2 Days

### Included in the price

- Course documents
- 2 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs

Standard courses &gt; Operation and programming

ORDER NO.  
**60023353**

# Operation and programming StuderWIN Advanced

## External grinding with special grinding wheel shapes

### Course description

Like course StuderWIN Advanced external grinding. In the supplementary course "Special Grinding Wheel Shape", which continues directly after the StuderWIN Advanced External Grinding course, you will learn the capabilities of free-programming special grinding wheel shapes. Through practical exercises on a STUDER cylindrical grinding machine, you will discover the various programming options for special grinding wheel shapes. Would you like to dress complex profiles on your grinding wheels? Would you like to grind multiple diameters with a single grinding wheel in a single operation? If so, then you're in the right place.

### Target group and course prerequisites

- The course is aimed at operators of STUDER cylindrical grinding machines who have attended the StuderWIN Basic External Grinding or Universal courses within the past 24 months.

### Objectives

- Using the course documentation, the participant can create workpiece projects and set up the machine with multiple tools accordingly.
- With the help of the course documentation, the participant is able to apply workpiece corrections correctly in order to grind parts within the specified tolerances.
- The participant can create grinding programs with the help of the course documentation and the support of StuderTechnology, and knows the methods of applying them safely.
- The participant knows about additional correction possibilities and other machine settings, to help them use the STUDER cylindrical grinding machine more efficiently and tailored to their needs.
- Using the course documentation, the participant is able to independently program special grinding wheel shapes for external grinding wheels and to apply them in practice.

### Course contents

- Programming workpiece programs with multiple grinding tools on the machine
- Discussion and troubleshooting when setting up
- Settings and optimisation of Sensitron
- Various options for reworking workpieces
- Various machine and PCU settings
- More efficient workpiece changeovers with QuickSet
- More efficient procedures for grinding wheel changes

- Reprofile standard grinding wheel shapes without StuderDress Integrated
- Grinding cycle InOne Grind CG0001
- Radius grinding cycle G9213
- Special grinding wheel shapes with "workpiece imprint"
- Use of the "finisher"
- Drawing a special external grinding wheel shape in StuderWIN
- Discussion of the options for direct ISO programming and import of a grinding wheel profile as .dxf
- Ways of setting T points
- Practical example of profiling an external grinding wheel and grinding a workpiece
- To make profiling as efficient as possible, use of the StuderDress Integrated add-on software is recommended. The operator course for StuderDress Integrated takes place directly after the course StuderWIN Advanced with "Special Grinding Wheel Shape".

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 3 Days

### Included in the price

- Course documents
- 3 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs

Standard courses &gt; Operation and programming

ORDER NO.  
**60023357**

# Operation and programming StuderWIN Advanced

## Internal grinding

### Course description

In the StuderWIN Advanced Internal Grinding course, you will expand on the knowledge gained in the StuderWIN Basic Internal Grinding course and your practical experience on your STUDER machine for internal cylindrical grinding. Share ideas with other participants during group programming and setup work. Tell our instructors and the other course participants about your experiences and get valuable practical tips. Learn more about additional settings and other things that your STUDER machine for internal cylindrical grinding can do. Learn to retool more quickly, thus further increasing the productivity of your machine.

### Target group and course prerequisites

- The course is aimed at operators of STUDER machines for internal cylindrical grinding who have attended the StuderWIN Basic Internal Grinding course within the past 24 months.

### Objectives

- Using the course documentation, the participant can create workpiece projects and set up the machine accordingly with multiple tools
- With the help of the course documentation, the participant is able to apply workpiece corrections correctly in order to grind parts within the specified tolerances
- The participant can create grinding programs with the help of the course documentation and the support of StuderTechnology, and knows the methods of applying them safely.
- The participant knows about additional correction possibilities and other machine settings, to help them use the STUDER internal cylindrical grinding machine more efficiently and tailored to their needs.

### Course contents

- Programming workpiece programs with multiple grinding tools on the machine
- Discussion and troubleshooting when setting up
- Settings and optimization of Sensitron
- Various options for reworking workpieces
- Various machine and PCU settings
- More efficient workpiece changeovers with QuickSet
- Grinding arbour changes
- Reprofile standard grinding wheel shapes without StuderDress Integrated
- Angular internal grinding wheels
- Grinding cycle InOne Grind CG0001
- Radius grinding cycle G9213

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 2 Days

### Included in the price

- Course documents
- 2 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs

Standard courses &gt; Operation and programming

ORDER NO.  
**60023358**

# Operation and programming StuderWIN Advanced

## Internal grinding with special grinding wheel shapes

### Course description

Like course StuderWIN Advanced internal grinding. In the supplementary course "Special Grinding Wheel Shape", which continues directly after the StuderWIN Advanced External Grinding course, you will learn the capabilities of free-programming special grinding wheel shapes. Through practical exercises on a STUDER internal grinding machine, you will discover the various programming options for special grinding wheel shapes. Would you like to dress complex profiles on your grinding wheels? Would you like to grind multiple diameters with a single grinding wheel in a single operation? If so, then you're in the right place.

### Target group and course prerequisites

- The course is aimed at operators of STUDER machines for internal cylindrical grinding who have attended the StuderWIN Basic Internal Grinding course within the past 24 months.

### Objectives

- Using the course documentation, the participant can create workpiece projects and set up the machine with multiple tools accordingly.
- With the help of the course documentation, the participant is able to apply workpiece corrections correctly in order to grind parts within specified tolerances
- The participant can create grinding programs with the help of the course documentation and the support of StuderTechnology, and knows the methods of applying them safely
- The participant knows about additional correction possibilities and other machine settings, to help them use the STUDER machine for internal cylindrical grinding more efficiently and tailored to their needs.
- Using the course documentation, the participant is able to independently program special grinding wheel shapes for internal grinding wheels and to apply them in practice.

### Course contents

- Programming workpiece programs with multiple grinding tools on the machine
- Discussion and troubleshooting when setting up
- Settings and optimisation of Sensitron
- Various options for reworking workpieces
- Various machine and PCU settings
- More efficient workpiece changes with QuickSet

- Grinding arbour changes
- Reprofile standard grinding wheel shapes without StuderDress Integrated
- Grinding cycle InOne Grind CG0001
- Radius grinding cycle G9213
- Angular internal grinding wheels
- Special grinding wheel shape with "workpiece imprint"
- Use of the "finisher"
- Drawing a special internal grinding wheel shape in StuderWIN
- Discussion of the options for direct ISO programming and import of a grinding wheel profile as .dxf
- Ways of setting T points
- Practical example of profiling an internal grinding wheel and grinding a workpiece
- To make profiling as efficient as possible, use of the StuderDress Integrated add-on software is recommended. The operator course for StuderDress Integrated takes place directly after the course StuderWIN Advanced with Special Grinding Wheel Shape.

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 3 Days

### Included in the price

- Course documents
- 3 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs



Standard courses &gt; Operation and programming

ORDER NO.  
**60023354**

# Operation and programming StuderWIN Universal Package

External and Internal grinding (basic and advanced  
with special grinding wheel shapes)

## Course description

For a reduced package price, you receive the courses 60023355 StuderWIN Basic Universal and 60023353 StuderWIN Advanced External Grinding with Special Grinding Wheel Shape

## Target group, course prerequisites, objectives and course contents

- See courses 60023355 and 60023353

## Languages (by agreement)

- German, English, French, Italian

## Number of participants

- 2 to max. 4 persons

## Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

## Course duration

- 7½ Days

## Included in the price

- Course documents
- 7 lunch

## Price

- According to pricelist, per person, excluding travel and accommodation costs

Standard courses > Operation and programming

ORDER NO.  
**60023359**

# Operation and programming StuderWIN Package

## Internal grinding (basic and advanced with special grinding wheel shapes)

### Course description

For a reduced package price, you receive the courses 60023356 StuderWIN Basic Internal Grinding and 60023358 StuderWIN Advanced Internal Grinding with Special Grinding Wheel Shape

### Target group, course prerequisites, objectives and course contents

- See courses 60023356 and 60023358

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 6½ Days

### Included in the price

- Course documents
- 6 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs



Standard courses > Operation and programming

ORDER NO.  
**60023360**

# Operation and programming StuderWIN Expert

## Programming

### Course description

In the StuderWIN Expert "Programming" course, you will gain expert programming skills. Immerse yourself in the world of grinding parameters and get the best out of your programs. Find out all about production specifications, technological programming, and other useful features in the programming of your STUDER cylindrical grinding machine.

Learn more useful functions of STUDER GeolImport and enter into the world of ISO programming in StuderWIN with variables, which you can use to make your programs even more versatile. Round out your expert knowledge by enriching your experience with practical examples in the following course StuderWIN Expert "The Art of Grinding."

### Target group and course prerequisites

- The course is aimed at operators of STUDER universal cylindrical grinding machines who have already worked on a STUDER cylindrical grinding machine with at least Rel. F35 for several months or years. Participants must have good to very good programming skills.

