

Year one watchmaking course

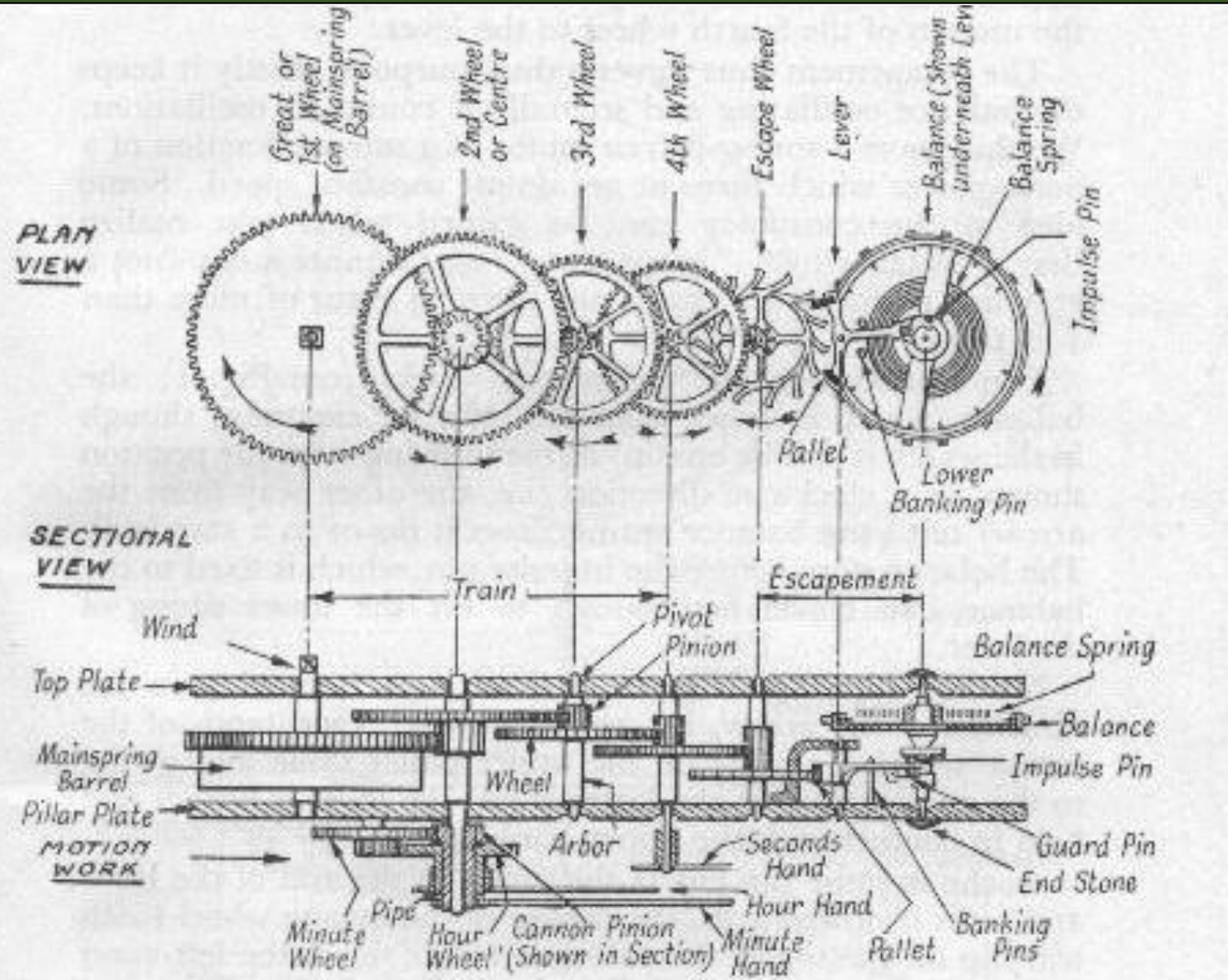


FIG. 1. PARTS OF A WATCH

About the course – Year One

- **Entry Level - assuming no prior knowledge of watch mechanics.**
- **The course is held over 40 weeks (120 hours).**
- **Three hour lessons. Each week 30 – 45 minutes of theory followed by a practical session.**
- **Lessons in Power-point format will be ‘Drop-boxed’ (cloud based storage) weekly prior to the lesson.**
- **Gain skills in servicing hand-wound mechanical movements.**
- **History and development of watchmaking.**
- **Tools, techniques and workshop practices.**

