

NAWCC School of Horology

Five-Year Plan 2024–2029

18-Month Progress Report April 2026

Over the last 18 months, the NAWCC School of Horology has shown solid progress. The range of workshops has grown steadily, and these are consistently well attended. There is clearly a demand for education in clock and watch theory, restoration, and conservation.

The School mainly offers short-format workshops of one to three days. Longer-format workshops are offered, and several are being developed for advanced competencies.

We are encouraged to see many of our participants return to continue their learning journey with us. Across the last 18 months, participants traveled 320 miles on average to attend the School's workshops. Workshops are well attended, with 94% of registrations sold on average and revenue consistently positive (see Appendix 1). Participants' evaluations of the workshops are consistently high, averaging a 4.85/5 (96%) approval rating (see Appendix 2).

The pool of instructors has expanded steadily, and instructors have traveled from Europe to lead our workshops in watch finishing and enameling techniques. We proactively maintain succession planning by training new instructors from within our dedicated cohort of School volunteers.

We carefully develop new instructional material for every workshop. The copyright for any printed or digital information is held by the Association.

In 2025, we ran 20 different workshops at the School. In 2026, we ran 10 workshops during the first quarter and will continue at the same frequency for the remainder of the year. New additions to our curriculum were successfully held:

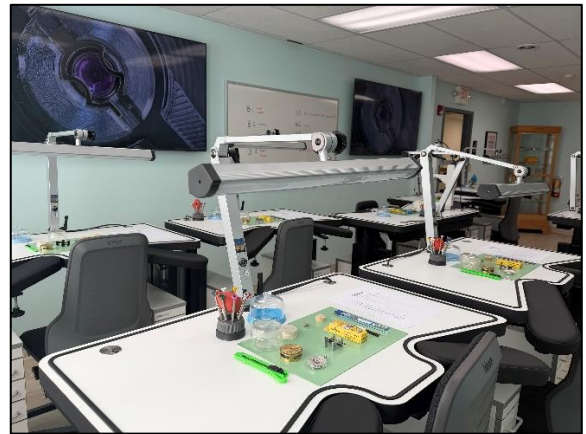
- Introduction to Wristwatch Servicing
- Servicing Three-Train Chiming Clocks
- Introduction to Servicing Cuckoo Clocks
- Machinist Boot Camp – Milling Machine
- Machinist Boot Camp – Lathe

Year 1 Objectives

➤ Fully modernize five classrooms

Completed Tasks

- All fully equipped with large screens and microscopes/cameras
- Full set of equipment provided for each workshop participant
- Completely upgraded the electrical infrastructure in the micro-machining and watchmaking classrooms
- Upgraded much of the lighting in the building from fluorescent to LED: 85% of educational spaces converted



➤ **Develop a full clock curriculum**

Completed Tasks

- See Appendix 3.



➤ **Conduct three workshops each calendar month**

Completed Tasks

- In 2025, the average was 1.6 workshops each month. In 2026, the School will have held an average of three workshops per month between January and April.



➤ **Convert the loading dock area into a maker's space**

Completed Tasks

- Three rooms created, electrical infrastructure upgraded throughout, painted, and furnished with bright LED lighting
- Schaublin 102 lathe installed and operational
- Elgin horizontal mill installed and requires basic overhaul

- Bridgeport milling machine acquired and due for installation in June 2026
- Two small lathes and milling machines installed
- Woodworking section furnished with table saw, planer, jointer, and five woodworking benches
- Hearth area completed with fume extraction and return air system
 - Enameling kilns and equipment installed
 - Anvil

Remaining Tasks

- Dust extraction system, router table, band saw, and hand tools

➤ **Ensure that the building is fully repaired, secure, and weather-tight**

Completed Tasks

- Roofing was repaired in 2025
- Security cameras installed throughout the building

➤ **Continue to train and develop teachers**

- Current roster of teachers provides expert instruction in a variety of subject areas