### Objectives

- The participant gains valuable expert knowledge and is consequently capable of analyzing grinding programs and systematically improving them.
- With the aid of the course documentation, the participant can modify production specifications for specific purposes and save them.
- The participant knows formulas for grinding data calculations and can apply them as needed.

### Course contents

- Creating production specifications in StuderTechnology Integrated
- Using and discussing the technological view
- Analysis of programs, incorporating technical grinding formulas
- Expert view of grinding cycles and additional cycles
- Working with GeolImport (enlarging and reducing, zero offset)
- Discussing custom variables and creating simple programs with variables

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 1 Day

### Included in the price

- Course documents
- 1 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs



Standard courses &gt; Operation and programming

ORDER NO.  
**60023361**

# Operation and programming StuderWIN Expert

## "The Art of Grinding."

### Course description

Why can't I achieve the specified surface quality? What can I do to improve the roundness of my workpiece? Why can't I achieve the required cylindricity? These are all questions from a grinder's day-to-day work that are discussed and answered in this course, StuderWIN Expert "The Art of Grinding." This is the course for all those who want to take a look behind the scenes. Become a grinding expert and develop a better understanding of how all the different factors interact. Learn to see the big picture: in grinding, there are dozens of variables that need to be specifically controlled in order to steer the grinding result in the desired direction. The first day is all about dressing. Whether stationary or rotating, there's something for everyone. Discover the purposes and capabilities of the various different dressing tools. Take part in a practical group workshop where you will see first hand how rotating dressing can be used to selectively influence the workpiece surface quality and the grinding wheel topography. Learn about the different dressing tools and understand what they are all for. The second day is all about grinding parameters. Qs, Q'w, qd, Ud, ... are they all new to you? Then it's high time you experienced these dry formulas live in action on a STUDER cylindrical grinding machine. We selectively influence the various controlled variables and watch their astonishing effects on the grinding result.

### Target group and course prerequisites

- The course is aimed at operators of STUDER universal cylindrical grinding machines who have already worked on a STUDER cylindrical grinding machine with at least Rel. F35 for several months or years. Participants must have good to very good programming skills.
- We recommend first attending the StuderWIN Expert Programming course.

### Objectives

- The course is aimed at operators of STUDER universal cylindrical grinding machines who have already worked on a STUDER cylindrical grinding machine with at least Rel. F35 for several months or years. Participants must have good to very good programming skills.
- We recommend first attending the StuderWIN Expert Programming course.

### Course contents

- The use and capabilities of dressing tools
- Calculating dressing parameters
- Working in a group to set up the machine with various stationary dressing tools and a rotating dressing tool
- Live demonstration of various dressing parameters with stationary and rotating dressing tools
- Discussing and working with the technological view in StuderWIN
- Selectively influencing grinding parameters to modify workpiece qualities, in particular Ud and Qs
- What is the effect of modifying the coolant amount?

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 2 Days

### Included in the price

- Course documents
- 2 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs

Standard courses > Operation and programming

ORDER NO.  
**60023362**

# Operation and programming StuderWIN Expert

## Measuring

### Course description

In the StuderWIN Expert "Measuring" course, you will gain expert knowledge in supplementary measurement with the STUDER control cycles. Find out how to make your STUDER cylindrical grinding machine even more versatile, by using TouchControl to perform simple measuring tasks directly after or during the grinding process. Our experienced and practical grinding engineers will introduce you to the basic technical requirements for measuring on STUDER cylindrical grinding machines. Work in a group to develop control strategies that are made possible by the STUDER control cycles. Practical exercises on a machine in the Customer Center help to consolidate and understand what has been learned.

### Target group and course prerequisites

- The course is aimed at operators of STUDER universal cylindrical grinding machines who have already worked on a STUDER cylindrical grinding machine with at least Rel. F35 for several months or years. Participants must have good to very good programming skills.
- The STUDER cylindrical grinding machine must be equipped with the STUDER TouchControl control cycles and the horizontal length positioning probe with mechanical end-stop.

### Objectives

- The participant can use the course documentation to create measuring programs for the measuring of diameters, tapers, and lengths, and can generate measurement logs from them.
- The participant is familiar with the measuring limitations on a machine and can interpret measurement results correctly.

### Course contents

- Discussing mechanical limits
- Measuring the centre height of the measuring probe
- Creating a program for in-process or post-process measurement
- Logging options
- Creating a program for grinding / measuring / regrinding as a loop

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 1 Day

### Included in the price

- Course documents
- 1 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs

Standard courses &gt; Operation and programming

ORDER NO.  
**60023349**

# Operation and programming StuderWIN Retraining

## (External oder internal grinding)

### Course description

In the Retraining StuderWIN course, you will learn about all the differences in operation between your old STUDER CNC cylindrical grinding machine with Rel. B, C, D, or E and your newly acquired machine with StuderWIN user interface. Explore all the new features and differences in the theoretical and practical exercises on the computer and on training machines. Our instructors will carefully guide you through the compact, intensive course and will prepare you for your new acquisition.

- \*Reprofiling standard grinding wheel shapes
- \*Special grinding wheel shapes with "workpiece imprint"
- \*Use of the "finisher"
- \*Drawing a special internal grinding wheel shape in StuderWIN
- \*Ways of setting T points

Content marked with \* depends on the customer's needs and is at the discretion of the instructor under the given course requirements. The instructor is not obliged to provide this content.

### Target group and course prerequisites

- The course is aimed at experienced operators of STUDER cylindrical grinding machines who already have several years of experience on machines with Release B, C, D, or E.
- The participant can confidently create workpiece programs with the STUDER grinding cycles, and setting up the machine poses no difficulty.

### Objectives

- Using the course documentation, the participant can create workpiece projects and set up the machine accordingly with multiple tools.
- With the help of the course documentation, the participant is able to apply workpiece corrections correctly in order to grind parts within the specified tolerances.
- The participant can create grinding programs with the help of the course documentation and the support of StuderTechnology, and knows the methods of applying them safely.

### Course contents

- Programming workpiece programs on a computer and on the machine
- Drawing and importing workpieces
- Programming with StuderTechnology Integrated
- Setting up the machine
- Discussion and troubleshooting when setting up
- Learning ways of safely applying grinding programs
- Corrections and reworking functions
- Length positioning and workpiece changeovers
- Saving programs
- \*Assisted manual operation
- \*Settings for Sensitron
- \*Various machine and PCU settings

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 3½ Days

### Included in the price

- Course documents
- 3 lunch

### Price

- According to pricelist, per person, excluding travel and accomodation costs

Standard courses > Operation and programming

ORDER NO.  
**60023350**

# Operation and programming StuderWIN Retraining

## Universal

### Course description

In the Retraining StuderWIN Universal course, you will learn about all the differences in operation between your old STUDER CNC cylindrical grinding machine with Rel. B, C, D, or E and your newly acquired machine with StuderWIN user interface. Explore all the new features and differences in the theoretical and practical exercises on the computer and on training machines. Also, learn the essentials of internal grinding. Our instructors will carefully guide you through the compact, intensive course and will prepare you for your new acquisition.

### Target group and course prerequisites

- The course is aimed at experienced operators of STUDER cylindrical grinding machines who already have several years of experience on machines with Release B, C, D, or E.
- The participant can confidently create workpiece programs with the STUDER grinding cycles, and setting up the machine poses no difficulty.

### Objectives

- Using the course documentation, the participant can create workpiece projects and set up the machine accordingly with multiple tools.
- With the help of the course documentation, the participant is able to apply workpiece corrections correctly in order to grind parts within the specified tolerances.
- The participant can create grinding programs with the help of the course documentation and the support of StuderTechnology, and knows the methods of applying them safely.

### Course contents

- Programming workpiece programs on a computer and on the machine
- Drawing and importing workpieces
- Programming with StuderTechnology Integrated
- Setting up the machine
- Discussion and troubleshooting when setting up
- Learning ways of safely applying grinding programs
- Corrections and reworking functions
- Length positioning and workpiece changeovers
- Saving programs
- \*Assisted manual operation
- \*Settings for Sensitron

- \*Various machine and PCU settings
- \*Reprofiling standard grinding wheel shapes
- \*Special grinding wheel shapes with "workpiece imprint"
- \*Use of the "finisher"
- \*Drawing a special internal grinding wheel shape in StuderWIN
- \*Ways of setting T points

Content marked with \* depends on the customer's needs and is at the discretion of the instructor under the given course requirements. The instructor is not obliged to provide this content."

