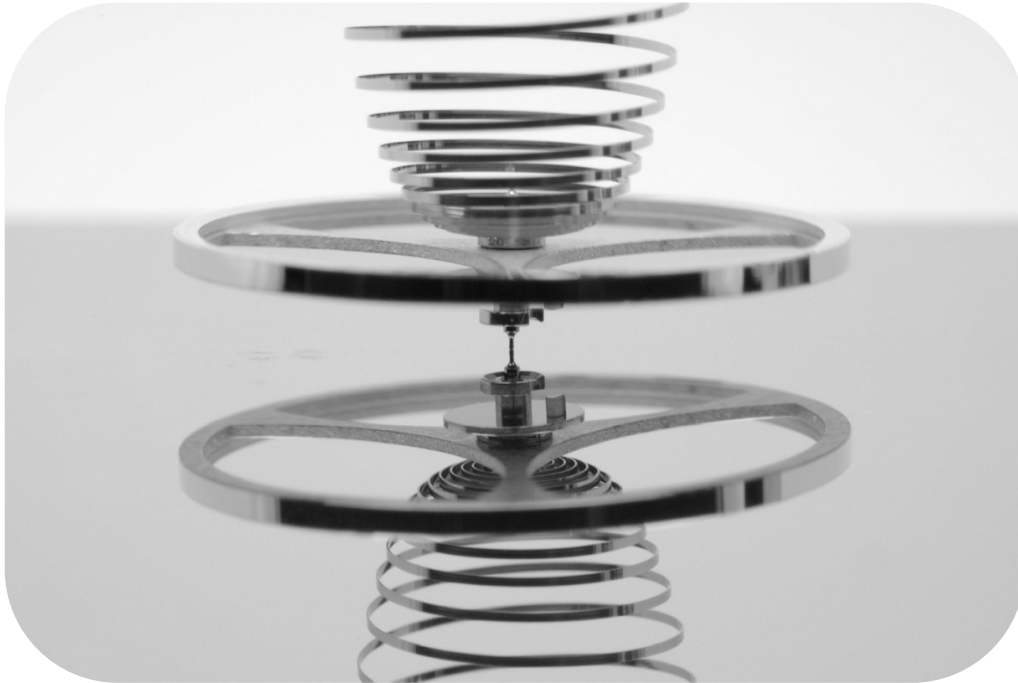


# Precision Timing

Theory and practice of regulating a mechanical watch



SCAN ME

Adjusting the Swiss lever escapement  
and regulating organ,  
in order to achieve chronometry accuracy.



Watchmakers of Switzerland Training and Educational Program  
Centre Suisse de formation et de perfectionnement horloger





## WOSTEP – WHO ARE WE?

Founded in 1966 and supported by the Swiss watch industry, the Fondation WOSTEP, located in the cradle of watchmaking in Neuchâtel, offers training programs covering several watchmaking professions. As a reference center for watchmaking training and development worldwide, the Fondation WOSTEP transmits unique know-how through cutting-edge teaching. The range of training programs and consulting services offered by WOSTEP are considered quality standards. Employers around the world recognize WOSTEP certification as a proof of technical competence and demonstration of a solid training.

The neutral and independent Fondation WOSTEP is supported by 6 active members who together generate 90% of the turnover of the watch industry in Switzerland. Its ambition is to preserve and promote Swiss know-how abroad. Two pillars of the Foundation are the courses offered in Neuchâtel and the partnership with several schools abroad. The standardization of training programs and evaluation criteria implemented in cooperation with the industry ensures a true Swiss Made on a global scale.

With more than 50 years of experience, WOSTEP manages innovative projects with the close support of its members and donors and positions itself as a real training and skills center of the future.

## CERTIFYING TRAINING

The Neuchâtel school offers certifying training in watchmaking and polishing.

The watchmaking programs are run through a phase of Watch Technician, then Customer Service Watchmaker after one year. Finally, Watchmaker is the additional year more specialized in manufacturing which allows to arrive at a panel of knowledge worthy of traditional haute horlogerie. The student develops in-depth and specific skills in tool maintenance, diagnosis with defect identification, maintenance, movement adjustment, complete service, polishing, precision adjustment, micromechanics and watch manufacturing.

The Customer Service Polishing Technician is a program that allows the reconditioning, disassembly and reassembly of watch cases and bracelet components made of various base metals according to their technical and aesthetic characteristics.

These certification programs make it possible to reach a high level in watchmaking and polishing careers with specific opportunities in international haute horlogerie.

*Note: Certificates – titles recognized for their practical part by the Convention Patronale de l'Industrie Horlogère Suisse (Swiss Watch Industry Employers Federation) / based on governmental orders of the SEFRI (Secrétariat d'Etat à la Formation, à la Recherche et à l'Innovation (SERI - State Secretariat for-Education, Research and Innovation).*

## COURS À LA CARTE

To complete our offer, the school hosts multipurpose courses. Practical or theoretical à la carte courses can be developed and implemented on demand. Train the Trainer, Precision Timing, Chronograph, Turning, as well as modular and specific polishing courses, such as laser welding refilling, are given regularly.

