



**AMERICAN WATCHMAKERS & CLOCKMAKERS INSTITUTE
HARRISON, OHIO**

Modern Automatic Watches

(Also a preparatory course for the AWCI CW21 exam)

- **The purpose** of this course is to teach the student all the fundamentals of modern mechanical automatic watch repair that are most prevalent on today's market. The student will learn how to perform the various diagnostics in evaluating the condition of the various components, cleaning, assembling, adjustments, dialing and casing.
- **Prerequisites:** Having at least three (3) years in mechanical watch repair, or having participated in the AWCI **Basic Watch Repair or 21st Century Watchmaking Standards** course as well as having the tools mentioned below.
- Reading pages 169-188 of the book *The Theory of Horology* is essential prior to attending the course.
- Length of course: 5 days, Monday –Thursday 8:00 am to 5:00 pm Friday 8am to 3 pm

More specifically, the student will learn about:

- The most common differences between manual wind and automatic watches
- Detailed discussion of all components
- Endshakes and tolerances
- Servicing, including up-to-date methods of barrel set-up.
- Identifying worn components
- Advanced cleaning procedures including pre-cleaning
- Advanced methods of lubricating modern movements including escapement
- Proper use of “Epilame”
- Etachron adjustment procedure
- Timing adjustments and analysis
- Water testing

Essential materials for the student to bring along

For **all** AWCI courses, AWCI will provide cleaning machines and solutions. Hand-tools should be provided by the student. Ownership of quality hand tools is an expectation of a **Professional Watchmaker**. The brand name Bergeon mentioned below is used to help you identify the tools from the most popular tool catalogs; you are welcome to choose a brand of your choice, as long as it is of equal or better quality

Check with your supplier for the recommended hand tools or their equivalents.

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TOOL LIST

Description	Bergeon
1. Barrel Arbor Holder size 1.00 mm	30610 Diam. 1.00
2. Barrel closing tool	
3. Brush (small) or soft small dial brush	1300-6
4. Buff stick leather 6.0 mm wide with plexi-cover # 4056-6	1282-D 4056-6
5. Casing cushion	5394
6. Cloth (lint-free) Selvyt or micro-fiber	
7. Dial plastic protection	6938
8. Dust-blower (rubber)	5733
9. ETACHRON regulator adjusting tool & removing tool #015595 & # 015600	6918 6919
10. File, Hand style 6" long # 2 cut or # 4 cut	
11. File Handle	
12. Finger-cots	
13. Hands fitting tool (hand press or manual pushers)	7404
14. Knife with case opener	6403
15. Lever for hands (2.5 – 5.0 mm in width or similar)	30018
16. Loupe 4X or 5X	
17. Loupe 10X	
18. Movement holder (Slick/Bergeon/Horotec) (large)	4040
19. Movement holder – dial side with center support for hand installation	1996 / 1112
20. Oilers (plastic handle, spade tipped) small sizes Bergeon only (7013 preferred)	7013 or 30102
21. Oil cups, die-cast alloy, 4 separate cups (or more)	30180-A
22. Oiler (automatic No. 1A)	2718-1A
23. Pegwood, Ø 3 mm Or Ø 4 mm	
24. Pithwood (circular wheels)	
25. Pithwood sticks (assorted sizes)	
26. Plexi-stick (clear style only)	6436
27. Presto for removing hands, tool No.	30636-1
28. Rodico or Rub-off	Rodico # 7033
29. Screwdrivers, with stand, e.g. Bergeon, Horotec, Vaucher, etc.	
30. Tweezers, antimagnetic, No. 00 (for cap jewels)	
31. Tweezers, brass, bronze or nickel	1064AM
32. Tweezers, antimagnetic, No. 5	6671-5
33. Tweezers, antimagnetic, No. 3	6671-3
34. Tweezers for hands, type F (Fontax or Horotec) polished steel tips Horotec 12.301-F1 or 12.302-F1	