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 4 Days

### Included in the price

- Course documents
- 4 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs



Standard courses &gt; Operation and programming

ORDER NO.  
**60027614**

# Operation and programming: Release X, machine S100

## Internal grinding

### Course description

In this course you will learn the correct use of the basic functions of your newly acquired S100 internal grinding machine. Our experienced instructors will guide you step-by-step through operation and programming of the machine. Learn how to program simple round parts on a STUDER S100 cylindrical grinding machine in the quiet and professional environment of the Customer Center. Work with the rest of the group to set up the machine for cylindrical grinding in three-jaw chucks, while benefiting from valuable tips from our grinding experts. The group's programming and setup work culminates in the practical grinding of a workpiece, with all the necessary basic correction and reworking functions. Other topics such as the Marposs P1d contact detection system and assisted manual mode complete the course, ensuring that operators are ideally equipped for future grinding tasks on the S100 cylindrical grinding machine.

### Target group

- The course is aimed at operators of a STUDER S100 cylindrical grinding machine.

### Requirements

- Course participants have completed basic technical training.
- CNC skills are very beneficial.
- The participants already have basic knowledge in cylindrical grinding. This can be acquired in the "Basic Seminar: The Art of Grinding".

### Objectives

- With the aid of the course documentation, the participant will be able to program simple workpieces and set up the machine accordingly.
- With the aid of the course documentation, they are able to apply workpiece corrections correctly in order to grind parts within the specified tolerances.

### Course contents

- Familiarization with the control and operating elements
- Programming simple workpiece programs on the machine
- Setting up the machine (with QuickSet if available)
- Correction and regrinding options
- Arbor change
- Assisted manual mode
- Marposs P1d contact detection
- Saving programs

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 3 days

### Included in the price

- Course documents
- 3 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs

Standard courses > Operation and programming

ORDER NO.  
**60020221**

# Operation and programming STUDER WireDress®

## Target group

- Experienced operators and programmers of STUDER CNC cylindrical grinding machines with StuderWIN

## Requirements

- All participants should already have experience with a STUDER cylindrical grinding machine with StuderWIN
- Safe programming with pictogramming
- Safe setup and changeover

## Objectives

- Participants will acquire a solid basic knowledge of using STUDER WireDress®. Upon completion of the course, they will be able to independently create grinding wheel contour programs and reprofiling programs

## Course contents

- Instruction in the Co2 fire-extinguishing system
- Operation of StuderDress integrated
- Mechanical handling of WireDress®
- Programming and technology parameters in WireDress®
- Accessories and wear parts
- Setup
- Profiling the grinding wheel

## Note

- If the required contours cannot be produced with GeolImport and Contour Editor, they must be drawn using a CAD system (e.g. Vector) and imported as a dxf file

## Languages (by agreement)

- German, English, French, Italian

## Number of participants

- 2 to max. 4 persons

## Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

## Course duration

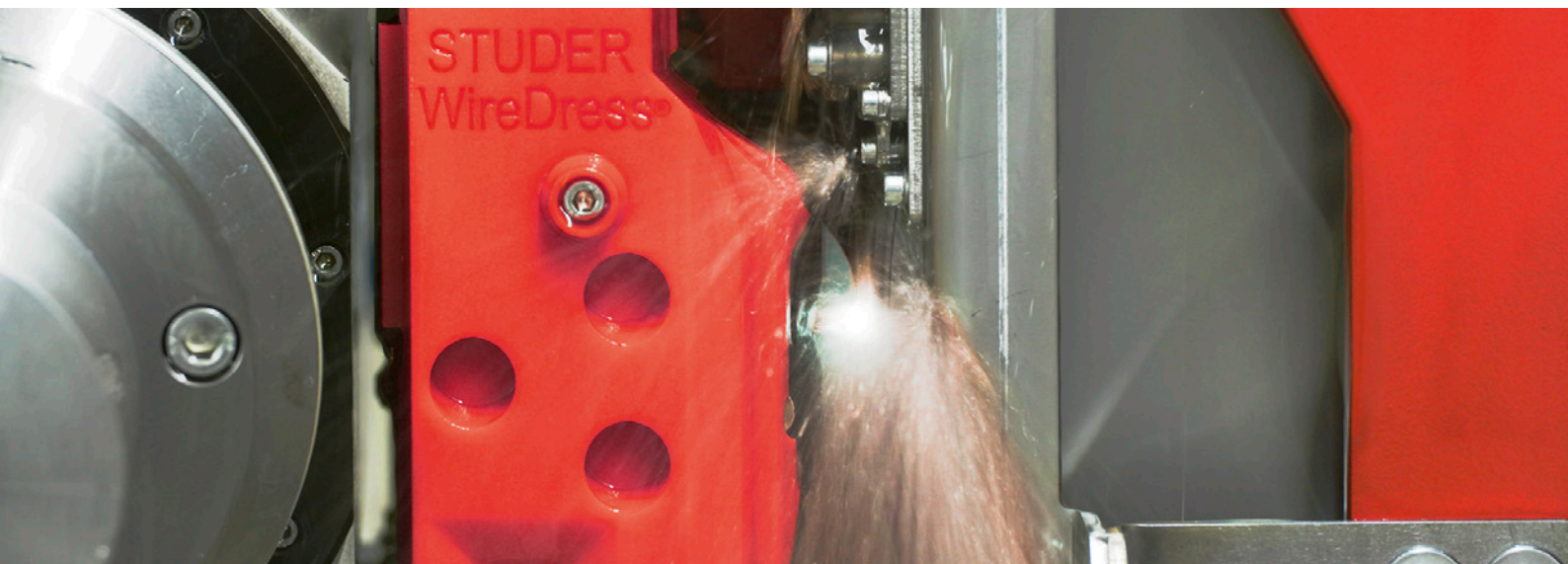
- 3 days

## Included in the price

- Course documents
- 3 lunch

## Price

- According to pricelist, per person, excluding travel and accomodation costs



Standard courses &gt; Maintenance and service

ORDER NO.  
**60022749**

# Maintenance

## Mechanical and electrical

### Target group

- Maintenance technicians/machine operators

### Objectives

- Carry out care and preventive maintenance measures
- Structure of workhead, tailstock, and wheelhead
- Mechanical and electrical layout of the machine
- Ability to reference the main axes
- Back up and restore data (PC)
- Secure, no-loss handling of machine data
- Isolate and correct errors using the integrated diagnostic tools

### Course contents:

- Working with the machine documentation: user's manual and machine diagrams
- Briefing on safety and transport (based on DIN EN 13306 and DIN 31051)
- Instruction in basic maintenance measures and general machine functions
- Mechanical and electrical layout of the machine and its modules
- Checking the condition of the oil and filters; checking the battery function
- Training in the diagnostic options for remote access and within the control system (Digital Solutions, Team Viewer, StuderWIN, Fanuc, OPC-UA)
- Creating a data backup
- Referencing the main axes

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 3 days

### Included in the price

- Course documents
- 3 lunch

### Price

- According to pricelist, per person, excluding travel and accommodation costs





Standard courses > Integrated Tools for StuderWIN

ORDER NO.  
**60008130**

# Operation and programming

## StuderDress integrated

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with Fanuc control system and StuderWIN operator interface

### Requirements

- StuderWIN Advanced course must have been completed beforehand
- All participants must already have operating and programming knowledge of STUDER CNC cylindrical grinding machines

### Objectives

- Participants will acquire a solid basic knowledge of StuderDress integrated. At the end of the course, they are able to autonomously create reprofiling programs

### Course contents

- Operation of StuderDress integrated
- Subroutine import and creation in StuderWIN, dxf import and wheel shape
- Development of examples

### Note

- StuderDress integrated can only be used to reprofile a grinding wheel. Creating and defining the grinding wheel shape is done with StuderWIN. No free profiles can be created; they must previously be produced with StuderWIN and its Contour Editor

### Languages (by agreement)

- German, English, French, Italian

### Number of participants

- 2 to max. 4 persons

### Course location

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- ½ day

### Included in the price

- Course documents

### Price

- According to pricelist, per person, excluding travel and accommodation costs





Standard courses &gt; Integrated Tools for StuderWIN

ORDER NO.  
**60021948**

# Operation and programming

## StuderContourBasic integrated

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with Fanuc control system and StuderWIN interface

### Requirements

- Knowledge of the StuderWIN interface
- All participants must have operating and programming knowledge of a STUDER CNC cylindrical grinding machine

### Objectives

- Participants acquire solid basic knowledge in operating StuderContourBasic integrated. At the end of the course, they are able to create a workpiece contour program on their own

### Course contents

- Operation of StuderContourBasic integrated
- Basics of contour grinding
- StuderGeoImport integrated
- Creating theoretical and practical examples of external and/or internal grinding, with actual grinding
- Corrections and their possibilities