Topics covered

- **Opening watch cases.**
- **Tools: selection, uses & maintenance.**
- **Uncasing movements: safe removal & replacement of stem, hands, dial & movement.**
- **Disassembly, reassembly and checking of movement for faults.**
- **Lever escapements: action of all parts – checking, adjusting & regulation.**
- **Removing, fitting & replacing mainsprings.**
- **Keyless-work variations and understanding functions of parts.**

Topics covered

- **Gain skills in fault finding.**
(Understanding how a watch works and why it doesn't).
- **Using a watchmaker's staking tool.**
- **Using a jewelling tool and adjusting end-shake.**
- **Bench metalwork toolmaking skills - cutting, filing, hardening, tempering and polishing**
- **Acrylic, mineral & sapphire crystal removal and replacement.**
- **Theoretical and practical aspects of watchmaking.**
- **Using a watch cleaning machine.**
- **Oiling of jewels.**
- **Polishing pivots & pinions. Using a jacot tool**

Topics covered

- **Adjusting hairsprings.**
- **Watch jewels – Replacement and adjustment**
- **Adjusting and regulating working serviced movements.**
- **Using a timegrapher – fault finding & timing.**
- **Detailed understanding of how the Swiss lever escapement works, as well as cylinder and pin-pallet escapements.**
- **Full strip down, fault finding, cleaning, assembly, and lubrication of every movement in each module.**

Topics covered

- **Ability to oil both shockproof and non-shock proofed cap jewels in vintage and modern timepieces.**
- **Ultimately, gain an intimate understanding how a watch works, why it works in that particular way and what to do to alleviate most faults once identified.**

Qualifications

- **The course does not provide a qualification of its own, but the structured beginner's watchmaking lessons aim to provide a practical and theoretical understanding in watch servicing and repair, as well as some handy techniques and tips.**
- **If you are thinking of gaining a professional qualification in the future, we recommend you bring a camera to document your progress, and also make your own notes, which you may add to a portfolio in the future.**
- **We can advise you of course options, if you want to take watchmaking up professionally.**
- **Five previous students who completed the first and a second-year courses are now employed as watchmakers and technicians as a full-time career.**

What you can achieve

- **If modules of the course are followed and more 'bench-time' is completed at home, then there is no reason why you won't have the confidence and ability to service most hand wound mechanical watches by the completion of this 120 hours course.**
- **If you set up your own work area at home and work on more watches in your own time, then you will better understand both the theoretical and practical aspects of the course.**

What you need

- **All tools needed for the course are available in our ‘starter’ tool boxes, which you can use for the first six weeks.**
- **After several weeks, we expect you to start building up your own collection of tools to use. By week 5 or 6, we expect you to have your own toolkit and toolbox.**
- **More tools will be needed through the course, other than the ‘starter’ toolbox, if you want to do more and achieve more at home.**

What you need

- It will cost approximately £150 for a basic tool kit, not including the price of a tool box. (You will appreciate your own tools, rather than having to sharpen student borrowed tweezers and screwdrivers!)
- Depending on the quality of the tools you buy, you can easily double that amount, especially when buying 'Bergeon' screwdrivers and 'Dumont' tweezers. You will be adding tools to this basic kit as you progress .
- I always say, "Buy what you can afford".
- Don't buy really cheap, as you end up buying twice. I will provide links and guidance as to what tools to buy, prices and where to get them, but you don't need to worry about tools for now.

What you need

- I always advise students to start by buying these seven particular books.
 - ‘Practical Watch Repairing’ – by Donald De Carle.
 - ‘The Watch Repairer’s Manual’ – by Henry B Fried.
 - ‘The Watch Repairer’s Manual’ – by H. Jendritzki
 - ‘Bench Practices for Watch Repairers’ – by Henry B Fried.
 - ‘Watch & Clock Making & Repairing’ – by W J Gazeley.
 - ‘The Watch Escapement’ – by Henry Fried
 - ‘The Theory of Horology’ – by Charles Andre Reymondin
- This last book is expensive, by worth it!

