



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

**Watchmaker's Lathe I**

(Also a preparatory course for the AWCI CW21 exam)

1. The purpose of this course is to teach the student basic micromechanics skills and all the basics of operating a watchmaker's lathe.
2. Prerequisites: **Must read chapter 12**, of *The Modern Watchmakers Lathe And How to Use It* by Archie Perkins, prior to attending the course.
3. <http://www.watch-clock-makers.org/ecom/proddetail.php?prod=book024>
4. Duration of course: 40 hours in 5 days (9:00 a.m. – 5:00 p.m.)

**The student will learn about:**

- Measuring and measuring tools
- Tracing and sawing
- Various methods of filing
- Drilling
- Creating line-finishes
- Introduction to the lathe and its care
- Use of gravers, shapes and cutting geometry
- Sharpening gravers
- Turning square shoulders and tapered surfaces
- Cutting an inside and outside thread
- Other applications of the lathe e.g. cutting out a balance staff.

**I. 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. Lathes, staking tools, poising tools and truing calipers etc will be available, but students should provide their own wherever possible. 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.

# Watchmaker's Lathe I

## Tool List

Description	Bergeon
1. Blades, for jeweler's saw (#4/0 or assortment) (fine, medium, coarse teeth)	
2. Brush (small) or soft small dial brush	1300-6
3. Brush, 3 rows, No. 4	1103-4
4. Buff stick leather 6.0 mm wide with plexi-cover #4056-6	1282-D 4056-6
5. Dust-blower (rubber)	5733
6. Emery sticks, set of different grades (extra fine, fine, medium, coarse)	6636
7. File, Hand style 6" long #2 cut <b>or</b> #4 cut	
8. File Handle	
9. Graver blank CARBIDE (1/16" thick or 1.58 mm) <a href="http://www.mscdirect.com">www.mscdirect.com</a>	MSC # 0412007
10. Gravers square Grobet –Swiss # 36.194 ( 2 NEEDED )	
11. Gravers square Grobet –Swiss # 36.198 ( 2 NEEDED)	
12. Graver handles (6 NEEDED) (file style) ¼" x 3" wooden with metal collar	
13. Graver sharpening holder tool Cas-Ker item # 361.880 or similar	
14. Knife for sharpening pegwood	6403
15. Loupe 3 X <b>or</b> 4 X	
16. Loupe 10 X	
17. Machinist's apron	
18. Machinist's scale ( 6" small metal ruler in millimeters ) Stanley or General brand found a local hardware store	
19. Micrometer ( in millimeters) (.50 mm per 1 turn of tumbler) small overall size is better Cas-Ker item # 350.277 or similar	
20. Pegwood, Ø 3 mm or Ø 4 mm	
21. Pithwood (circular wheels)	
22. Pithwood sticks (assorted sizes)	
23. Rodico or Rub-off	Rodico # 7033
24. Safety glasses	
25. Saw, jeweler's (4" depth of frame)	
26. Stone, Hard Arkansas 6" x 2" x ½" Cas-Ker item # 101.555 or similar	
27. Stone, India combination course and standard 6" x 2" x 1"	
28. Tweezers, brass AM ( x 1)	1064AM
29. Watch paper	
30. Ziploc bags 2" x 2" (clear) approx 10	
31. Vernier calipers in millimeters ( <b>quality</b> digital style preferred) approx. 6" in length	