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

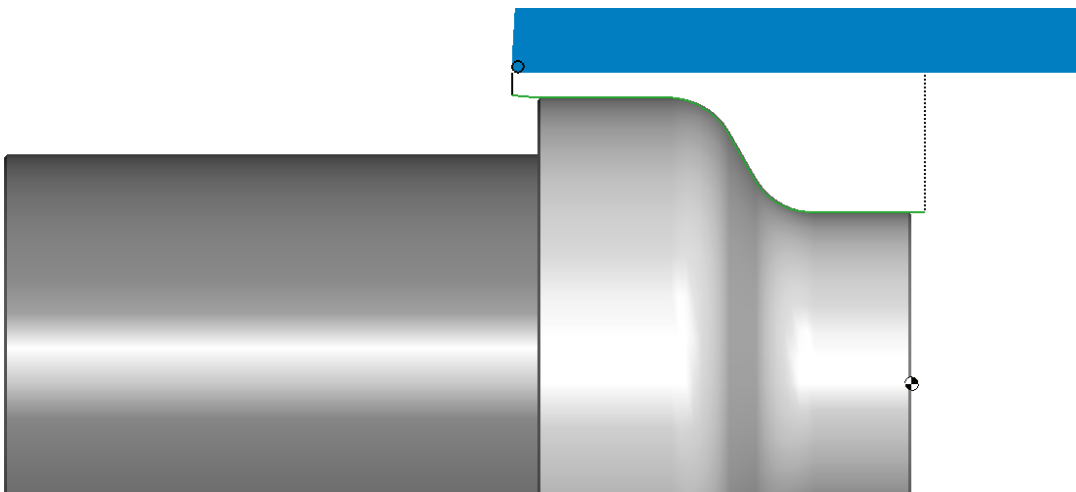
- 1½ days

### Services

- Course documentation
- 1 lunch

### Price

- according to price list, per person, without travel and accommodation costs



Standard courses > Integrated tools for StuderWIN

ORDER NO.  
**60021949**

# Operation and programming

## StuderContourPro integrated

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with Fanuc control system and StuderWIN interface

### Requirements

- Knowledge of the StuderWIN interface
- All participants must have operating and programming knowledge of a STUDER CNC cylindrical grinding machine

### Objectives

- Participants acquire solid basic knowledge in operating Studer ContourPro Integrated. At the end of the course, they are able to create a workpiece contour program on their own

### Course contents

- Operation of StuderContourPro integrated
- Basics of peel and contour grinding
- Basics of high speed grinding
- StuderGeoImport integrated
- Creating theoretical and practical examples of external grinding, with actual grinding
- Corrections and their possibilities

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 1½ days

### Services

- Course documentation
- 1 lunch

### Price

- according to price list, per person, without travel and accommodation costs



Standard courses &gt; Integrated tools for StuderWIN

ORDER NO.  
**60008132**

# Operation and programming

## StuderThread integrated (machines without A axis)

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with Fanuc control system and StuderWIN interface

### Requirements

- Knowledge of the StuderWIN interface
- All participants must have operating and programming knowledge of a STUDER CNC cylindrical grinding machine

### Objectives

- Participants acquire solid basic knowledge in operating StuderThread Integrated
- They are able to use grinding programs on the machine for axis-parallel thread grinding

### Course contents

- Programming system for axially parallel thread grinding
- Operation of StuderThread Integrated
- Practical exercises on the machine

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

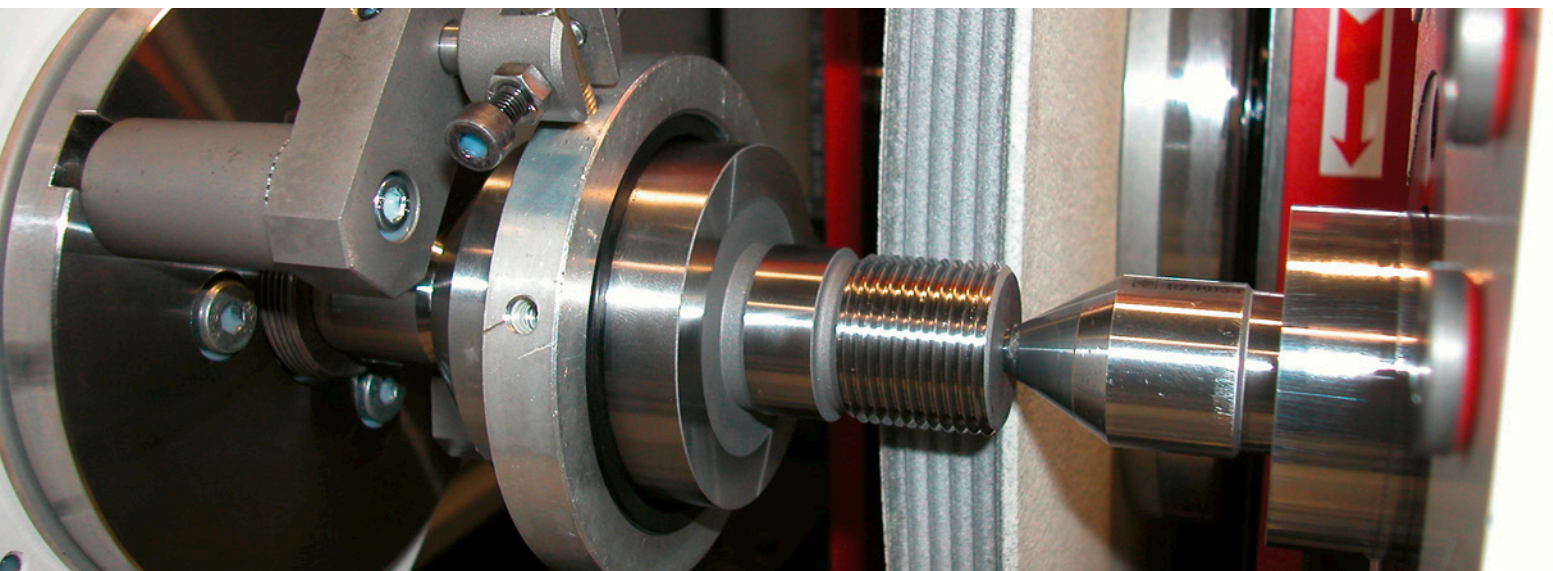
- 1½ days
- Vector CAD program can serve as a supplement if free thread shapes are necessary (order number 60008138)

### Services

- Course documentation
- 1 lunch

### Price

- according to price list, per person, without travel and accommodation costs



Standard courses > Integrated tools for StuderWIN

ORDER NO.  
**60016342**

# Operation and programming

## StuderThread integrated (machines with A axis)

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with Fanuc control system and StuderWIN interface

### Requirements

- Knowledge of the StuderWIN interface
- All participants must have operating and programming knowledge of a STUDER CNC cylindrical grinding machine

### Objectives

- Participants acquire solid basic knowledge in operating StuderThread Integrated
- They are able to use grinding programs on the machine to grind threads with A axis

### Course contents

- Programming system for thread grinding
- Operation of StuderThread Integrated
- Topic: "correct installation of the grinding wheel on the A axis"
- Profiling single-tooth threaded grinding wheels
- Practical exercises on the machine

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

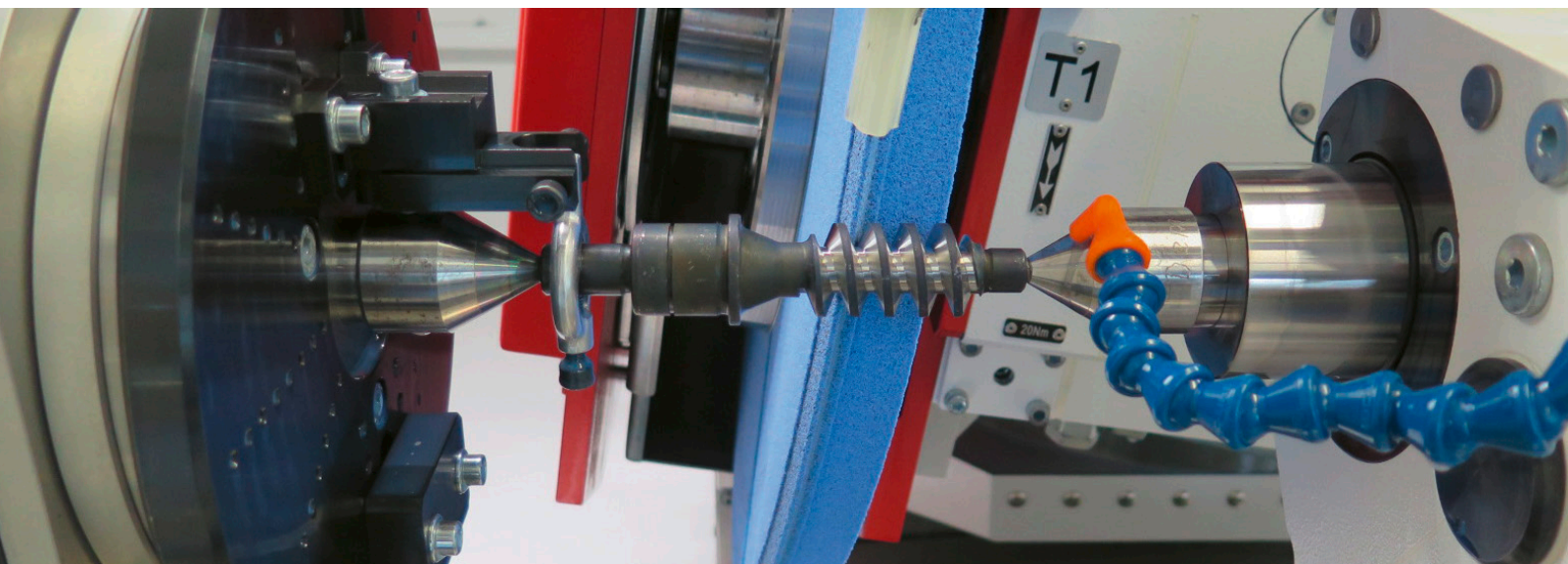
- 2 days
- Vector CAD program can serve as a supplement if free thread shapes are necessary (order number 60008138)

