



YACHT RESTORATION PROGRAM

FIRST YEAR

FALL

The first term begins with shop safety and tool and machine use. Students will progress from a series of bench projects designed to develop tool-use skills directly into the restoration of a small boat. In addition to the restoration work, students will measure a small boat, loft the lines, and create a scale lines plan and half model. Portfolio items completed by the end of the semester will include several small tools, a toolbox, a lines drawing, a half-model, and photo documentation of restoration projects. Subjects covered will include hull shape, lines drawings, and the fundamentals of wooden hull construction, materials and technology.

Courses: Shop Safety, Hull Shape and Lofting, Historic Documentation I, Restoration Practicum I.

SPRING

During the second term students will measure a small boat, loft the lines, develop construction details on the lofting, and create a scale lines plan and construction plan. Project documentation techniques are introduced. Students continue the restoration of their project boat. Portfolio items for the second semester will include a second lines plan and construction drawings and photo documentation of restoration projects. Subjects covered will include hull shape and lines drawings, construction drawings, basic structural marine engineering, fundamentals of wooden hull construction and materials and technology.

Courses: Documentation and Drafting, Restoration Practicum II.

SUMMER

The final term of the first year builds on restoration skills developed in the previous semesters as well as basic boat handling, seamanship and navigation. The summer term also includes an Independent Study, which allows students to complete self-selected projects that address their individual interests and proficiencies. Portfolio items will include photographic documentation, and the end product of the Independent Study.

Courses: Sailing and Seamanship, Independent Study.

SECOND YEAR

The second year of the yacht restoration program builds on the knowledge and skills achieved in the first year through the teaching of advanced restoration skills and project management techniques.

FALL

The first term begins with a review of shop safety. The first week is dedicated to a course in hull survey and assessment resulting in student survey reports of selected vessels. The second week is dedicated to a course in project management. Included in the project management course are real time exercises in materials costing and procurement, labor estimates, business fundamentals, and contracts and customer relations. Students then begin the restoration of their second year

YACHT RESTORATION PROGRAM TOOL LIST

Each student at IYRS is responsible for his or her own set of hand tools. A list of required tools follows, typically costing around \$850 when purchased new. Tools do not have to be new, simply in good working condition. IYRS instructors are available for advice and direction by contacting the school office.

- Safety Glasses (clear)
- Hearing protection
- 3M Respirator w/organic vapor cartridges
- 3/8" Chuck Electric Drill & Drill Index (cordless preferred)
- Set of drill bits 1/16" – 1/2" by 16" increments
- Fuller Tapered Drill Set #8
- 10" Combination (4 in hand) Rasp
- 16 oz. Claw Hammer
- Screwdriver Set
- 7/16", 1/2", 9/16" Combination Wrenches
- 6" Adjustable Wrench
- Vise Grip
- Retractable Utility Knife
- Glue Gun (with cartridges)
- Hex Key Set Standard
- Natural Bristle Paint Brushes 1", 2", 3"
- Putty Knife 1", 3"
- Paint Scraper
- Flat Bar
- Box of Pencils
- 12" Metal Combination Square
- 8" Bevel Square
- 16' Tape Measure
- 8" Pencil Dividers (compass)
- Sharpening Stone
- Low Angle Block Plane (Stanley)
- #3 or #4 Bench Plane
- Stanley #90 Rabbet Plane
- Chisel Set - 1/4", 3/8", 1/2", 3/4", 1" (Two Cheries, Hirsch, or Japanese if affordable)
- Flat Stanley Spoke Shave (or wood handled Veritas with adjustable knobs)
- Cabinet Scraper (Sandvik type)/Card Scraper
- Dovetail or Back Saw
- Japanese Crosscut Saw (2-sided)
- Hard Rubber Sanding Block (3M)
- 2 3/4" Soft Rubber Sanding Block (3M)
- Hack Saw
- Plumb Bob
- 35mm Point and Shoot Camera
- Padlock
- 3" or 4" Machinist's Square
- Pin Punches
- Box of Sharpie Markers

This kit is considered to be a basic set. Students will also work with and learn about many other tools commonly used in the trade. Recommended optional tools include a standard rabbet plane and a cordless drill. When purchasing tools, always keep receipts for return and/or warranty purposes.



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project boat. Project management and labor estimating are applied directly to the second year restoration project. During advanced lofting students learn the techniques used to transfer the shape of the faired hull to patterns and molds used in the restoration of the subject boat. Students then focus on the restoration of the hull framework and planking. Students also focus on improving craftsmanship as well as the management of restoration projects. Portfolio items will include photographic documentation of restoration project, survey report, bill of materials, table of scantlings, labor estimate, contract agreement and lines / construction plans.

Courses: Survey and Assessment, Project Management, Advanced Lofting, Restoration Practicum IV.

SPRING

The second term focuses on the final phase of a yacht's hull restoration and includes joinery such as decks, cockpit furniture, hatches, and interior bulkheads. The final phase of the restoration includes finishing and fitting out with hardware, sailing rig or power train in the case of a powerboat. Portfolio items include photographic documentation of the restoration project.

Course: Restoration Practicum V.