What you need

- **If you want to take this up as a hobby or profession, then you will want certain tools at home such as a staking set and a jewellery set, that we have to use in the classroom. These two tools can cost between £250 to £500 each, sometimes more, depending on the brand and the quality of the tool.**
- **Watchmaker's lubricants are ridiculously expensive. A set of four or five oils/greases will cost over £100.**
- **A decent ultrasonic or watch cleaning machine may cost many hundreds of pounds and the 'waterless' professional watch cleaning fluids and rinse will be about £60 to £100 for both, but these will clean over 150 watch movements.**

What you need

- **A timegrapher, tests to see how accurate the watch is keeping time, as well as other readings. The Weishi 1900 model, which I advise students to buy, costs approximately £150 to £200.**
- **We have all of these tools and equipment for students to use in the classroom and stress it is not necessary to buy these items, but you may want to invest in your own equipment so you can do certain tasks at home and not have to wait for the next lesson to use them.**

You'll need the following watches

- **The first complete watch you are going to learn with is a copy of the ETA 6497 which is used throughout the world in watch schools. We already have these watches for your first lesson, so don't worry! £80 is added to the course fee to cover the cost of this watch and any spare parts needed along the way,**
- **You will need to purchase the remaining watches in the course that we will all work on together. I suggest you get an eBay account to acquire these watches. I will talk more about which watches you need, so don't stress, there's no rush.**

Movements we will work on

The ST36 (ETA 6947); a pocket watch movement in modern wrist watch form. We'll be working on a copy of this renowned watch. This is a very big watch movement to gain an understanding of the part names and how each of the five sections of the watch works, before taking that understanding onto the next watch...



The first watch we'll work on

The ST36 movement is a copy of the Uitas/ETA 6497 which was developed in 1949 as a modern and easily serviced pocket watch movement.

This widely used teaching movement, available in a wide variety of case styles and at 36.6mm diameter is found in both pocket watches and modern oversize sports watches.



Movements we will work on

An ETA Incabloc/shock-proof calendar watch of your choice. Adding the extra 'complication' of a date wheel. This will give you an understanding of how the date wheel is driven and why it won't, if there is a fault.



The 2nd watch we'll work on

The ETA wheel train layout is different to the first watch movement and this watch has a sweep second hand.

The date window might be at 3 O'clock or 6 O'clock



The 3rd watch we'll work on

The Luch 2209 movement is a remarkable 23 jewels Soviet watch, with an ultra thin and unusual layout. Also marketed as Sekonda de Luxe & Poljot, amongst other names. We'll also really take a in depth look at the power transfer of the 'gear train' and fully understand how important that understanding is to diagnose some faults.