### Services

- Course documentation
- 2 lunch

### Price

- according to price list, per person, without travel and accommodation costs





Standard courses &gt; Integrated tools for StuderWIN

ORDER NO.  
**60008133**

# Operation and programming

## StuderForm integrated

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with Fanuc control system and StuderWIN interface

### Requirements

- Knowledge of the StuderWIN interface
- All participants must have operating and programming knowledge of a STUDER CNC cylindrical grinding machine

### Objectives

- Participants acquire solid basic knowledge in operating StuderForm integrated
- They are able to use grinding programs on the machine for form grinding

### Course contents

- General operation of StuderForm integrated
- Technological use of StuderForm
- Practical exercises on the machine with standard forms and optionally with DXF import

### Note

- If the required shapes cannot be made via standard forms, they must be drawn using a CAD system (e.g. Vector) and imported as a DXF file

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 2 days
- Vector CAD program can serve as a supplement (order number 60008138)

### Services

- Course documentation
- 2 lunch

### Price

- according to price list, per person, without travel and accommodation costs



Standard courses > Integrated tools for StuderWIN

ORDER NO.  
**60008134**

# Operation and programming

## StuderFormHSM integrated

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with Fanuc control system and StuderWIN interface

### Requirements

- Knowledge of the StuderWIN interface
- All participants must have operating and programming knowledge of a STUDER CNC cylindrical grinding machine

### Objectives

- Participants acquire solid basic knowledge in operating StuderFormHSM integrated
- They are able to effectively use grinding programs on the machine for form grinding with high-speed machining

### Course contents

- Operation of StuderFormHSM integrated
- Creating grinding data
- Practical exercises on the machine with standard forms and optionally with DXF import

### Note

- If the required shapes cannot be made via standard forms, they must be drawn using a CAD system (e.g. Vector) and imported as a DXF file

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

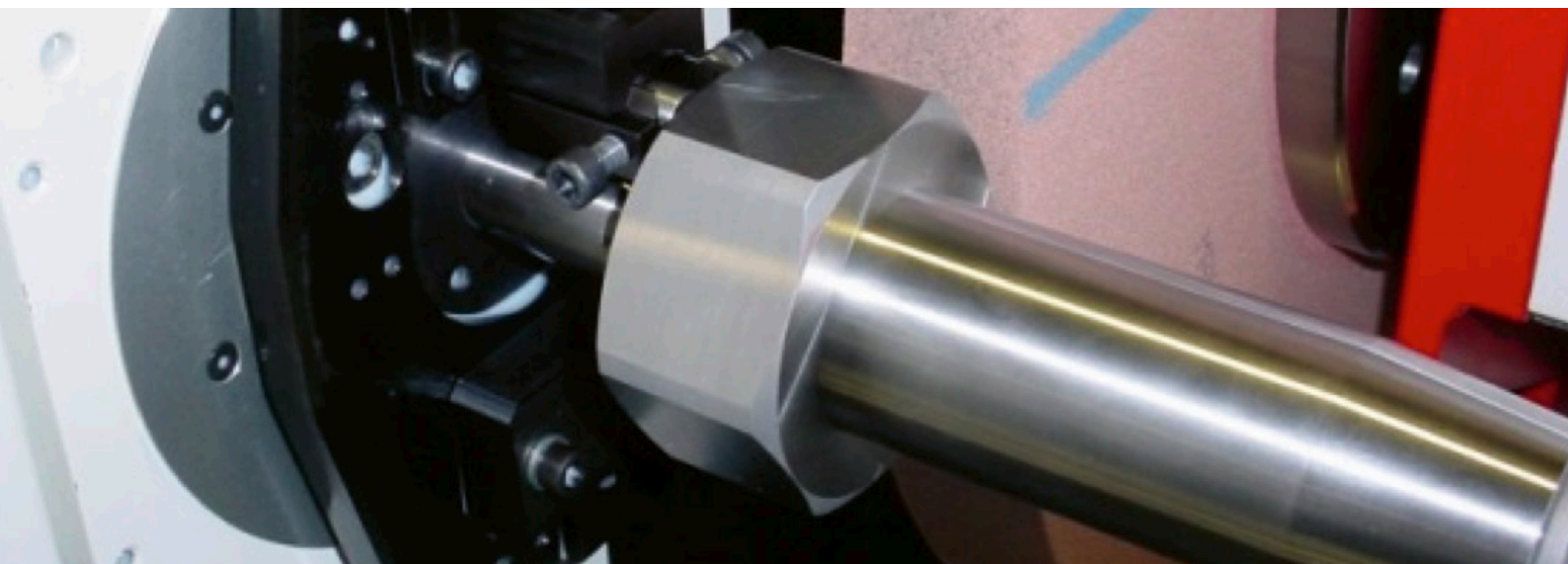
- 3 days
- Vector CAD program can serve as a supplement (order number 60008138)

### Services

- Course documentation
- 3 lunch

### Price

- according to price list, per person, without travel and accommodation costs



Standard courses &gt; Integrated tools for StuderWIN

ORDER NO.  
**60008412**

# Operation and programming

## StuderPunch integrated

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with Fanuc control system and StuderWIN interface

### Requirements

- Knowledge of the StuderWIN interface
- All participants must have operating and programming knowledge of a STUDER CNC cylindrical grinding machine
- Knowledge of how to use a PC with a Windows interface

### Objectives

- Participants are able to use the created standard forms on the machine
- Punch grinding with StuderPunch

### Course contents

- Operation of StuderPunch
- Creating and defining the process data (production tasks)
- Practical exercise on the machine with standard forms and optionally with DXF import

### Note

- If the required shapes cannot be made via standard forms, they must be drawn using a CAD system (e.g. Vector) and imported as a DXF file

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

- 2 days
- Vector CAD program can serve as a supplement (order number 60008138)

### Services

- 2 lunch

### Price

- according to price list, per person, without travel and accommodation costs



Standard courses > Integrated tools for StuderWIN

ORDER NO.  
**60008138**

# Operation and programming

## CAD program Vector

### Target group

- Operators and programmers of STUDER cylindrical grinding machines and their extended programming systems

### Requirements

- Knowledge of how to use a PC with a Windows interface

### Objectives

- Participants acquire solid basic knowledge in operating the CAD program Vector. At the end of the course, they are able to create non round shapes as well as workpiece or grinding wheel profiles that cannot be made via standard forms and contour editor

### Course contents

- Operation of the Vector CAD program
- Creating non round shapes for form grinding in DXF format
- Creating workpiece and grinding wheel profiles in DXF format
- Dimensions in drawings

### Languages (as agreed)

- German, English and French

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland

### Course duration

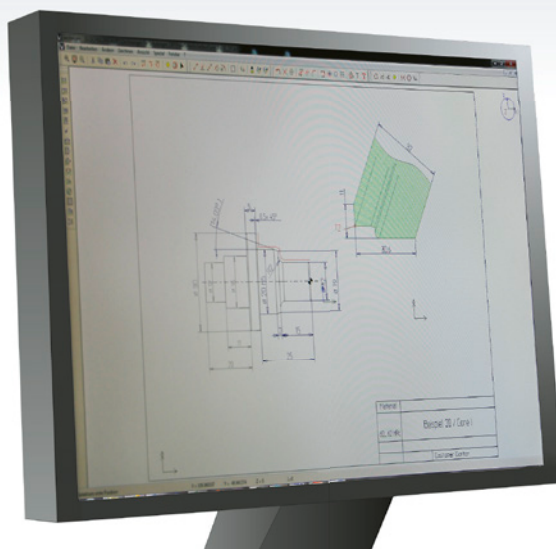
- 1 day

### Services

- 1 lunch
- Course documentation

### Price

- according to price list, per person, without travel and accommodation costs







# CUSTOMER-SPECIFIC COURSES

Customer-specific courses > instruction & consulting

ORDER NO.  
**60017812**

# Individual instruction and consulting

## 2 days at Fritz Studer AG

### Target group

- Customers who want instruction or consulting at STUDER in Thun or Biel

### Objectives

- The objectives for the particular instruction or consulting are predefined in the quotation
- The course contents have to be agreed with the instructor in advance
- Those objectives serve as the benchmark for the training to be carried out