Instructor	Workshop
Ken De Lucca <i>Education Director</i>	Craft-A-Clock, Introduction to Antique Clocks, American Style Time/Strike Movement, Rack-and-Snail Striking and an Introduction to the Tall Case Clock, Mentorship in Clockmaking, Pivots & Bushings, Chiming Clocks, Foundational Clock Repair Skills I, Cuckoo Clock Repair Basics
Sam Gradel <i>School Coordinator</i>	Craft-A-Clock, Introduction to Antique Clocks, American Style Time/Strike Movement, Rack-and-Snail Striking and an Introduction to the Tall Case Clock, Mentorship in Clockmaking, Pivots & Bushings, Chiming Clocks, Foundational Clock Repair Skills I, Machinist Boot Camp: Lathe, Machinist Boot Camp: Mill
Rory McEvoy <i>Executive Director</i>	Wristwatch Servicing, Clock and Watch Conservation

Instructor	Workshop
Marc Clodfelter <i>Visiting Instructor</i>	Wristwatch Servicing
Jerry Kieffer <i>Visiting Instructor</i>	Using the Micro-Lathe for the Beginner, Using a Micro Mill for the Beginner, Wheel and Pinion Cutting
Bill Forney <i>Volunteer</i>	Introduction to the Anniversary or 400- Day Clock
Kevin McCauley <i>Volunteer</i>	Foundational Clock Repair Skills I, Machinist Boot Camp: Lathe, Machinist Boot Camp: Mill
Joel Hagle <i>Volunteer</i>	Cuckoo Clock Repair Basics
Lee Davis <i>Visiting Instructor</i>	Introduction to Gilding on Clock Tablets, American Shelf Clock Tablets with Stenciled Borders
Dave Gorrell <i>Visiting Instructor</i>	The American Wooden Clock Movement, Pocket Watch Disassembly, Lubrication & Reassembly
Philippe Narbel <i>Visiting Instructor</i>	Watchmaker Master Class
Nikoloz Gamkhitashvili <i>Visiting Instructor</i>	Master Class in the Ancient Art of Enameling
R.K. Elswick, Stu Lord, Dave Burns from the American Watchmakers- Clockmakers Institute	Foundational Clock Repairs II

➤ **Develop a Museum conservation program of workshops**

Completed Tasks

- Several workshops developed
 - Handling antique clocks for museum professionals
 - Historical clockmaking techniques and conservation
 - Silvering processes
 - Cleaning products and application
 - Approaches to maintaining dynamic objects in the museum environment

➤ **Begin the process of gaining state accreditation**

- Obtain state licensure to conduct classes – Year 3 Objective

Next Steps

The development of the NAWCC School of Horology has been rapid and very successful. Our five-year objectives are unchanged, and over the last 18 months, we have seen remarkable progress. We have developed workshops that will enable an entry-level participant to learn the core skills required for clock restoration and repair. We are actively creating advanced workshops that will integrate the resources of the School and Museum to train participants in the critical thinking skills required for working on heritage pieces in museums and private collections.

We are fortunate to have highly proficient educators on staff, and our in-house instructor training has proven very effective in ensuring that the School can continue to deliver excellence. However, in order to attract the best instructors for an ever-expanding curriculum, we must offer competitive salaries. The NAWCC capital campaign will highlight this need and encourage donors to contribute to an endowment that will help us reach this goal.

Appendix 1: Financial Details

	Fiscal Year 23-24	Fiscal Year 24-25	Fiscal Year 25-26*	Budgeted Fiscal Year 26-27
Contributions	4,510	14,665	82,251	15,000
Investment Income	11,332	15,616	14,441	16,327
Grant	-	20,883	-	-
Workshops	69,030	82,002	142,585	200,426
Other	976	2,733	346	1,000
Total Revenue	85,848	135,899	239,623	232,753
Personnel Costs	23,153	60,130	126,461	80,629
Program Operations	5,958	26,692	27,106	16,949
Facility and Infrastructure	8,171	19,480	22,603	15,642
Administrative and financial	9,849	4,772	11,339	10,414
Special Projects	-	9,499	-	-
Total Expenses	47,131	120,573	187,509	123,634
Operating Income	<u>38,717</u>	<u>15,326</u>	<u>52,114</u>	<u>109,119</u>

* Uses actual results through 2/28/2026 and estimated numbers for March 2026.