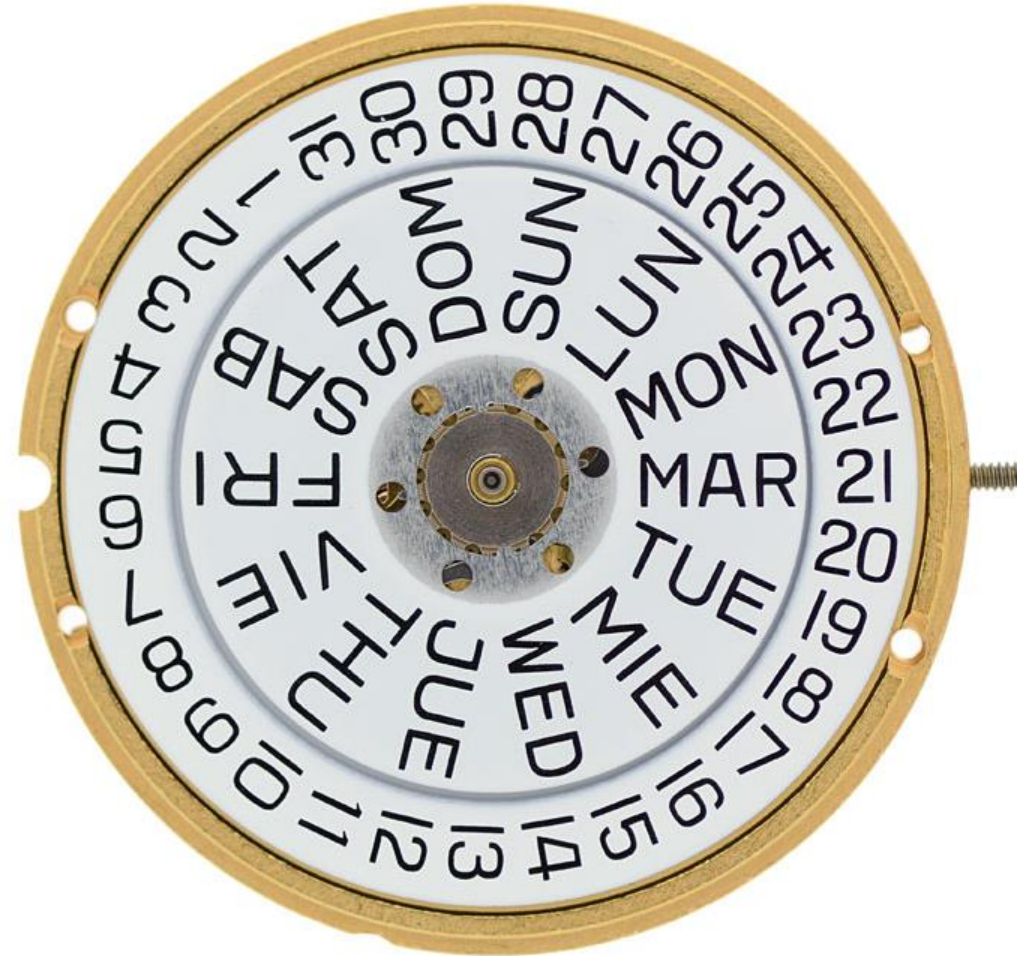
The 3rd watch we'll work on

The 'ultra-thin' 2209 movement, first introduced by Vympel and further branded by Poljot and Luch starting in 1961 through to the 70s. These 23 jewel movements are also sold as 'Sekonda de Luxe'.



The 4th watch we'll work on

**ETA 955.122 quartz watch.
Showing this is a simple seven jewelled movement for a first-time quartz watch servicing, although it has the added 'complications' of a day and date indicator as well as a 'quickset' function. We don't electrical test this watch. That is covered in 'Year two'.**