### Course contents

Instruction, consulting and retraining for:

- Programming
- Operation
- Grinding technology

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 1 up to a max. of 4 persons

### Course location (as agreed)

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland
- Fritz Studer AG · Lengnaustrasse 12 · 2504 Biel · Switzerland

### Course duration

- 2 days

### Services

- Course documentation, if available
- 2 lunch

### Price

- according to price list, per person, without travel and accommodation costs





Customer-specific courses &gt; instruction &amp; consulting

ORDER NO.  
**60017813**

# Individual instruction and consulting

## 3 days at Fritz Studer AG

### Target group

- Customers who want instruction or consulting at STUDER in Thun or Biel

### Objectives

- The objectives for the particular instruction or consulting are predefined in the quotation
- The course contents have to be agreed with the instructor in advance
- Those objectives serve as the benchmark for the training to be carried out

### Course contents

Instruction, consulting and retraining for:

- Programming
- Operation
- Grinding technology

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 1 up to a max. of 4 persons

### Course location (as agreed)

- Fritz Studer AG · Thunstrasse 15 · 3612 Steffisburg · Switzerland
- Fritz Studer AG · Lengnaustrasse 12 · 2504 Biel · Switzerland

### Course duration

- 3 days

### Services

- Course documentation, if available
- 3 lunch

### Price

- according to price list, per person, without travel and accommodation costs



Customer-specific courses > instruction & consulting

ORDER NO.  
**A9904291**

# Individual instruction and consulting

## at the customer site in Europe

For all customer machine types

### Target group

- Customers who need instruction or consulting at their site

### Objectives

- The objectives for the particular instruction or consulting are predefined in the quotation
- Those objectives serve as the benchmark for the training to be carried out

### Course contents

Instruction, consulting and retraining for:

- Programming
- Operation
- General maintenance
- Grinding technology

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 1 up to a max. of 4 persons

### Course venue

- At the site of the customer

### Course duration

- The course duration will be defined by the customer in consultation with the instructor

### Services

- Course documentation, if available

### Price

- according to price list, per 8-hour course day, plus travel, accommodation and food costs







# BASIC COURSES STUDERSIM (BIEL)

StuderSIM basic courses > operation and programming

ORDER NO.  
**60016639**

# Operation and programming

## StuderSIM basic course

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with StuderSIM user interface

### Requirements

- Every participant must already have knowledge of cylindrical grinding and NC-programming
- Knowledge of ISO code programming would be advantageous
- Knowledge of how to use a PC with a Windows interface

### Objectives

- Participants acquire solid basic knowledge of the controls with the StuderSIM user interface (focus on internal grinding)

### Course contents

- Controls and control system
- Basic user interface structure
- Drawing the geometry of workpieces, grinding wheels and the machine
- Tool management
- Programming of dressing and grinding programs
- Mechanical handling
- Setting up grinding wheels and dressers
- Use of TouchControl for StuderSIM (automatic correction, regrinding)
- Practical exercise on the machine
- Corrections

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Lengnaustrasse 12 · 2504 Biel · Switzerland

### Course duration

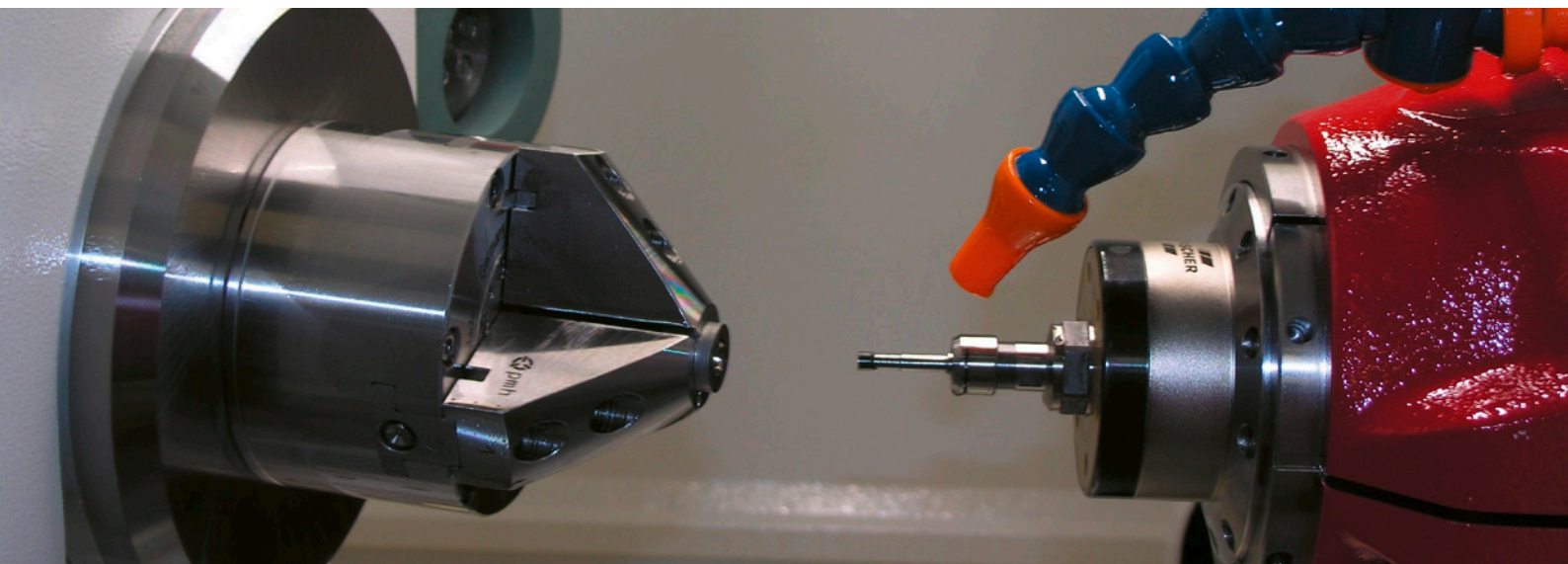
- 4½ days (Monday morning to Friday lunchtime)

### Services

- Course documentation
- 4 lunch

### Price

- according to price list, per person, without travel and accommodation costs





StuderSIM basic courses &gt; operation and programming

ORDER NO.  
**60016643**

# Operation and programming

## StuderSIM radius/taper grinding

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with StuderSIM user interface

### Requirements

- Knowledge of how to use a PC with a Windows interface
- All participants must have operating and programming knowledge of STUDER CNC cylindrical grinding machines
- Knowledge of StuderSIM user interface (see "Basic course")
- Knowledge of Vector CAD program if this is to be used for creating the geometry data (see Vector CAD program course)

### Objectives

- Ability to grind radii and tapers with the B5 axis

### Course contents

- General information on grinding with interpolating B-axis
- Programming and simulating grinding cycles for radii (G71) and tapers (G72)
- Setting up and measuring the workpiece length (Z-B distance)
- Grinding-related information on radius / taper grinding
- Practical exercise on the machine
- Interpreting the results and making corrections

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Lengnaustrasse 12 · 2504 Biel · Switzerland