Appendix 2: Workshop Evaluation Results

Workshop	Overall Class Avg Rating	Instructor Avg	Facility Avg	Avg Travel Distance (mi)	As %
Craft-A-Clock – Dec 2024	4.95				99
Introduction to Antique Clocks (2-day) – Jan 2025	4.87			228	97
American Kitchen Clock Movement: Traveling Workshop – Jan 2025	4.90				98
Time/Strike – Feb 2025	4.73			318	95
Rack & Snail – March 2025	4.86			320	97
Micro-Lathe for Beginners – Mar 2025	4.89			626	98
Introduction to 400-Day Clocks – Apr 2025	4.72			225	94
Watchmaker Master Class – Beveling 1 – April-May 2025	4.80			193	96
(AWCI) Foundational Clock Repair Skills 1 – May 2025	4.62			296	92
Introduction to Gold Leafing on Clock Tablets – May 2025	4.84			374	97
Introduction to Antique Clocks – June 2025	4.85			225	97
Micro-Mill for Beginners – July 2025	4.87			654	97
American Wooden Works – July 2025	4.83	4.92	4.69	277	97
Mentorship in Clockmaking – July 2025	4.94	4.98	4.88	229	99
Pivot Polishing/Burnishing & bushings – Aug 2025	4.83	4.84	4.80	238	97
Chiming Clocks – Aug 2025	5.00	5.00	5.00	507	100
Wheel & Pinion – Sept 2025	4.80	4.94	4.62	327	96
AWCI Symposium: Introduction to Antique Clocks – Sept 2025					
Master Class in the Ancient Art of Enameling – Oct 2025	4.38	4.59	4.05	254	88
Introduction to Wristwatch Servicing – Oct 2025	4.81	4.84	4.75	215	96
Time/Strike – Oct 2025	4.98	5.00	4.95	188	100
Foundational Clock Repair Skills 1 – Nov 2025	4.84	4.86	4.82	609	97
Foundational Clock Repair Skills 2 – Nov 2025	4.38	4.91	4.52	104	88
Craft-A-Clock – Dec 2025	4.90	4.94	4.83	385	98

Workshop	Overall Class Avg Rating	Instructor Avg	Facility Avg	Avg Travel Distance (mi)	As %
Introduction to Wristwatch Servicing – Jan 2026	4.93	4.92	4.96	135	99
Introduction to Antique Clocks (FL Regional) – Feb 2026	4.85	4.99	4.64	287	97
Cuckoo Clock Basics – Feb 2026	4.87	4.92	4.80	235	97
Traveling Workshop: French Clocks F102 – Mar 2026	4.80	5.00	4.48		96
Machinist Boot Camp: Lathe – Mar 2026	4.88	4.88	4.90	522	98
Machinist Boot Camp: Mill – Mar 2026	4.89	4.93	4.83	458	98
Introduction to Antique Clocks – Mar 2026	4.88	4.92	4.82	276	98
WE-117 Using the Micro-Lathe for the Beginner – March 2026	4.91	4.97	4.85	251	
Introduction to the Anniversary or 400-Day Clock – Apr 2026					

Appendix 3: Workshops

Introductory: One Train, Time-Only

Introduction to Antique Clocks

Antique American style

“A peek behind the dial”

Offered twice/year+
One- or two-day workshop
12 participants

Craft-A-Clock

Modern Hermle desk clock

Participants assemble and keep
their clock; two-for-one deals

Offered twice/year
One-day workshop
12 participants

Introduction to Anniversary Clocks

Torsion spring & rotating
pendulum

Participants encouraged to bring
their own clocks; we have parts!

Offered once/year
Three-day workshop
8 participants

Intermediate: Two Trains, Time & Strike

American-Style Time/Strike

American count wheel strike

“The bread and butter of American
clock repair”

Participants encouraged to bring
their own clocks

Offered twice/year
Three-day workshop
8 participants

Rack and Snail Striking: Introduction to Tall Case Clocks

Rack & snail, English bell strike

Participants encouraged to bring
their own clock movements

Offered once/year
Three-day workshop
6 participants

Cuckoo Clock Basics

Modern Regula 25

Participants encouraged to bring
their own clocks; we have parts!