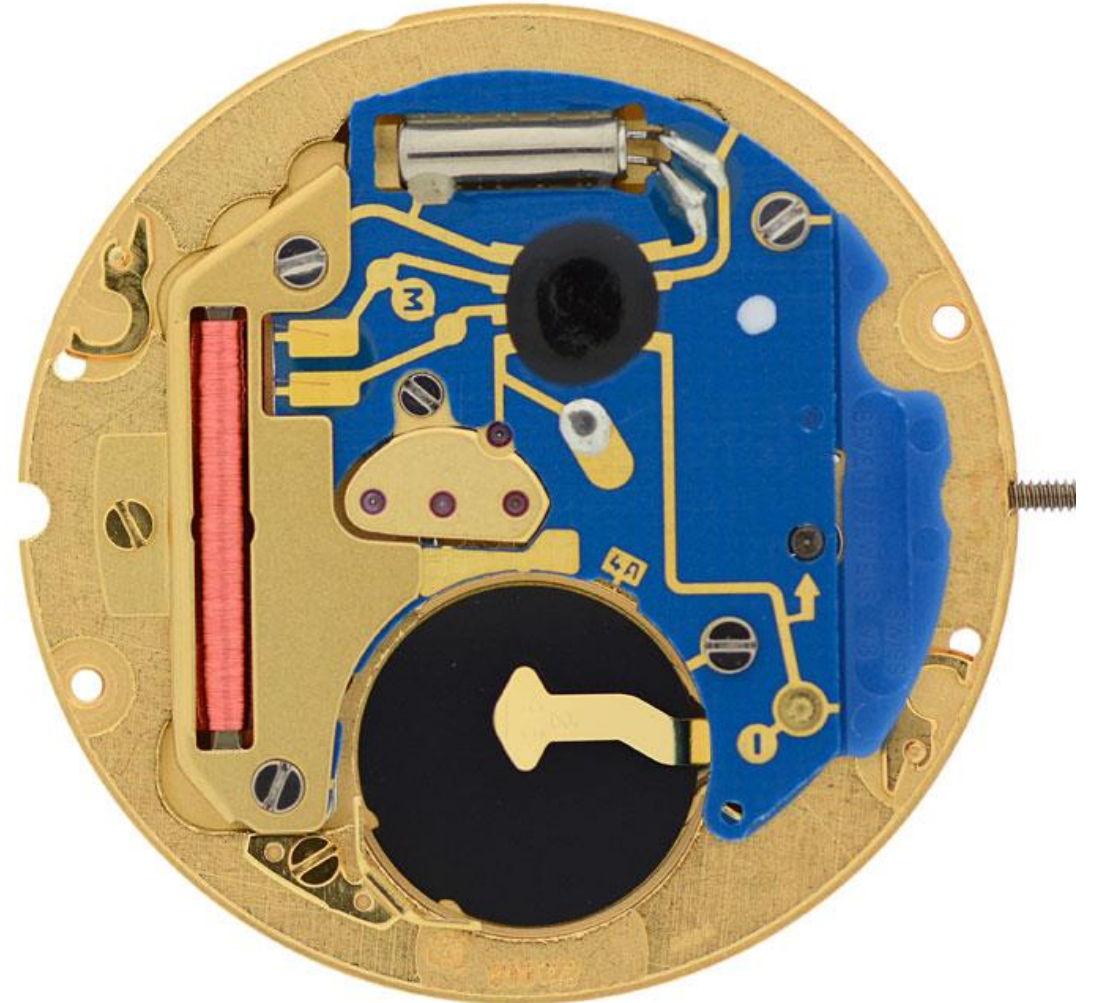


The 4th watch we'll work on

The ETA 955.122 quartz movement.

This is a 7-jewel quartz movement, available for less than £50

I wanted to show how serviceable these relatively cheap quartz movements are, as you will find these in watches such as Tag Heuer costing several thousand pounds!



The 5th watch we'll work on

An 'indirectly driven' centre seconds hand watch popular up to the late 1950's, exploring a design that doesn't often get used in modern watches today.



The 5th watch we'll work on

A vintage 1930's to 50's 'Indirect Drive' centre seconds hand watch. This looks at a different way the centre second hand is powered, that is no longer usual in modern wristwatches. This will test your skills which you have gained in all the previous watches.