### Course duration

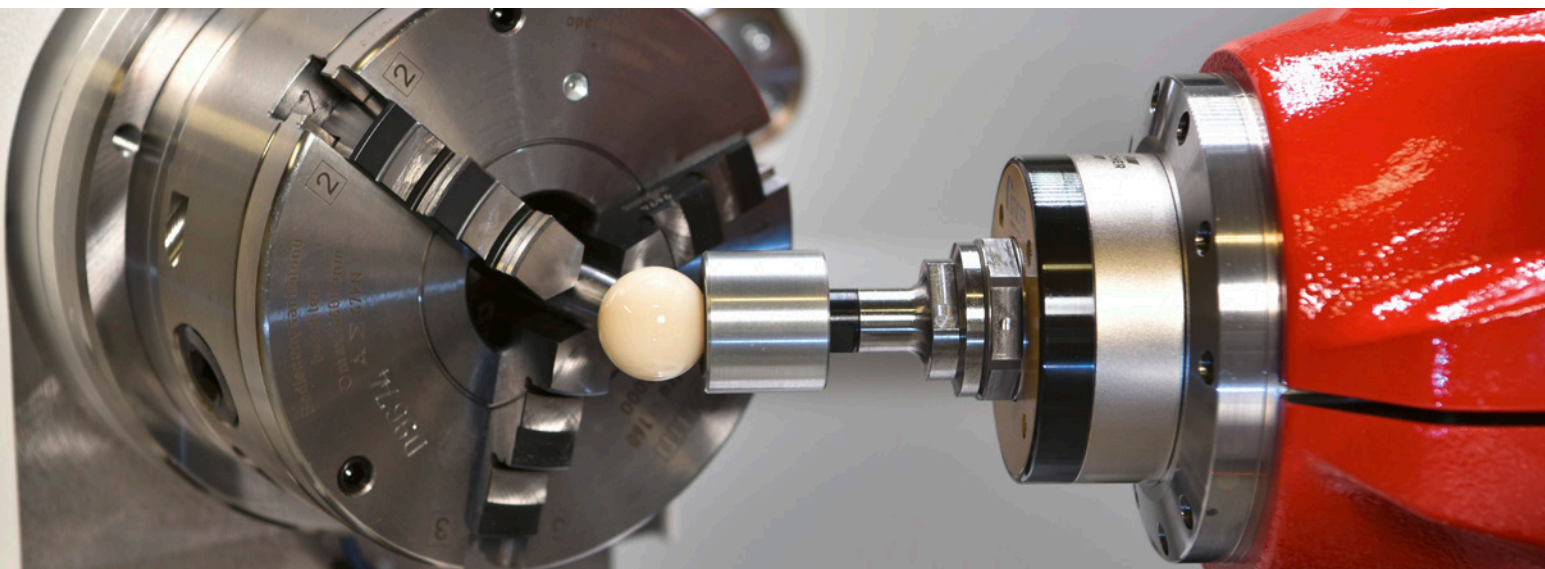
- 2 days

### Services

- Course documentation
- 2 lunch

### Price

- according to price list, per person, without travel and accommodation costs



StuderSIM basic courses > operation and programming

ORDER NO.  
**60016645**

# Operation and programming

## StuderSIM Vector CAD program

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with StuderSIM user interface

### Requirements

- Knowledge of how to use a PC with a Windows interface

### Objectives

- Basic knowledge of the Vector CAD program
- Creation of workpiece and grinding wheel contours

### Course contents

- Operating the Vector CAD program
- Creating workpiece and grinding wheel contours
- Creating dressing contours
- Exporting DXF data for further use in machine control

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Lengnaustrasse 12 · 2504 Biel · Switzerland

### Course duration

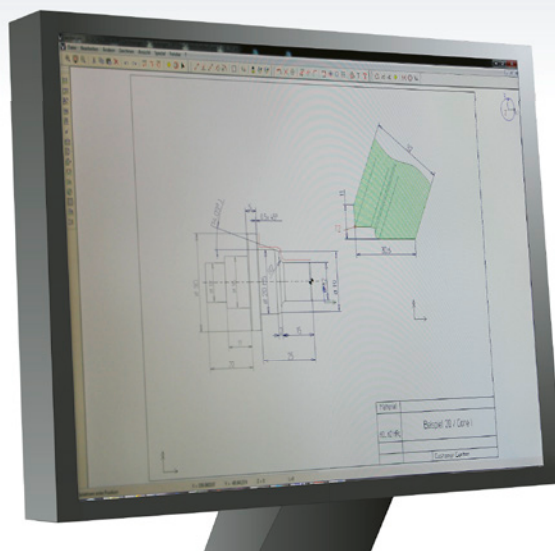
- 1 day

### Services

- Course documentation
- 1 lunch

### Price

- according to price list, per person, without travel and accommodation costs





StuderSIM basic courses &gt; operation and programming

ORDER NO.  
**60016640**

# Operation and programming

## StuderSIM path contour grinding

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with StuderSIM user interface

### Requirements

- Knowledge of how to use a PC with a Windows interface
- All participants must have operating and programming knowledge of STUDER CNC cylindrical grinding machines
- Knowledge of StuderSIM user interface (see "Basic course")
- Knowledge of Vector CAD program if this is to be used for creating the geometry data (see Vector CAD program course)

### Objectives

- Ability to grind path contours

### Course contents

- Preparations for path contour grinding (draw workpiece, data import)
- Programming and simulation of path contour grinding cycle (G89)
- Simulating the programmed cycle
- Grinding-related information for path contour grinding
- Practical exercise on the machine
- Interpreting the results and making corrections

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Lengnaustrasse 12 · 2504 Biel · Switzerland

### Course duration

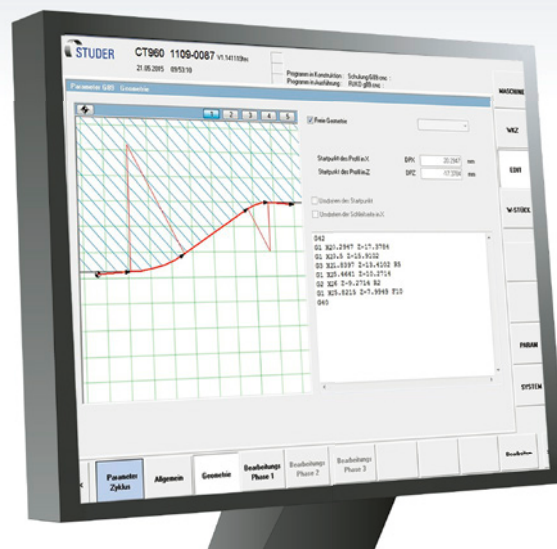
- 1 day

### Services

- Course documentation
- 1 lunch

### Price

- according to price list, per person, without travel and accommodation costs



StuderSIM basic courses > operation and programming

ORDER NO.  
**60016641**

# Operation and programming

## StuderSIM thread grinding

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with StuderSIM user interface

### Requirements

- Knowledge of how to use a PC with a Windows interface
- All participants must have operating and programming knowledge of STUDER CNC cylindrical grinding machines
- Knowledge of StuderSIM user interface (see "Basic course")
- Knowledge of Vector CAD program if this is to be used for creating the geometry data (see Vector CAD program course)

### Objectives

- Ability to dress the grinding wheel profile
- Ability to find starting points of rough-turned threads
- Ability to grind threads

### Course contents

- Preparations for thread grinding (workpiece drawing, data import)
- Creating a dressing cycle with imported data
- Shape dressing a grinding wheel
- Programming of thread grinding cycle (G88)
- Writing a program for thread grinding

- Setting up and programming the thread run-in positioning cycle
- Grinding-related information on thread grinding
- Practical exercise on the machine
- Interpreting the results and making corrections

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Lengnaustrasse 12 · 2504 Biel · Switzerland

### Course duration

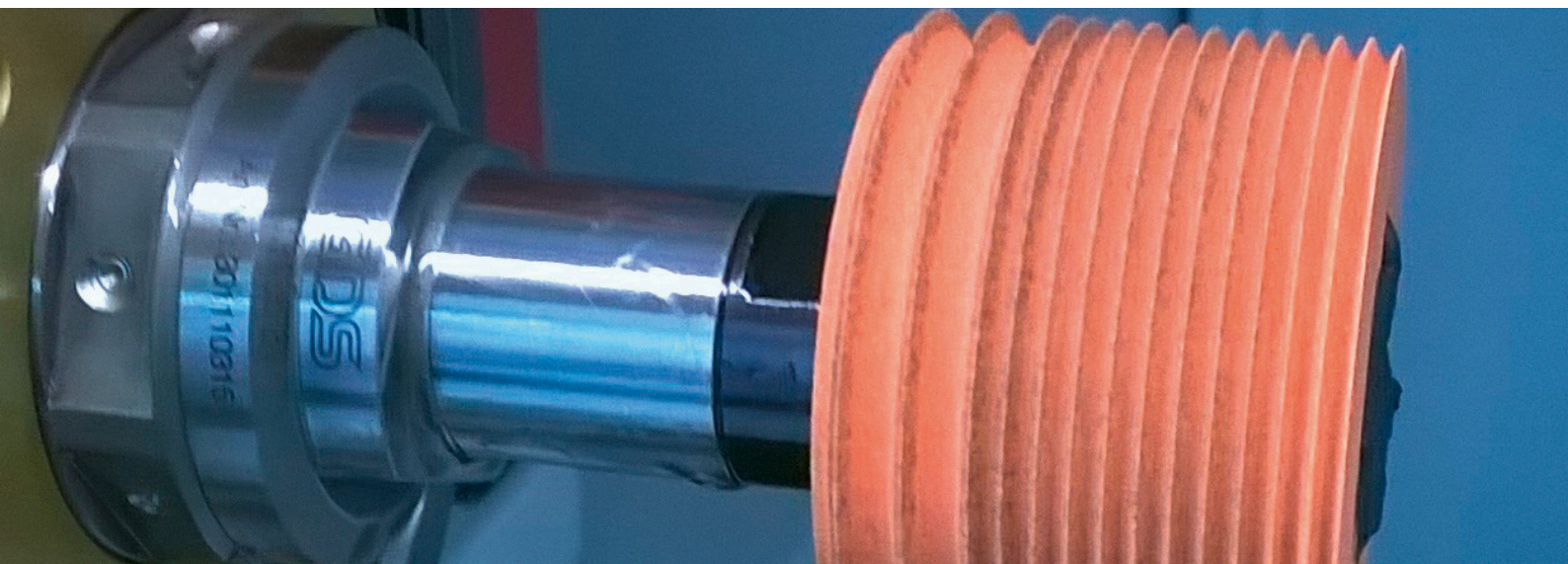
- 3 days

### Services

- Course documentation
- 3 lunch

### Price

- according to price list, per person, without travel and accommodation costs



StuderSIM basic courses &gt; operation and programming

ORDER NO.  
**60016642**

# Operation and programming

## StuderForm to StuderSIM

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with StuderSIM user interface