More details can be found on our website.

## COURSE CURRICULUM

### Course description

The *Precision Timing* Fondation WOSTEP 3 week course gives the participant the opportunity to gain practice and knowledge in precision timing and to understand its intricacies. Participants will learn to make all adjustments on a Swiss lever escapement and understand the effects of these adjustments on timing.

## C01 – WATCHMAKING - PRECISION TIMING



Duration: 3 weeks

### Main topics

#### Basic movement preparation

- Set a wheel flat and adjust endshakes and alignments.
- Adjust sideshake, endshake and flatness of a barrel.
- Lubricate the basic movement.

#### Escapement adjustment

- Understand the proper functioning of the Swiss lever escapement.
- Understand the effects of these adjustments on timing.
- Proceed to all escapement adjustments.
- Lubricate the Swiss lever escapement on different types of movements.

#### Regulating organ

- Fit a new balance staff.
- Proceed to the truing and the poise of balance wheels.
- Assemble and use Leroy's formula to count a hairspring.
- Adjust and manipulate the hairspring under bridge on different types of movements.

#### Chronometry

- Perform the dynamic poising of the balance assembly.
- Proceed to all interventions needed on the hairspring in order to ensure the best possible timing on different types of watches.
- Use the theoretical background in order to solve practical operations.

### Career opportunities

With the *Precision Timing* course participants will reinforce their skills on simple mechanical watches around the gear train, including barrel and jewels, and the winding and setting mechanism, a good base for customer services and independent repair centres.

### Requirements and target audience

The *Precision Timing* course is open to all participants who have attended a watchmaking school and have a complementary experience in watch repairs. Watchmakers with no such education or training must have a minimum of 3 years full-time experience in watchmaking.

## TIMETABLE AND PARTICIPANTS

- Monday to Friday: 08:30 – 12:00 / 13:30 – 17:00.
- Maximum 6 participants per session.

## LOCATION

Fondation WOSTEP, Rue des Saars 99, 2000 Neuchâtel, Switzerland

## REQUIRED MATERIAL

All the equipment, tools and components will be provided by WOSTEP.

## MEALS

Meals are not provided and are at the participants cost.

## ACCOMMODATION

Participants have the possibility to stay in the WOSTEP student' apartments located close to the school. Alternatively, a list of hotels and guest houses will be sent to them upon request in order to allow them to make their own reservation elsewhere.

The cost for a room in the WOSTEP student apartments is CHF 525.- per week.  
(Single bedroom with free Wi-Fi. Shared kitchen, bathroom and laundry facilities)

## COURSE FEE

- CHF 5'200.- per person (accommodation and meals not included)
- -10% discount for donators
- -75% discount for Partnership teachers
- -25% discount for active members

## ATTESTATION

An attestation will be delivered upon completion of the course.

## PRECISION TIMING COURSE REGISTRATION

### Session selection

Please indicate your choice of session date/period\*: .....

*\*Select from published program/course dates online or enclosed flyer.*

### Personal details – please fill in CAPITAL letters

Ms.       Mr.

Last name (s): .....

First name (s): .....

Employer: .....

Present occupation and responsibilities: .....

### Mailing address

Name / Company name (if applicable): .....

Street address, n°: .....

Post office box: .....

Zip Code - City: .....

Country: .....

Home phone: .....

Work phone: .....

Mobile phone: .....

Home e-mail: .....

Work e-mail: .....

### Invoice address (if different from the above mentioned)

Name / Company name (if applicable): .....

Contact person: .....

Street address, n°: .....

Post office box: .....

Zip Code – City: .....

Country: .....

Which language(s) do you speak? .....

### Please indicate your choice for accommodation

- I would like to stay in the students' apartments (subject to availability)  
Single bedroom with free Wi-Fi. Shared kitchen, bathroom and laundry facilities  
Price: CHF 525.- per week (+ VAT)
- I prefer to stay at a hotel (a list of hotels will be sent with the confirmation)
- I will not need accommodation

**EDUCATION AND EXPERIENCE – PRECISION TIMING**

**Watchmaking education and training:**

	Name of school/training institution	Period of time	Hours of training
Watchmaking school			
Apprenticeship			
Training in family business			
Self-taught			

**Professional experience (after training):**

Name of employer	Full-time	Part-time	Period of time
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	
	<input type="checkbox"/>	<input type="checkbox"/>	

**Repair experience:**

Number of years: \_\_\_\_\_ Mech. watches: \_\_\_\_\_ % Quartz watches: \_\_\_\_\_ %

Watch brand(s) you are most experienced with: \_\_\_\_\_

**WHERE/HOW DID YOU HEAR ABOUT WOSTEP?**

WOSTEP student(s)     Employer     Advertisement     Internet

Other: .....

**Session selection**

Please reconfirm your choice of session date/period\*: .....

*\*Select from published program/course dates online or enclosed flyer.*

Last name: ..... First name: .....

Date: ..... Signature: .....

To register for the course, kindly complete this form and send to [wostep@wostep.ch](mailto:wostep@wostep.ch) or register directly through our website under [www.wostep.ch/training/programs](http://www.wostep.ch/training/programs).