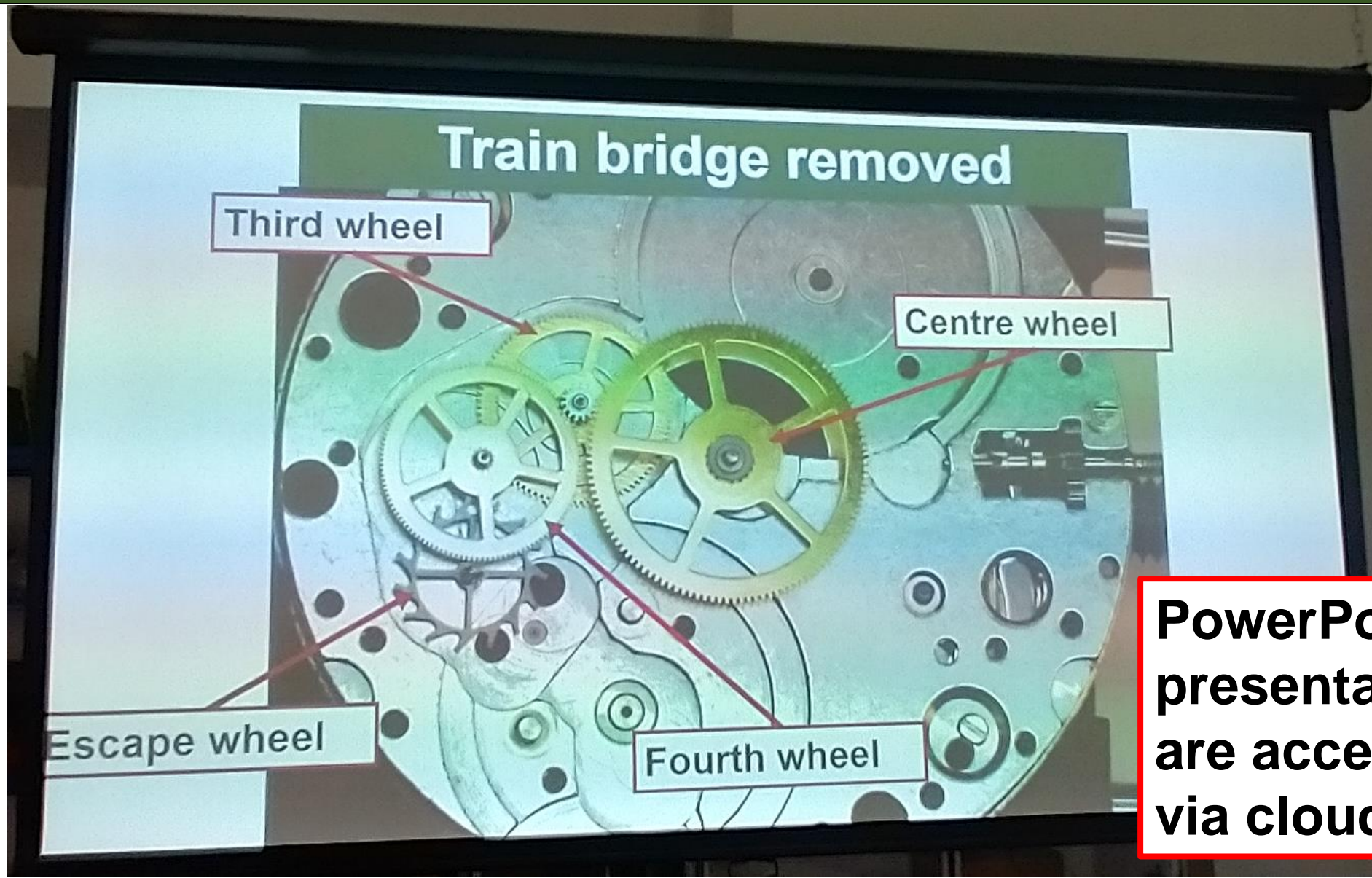
Movements we will work on

I have included watches in this course that are affordable and available. Get an eBay account, if you haven't already, as most of the watches you require are for sale there.

I also chose these particular movements because they will show you different aspects of how a watch is laid-out and different ways in which power is transferred through the wheels and pinions (wheel train).

The first watch is big and simple. You will spend the first few months familiarising & understanding the various parts of the watch and how they interact, with the aid of Power-point presentations and practical lessons.