Offered once/year
Two-day workshop
8 participants

American-Style Wooden Works

Count wheel strike

Participants encouraged to bring
their own clocks; we have parts!

Offered once/two years
Two-day workshop
8 participants

Mentorship in Clockmaking

(Usually) two trains
(Usually) time & strike
(Usually) count wheel strike

Participants bring and focus on
personal clocks over a week with
close guidance

Offered twice/year
Five-day workshop
4 participants

Advanced: Three Trains, Time, Strike & Chime

Introduction to Chiming Clocks

Rack & snail strike

Modern Hermle 451 movement

Offered once/year so far
6 participants

Clock Repair (minus pure machining workshops)

Pivot Polishing, Burnishing, and Bushings

Pivot polishing and burnishing by hand, by lathe, on Rollimat. Bushings on machines and by hand.

“Try before you buy” for more expensive & specialized equipment

Offered once/year
Three-day workshop
6 participants

AWCI/NAWCC: Foundational Clock Repair Skills I

Measuring, turning to numbers, cutter geometry, using a four-jaw chuck, pivot polishing, repivoting, making and installing bushings

Offered once/year
Three-day workshop
8 participants

In development: Hand Skills in Clock Repair

Repivoting, lantern pinion repair, tooth replacement, re-tailing mainspring, making and installing bushings, filing

Offered once/year tentatively
Two- or three-day workshop
8 participants

AWCI: Foundational Clock Repair Skills II

Laying out wheel, crossing with saw, machining hub and mounting wheel using the lathe, making tools (polishing, hardening, tempering steel)

Offered once/year
Three-day workshop
8 participants

Aesthetics

Introduction to Stenciling on Clock Tablets

Offered once/two years
One-day workshop
8 participants

Introduction to Gilding on Glass

One-day workshop
8 participants

In development: Clock Case Repair

Machining (repeating AWCI workshops from previous page)

Machinist Boot Camp: Introduction to the Micro Lathe / Micro Mill

Offered 3x/year
(tentatively)

Two-day workshop
8 participants

Using the Micro-Lathe for the Beginner

Procedures for machining on a Sherline micro-lathe: turning, boring, drilling, reaming

Offered once/year
Two-day workshop
8 participants

Using a Micro Mill for the Beginner

Procedures for machining on a Sherline micro-mill

Offered once/year
Two-day workshop
8 participants

Wheel & Pinion Cutting

Techniques for crossing wheels on the micro mill, making a fly cutter, cutting wheel teeth

Offered once/year
Two-day workshop
8 participants

AWCI/NAWCC: Foundational Clock Repair Skills I

Measuring, turning to numbers, cutter geometry, using a four-jaw chuck, pivot polishing, repivoting, making and installing bushings

Offered once/year
Three-day workshop
8 participants

AWCI: Foundational Clock Repair Skills II

Laying out wheel, crossing with saw, machining hub and mounting wheel using the lathe, making tools (polishing, hardening, tempering steel)

Offered once/year
Three-day workshop
8 participants

Vintage Pocket Watches

Pocket Watch Disassembly, Lubrication & Reassembly

Disassembling, reassembling, lubricating vintage American pocket watch.

Participants encouraged to bring their own watches

Offered once/2 years
currently
2-day workshop
8 participants

Modern Wristwatches

Introduction to Wristwatch Servicing

Disassembling, cleaning, reassembling, lubricating, regulating ST-36
Offered quarterly
Two- and a half-day workshop
8 participants

(Title TBD): Wristwatch Servicing II

Reinforcement of skills from Introduction to Wristwatch Servicing, plus cases, stems, dials, and hands for ETA 6498

Plan to offer twice/year
5-day workshop
8 participants

Bracelets, Batteries, Bands

Jewelry counter skills:
Fitting bracelets and bands, replacing batteries in quartz watches

Plan to offer twice/year
1-day workshop
8 participants

Automatic Wristwatches

Plan to offer twice/year
Three-day workshop
8 participants

Quartz Watch Repair

Plan to offer twice/year
3-day workshop
8 participants