### Requirements

- Knowledge of how to use a PC with a Windows interface
- All participants must have operating and programming knowledge of STUDER CNC cylindrical grinding machines
- Knowledge of StuderSIM user interface (see "Basic course")
- Knowledge of Vector CAD program if this is to be used for creating the geometry data (see Vector CAD program course)

### Objectives

- Ability to create grinding programs with StuderFORM
- Using the grinding programs created on the machine

### Course contents

- Operating "StuderForm integrated" with standard shapes
- Operating "StuderForm integrated" with import of DXF files from a CAD system
- Creating a contour subroutine with StuderForm
- Grinding-related information for contour grinding
- Simulating the program
- Practical exercise on the machine
- Interpreting the results and making corrections

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Lengnaustrasse 12 · 2504 Biel · Switzerland

### Course duration

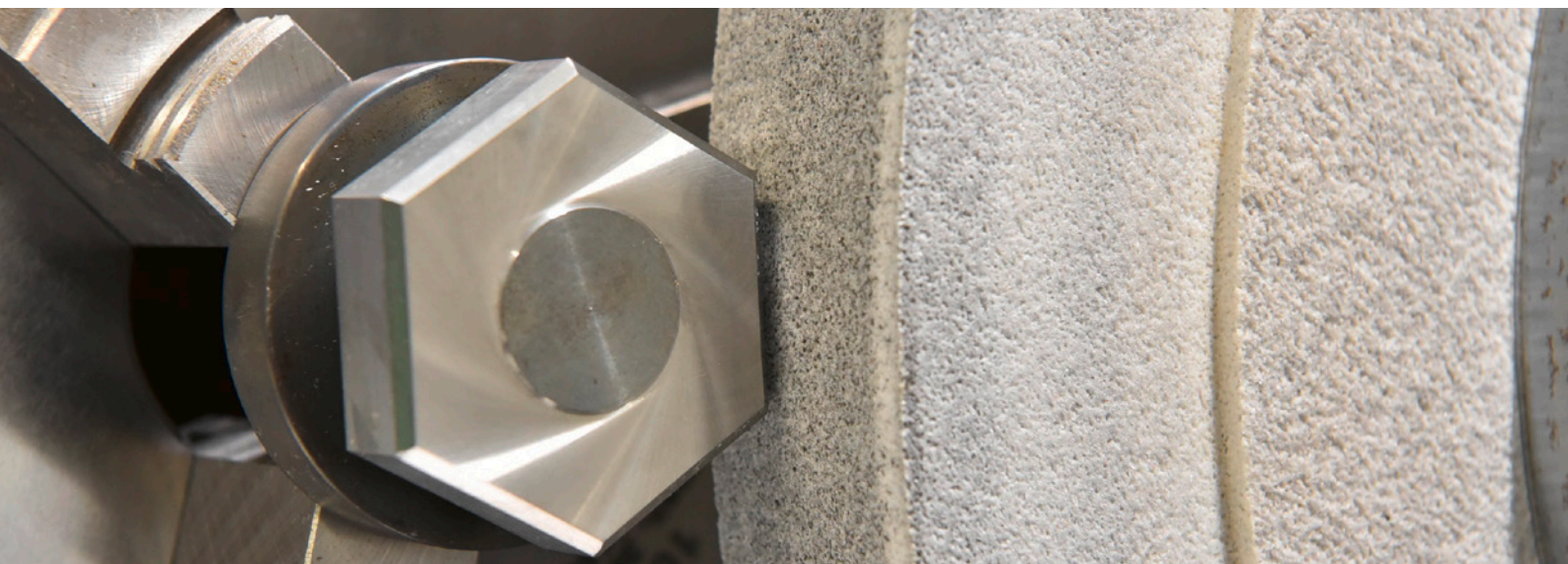
- 2 days

### Services

- Course documentation
- 2 lunch

### Price

- according to price list, per person, without travel and accommodation costs





StuderSIM basic courses > operation and programming

ORDER NO.  
**60016644**

# Operation and programming

## StuderSIM sphere grinding

### Target group

- Operators and programmers of STUDER CNC cylindrical grinding machines with StuderSIM user interface

### Requirements

- Knowledge of how to use a PC with a Windows interface
- All participants must have operating and programming knowledge of STUDER CNC cylindrical grinding machines
- Knowledge of StuderSIM user interface (see "Basic course")
- Knowledge of Vector CAD program if this is to be used for creating the geometry data (see Vector CAD program course)

### Objectives

- Ability to grind balls and spheres with cup wheels

### Course contents

- General information on ball / sphere grinding with cup wheel
- Programming and simulating the ball / sphere grinding cycle (G83)
- Simulating the programmed cycles
- Setting up and measuring the workpiece length (Z-B distance)
- Setting up the G83 cycle
- Frequent problems and solution for ball / sphere grinding
- Practical exercise on the machine
- Interpreting the results and making corrections

### Languages (as agreed)

- German, English, French, Italian

### Number of participants

- From 2 up to a max. of 4 persons

### Course venue

- Fritz Studer AG · Lengnaustrasse 12 · 2504 Biel · Switzerland

### Course duration

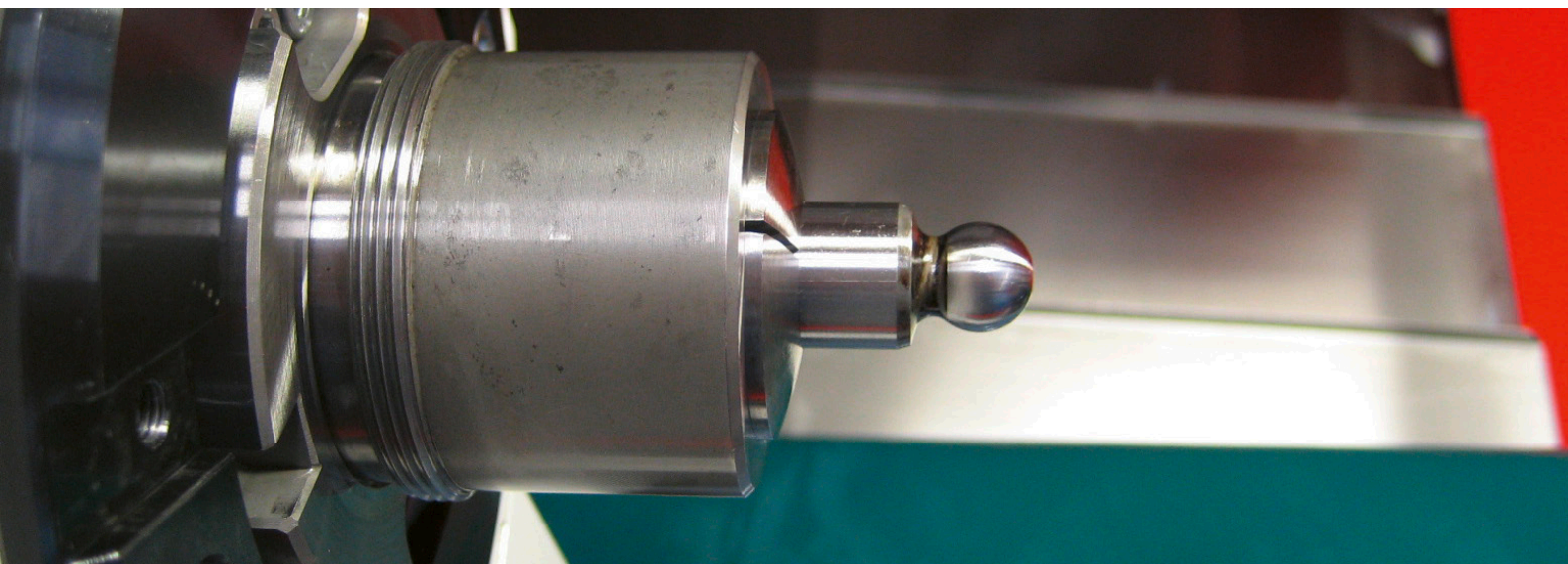
- 2½ days

### Services

- Course documentation
- 2 lunch

### Price

- according to price list, per person, without travel and accommodation costs







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