**Power-point presentation aid each lesson
projected onto a 100-inch screen**

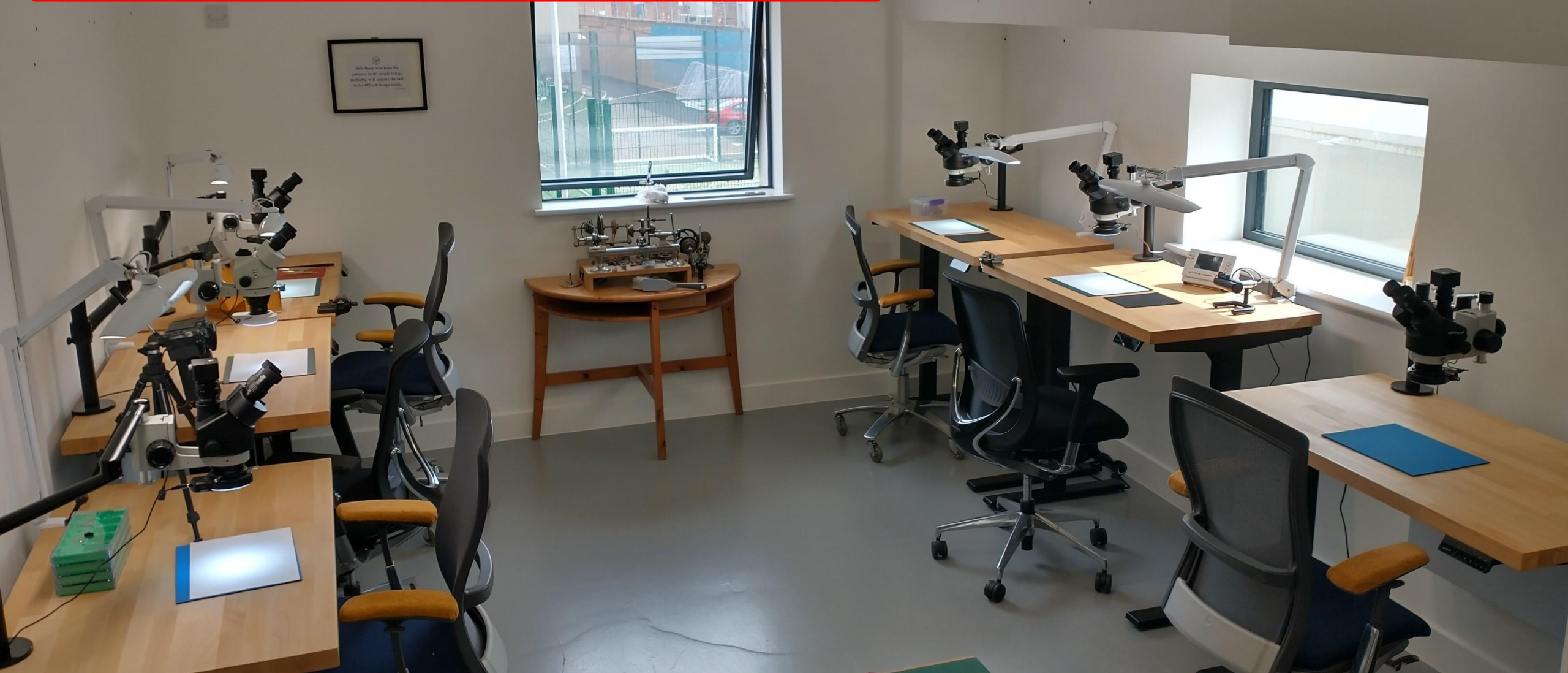


**PowerPoint
presentations
are accessible
via cloud storage**



There are over 2500 PowerPoint pages of video and pictorial content with detailed instructions and guidance.

Each student has a height adjustable bench, a simul-focal stereo microscope and a 'starter' toolkit







Jon the Watch- Your watchmaking tutor

The watch workshop is well equipped with specialised tools and equipment







**One to one tuition
is also catered for**







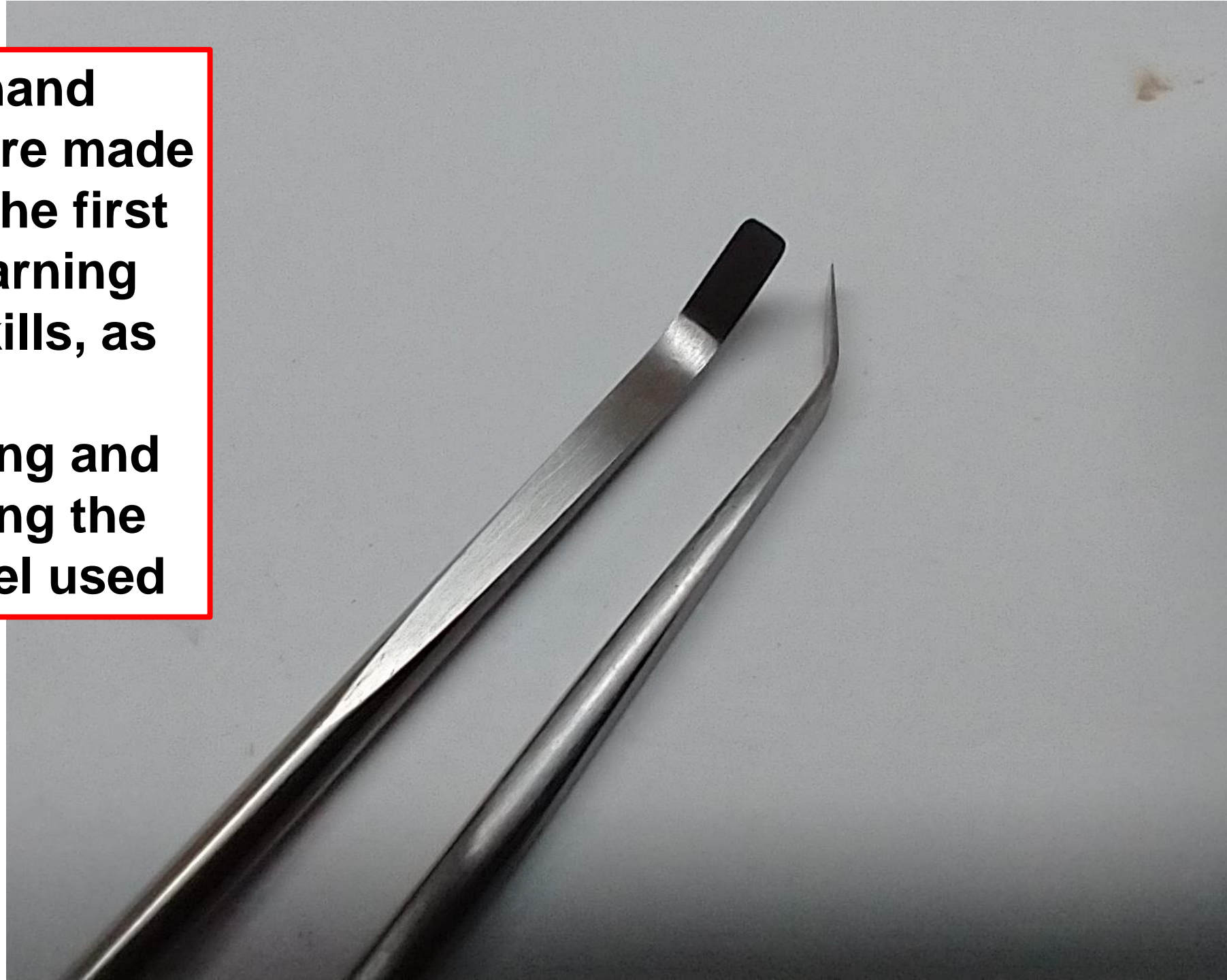
**A technician from Mr Jones
Watches learning how to
make a pair of hand leavers**





Technicians from Mr Jones Watches with their finished hand levers

**Watch hand
levers are made
during the first
year, learning
filing skills, as
well as
hardening and
tempering the
tool steel used**





**Some of the
technicians from
Mr. Jones Watches**



**A student setting a
pallet bridge jewel
using a jewelling tool**

Watch costs

- **The first watch has been bought and is ready for you on the first lesson. There are spare movement parts for breakages.**
- **We will be working on this watch movement for the first 15 to 16 weeks.**
- **I will go into more detail during the course about which watches are to be purchased next. I have chosen watches that can easily be purchased for less than £60 each on eBay. Some may cost more depending on the quality of the movement.**

The first watch in the course

ST36



Course costs and dates

- The course cost is £1320 for 120 hours training over 40 weeks.
- An additional £80 covers the cost of the first watch and spare parts.

There are two first year classes:

- The beginning of term is Monday 8th September 2025.
- The beginning of term is Tuesday 9th September 2025.
- The lessons are held between 6.30pm until 9.30pm.
- The course is held at Wimbledon Art Studios near Tooting, South London, SW17 0BB. 10 minutes from the nearest tube/mainline.
- Nearest tube: Tooting Broadway
- Nearest mainline station: Earlsfield

Course costs and dates

There are three terms over the academic year, consisting of 40 weeks of lessons.

Term one: Monday 8th September to Monday 15th December 2025 inclusive.

Tuesday 9th September to Tuesday 16th December 2025 inclusive.

Term two: Monday 12th January to Monday 23rd March 2026 inclusive.

Tuesday 13th January to Tuesday 24th March 2026 inclusive.

Term three: Monday 6th April to Monday 13th July 2026 inclusive.

Tuesday 7th April to Tuesday 14th July 2026 inclusive.

