



RVH University: a college with *no buildings*

Every class, every lab, every exam on a working research vessel — **the whole degree, on the water**. Ten hulls in the plan, all of them the same two decisions: **a ferrocement hull under a Chinese junk rig**, carrying as much computation as a ship can honestly power. The ship is real and fifty years old. The university is not built yet.

RVH UNIVERSITY IS A CONCEPT STUDY · DOES NOT EXIST · NOT ACCREDITED · NOT ENROLLING · SEND NO TUITION

84 ft

FERROCEMENT,
PLASTERED BY HAND

270,000

NAUTICAL MILES LOGGED

6

SCHOOLS · SIXTEEN
PROGRAMMES

0

BUILDINGS ON LAND, EVER

WHY THE SHIPS ARE MADE OF CONCRETE

The real argument is what happens six thousand miles from a boatyard.

FERROCEMENT · THE STANDARD

Materials are sand, cement, steel mesh and water — there is no port, and few villages, where you cannot buy all four.

Repair is chip out the damage, wire in new mesh, plaster, cure. Hand tools, supervisable labour.

Damage is visible: concrete cracks and spalls where it has been hurt. No borers, no osmosis, no rot, fireproof.

CARBON FIBRE · REJECTED

A composite repair wants resin inside shelf life, controlled temperature and humidity, vacuum bagging, sometimes an oven — and a technician who has done it before.

Damage can be invisible. Delamination inside the laminate leaves a hull that looks fine and is not.

A carbon hull has to come home to be fixed. This university never comes home.

AND WHY THE RIG IS A JUNK RIG

She already sails under one. Flat panels between full-length battens: you reef by dropping panels and the battens stack — fast, from the cockpit, single-handed, in a rising gale. No winches. Almost no standing rigging, which deletes the classic offshore failures: swaged terminals, turnbuckles, rod. Almost any cloth works and panels come off one at a time, so a tear is not a lost sail. **A needle, a sewing machine, and a length of bamboo.**

AND A COMPUTER THAT RUNS WHERE THERE IS NOTHING

A brain runs on about twelve watts; every supercomputer on earth combined still cannot fold laundry. The industry's answer has been more power and more water — roughly a third of a large data centre's energy goes to cooling it. A ship has **no grid, no water main and no cloud**. Whatever goes aboard runs on what the ship makes, cools on air, and works with the network down.

It has to. A season of hydrophone recordings will never fit up a satellite link, so either the work waits for the dock — as it did for fifty years — or it happens where the data is made: every instrument feeding one system that flags a sound nobody has on file, or a specimen matching nothing in the reference set, **while the ship is still in the bay**. The catalogue becomes what the university publishes.

Three decisions, one logic — build for the place the thing actually has to work, and accept the costs. Ferrocement is heavy so the fleet is slow; survey and insurance are harder; the junk rig gives up performance upwind; the computer is bounded by the ship's power budget. All acceptable for a school, none for a racing yacht. The onboard system is proposed, not installed — no hardware selected, no performance claimed.

WHAT IS TRUE TODAY

The R/V Heraclitus is real: 84 feet of ferrocement under junk rig, 270,000 nautical miles across six oceans, up the Amazon and beneath Antarctic ice. She is under rebuild at Roses, Catalonia, on a new hull of roughly sixty tons; paint was completed in December 2025 after a year in which over fifty people came to work on her. Everything above about ferrocement, composite repair and the junk rig is a fair description of the materials, trade-offs included.

STUDENTS BUILD HULL THREE

You cannot let students lay up a carbon hull. Steel wants certified welders; timber wants shipwrights and years. Mesh and plaster can be taught in a week, inspected as the work goes on, and corrected while it is still wet — the only hull material a student can legitimately help build.

So every cohort in Marine Engineering builds part of the next hull, and each hull should cost less than the last as the yard learns. It is exactly how the first one was built in 1974: volunteers, salvaged scaffolding, no experience.

Fund the materials. The students are the labour. The labour is the degree.

THE ASK: ONE VOYAGE, NOT A FLEET

Twelve students. One semester. The hull that already exists. Taught for credit through a marine science department that is already accredited, the way sea-going field semesters have run for decades. The only thing here that can be costed, scheduled and delivered inside two years. The fleet is the argument; the pilot is the ask.

NAME A LAB, NOT A BUILDING

One berth	A named scholarship — one student, one semester at sea. The only item with a face attached.
Hull three	Cement, mesh, timber, rig and sailcloth. Students supply the labour as coursework.
The compute bay	The machine that keeps the catalogue, and the power budget that lets it run on what the ship makes.
The comms suite	Satellite bandwidth is the hard constraint on teaching at sea.
The wet lab	Bench, sample handling, cold storage, instruments.
Drydock weeks	Yard time at Roses. Unglamorous and decisive.

Hull names are not for sale — those belong to the philosophers. Costing follows the pilot budget; we would rather show you the arithmetic than a tier card. Strongest commercial fit: shipping lines short of officers, cement and steel producers, instrument makers, silicon and power systems, satellite providers.

WHAT IS NOT TRUE YET

RVH University does not exist. No campus, no faculty, no admissions office, no fleet beyond the one hull. The seal is new; the ship is fifty years old. Nothing is accredited or licensed and nothing is enrolling; no applications, deposits or tuition are accepted. The schools, programmes, credential pathways, onboard computation and nine additional hulls are proposals, and hull imagery other than the Heraclitus is AI-generated concept work.

support@rvheraclitus.com · (800) 722-3870 · rvheraclitus.com/university

Ask for the pilot voyage budget, the fourteen-part concept film series, or a conversation. Sponsorship enquiries concern the RVH University concept only and are separate from the ship project's own fundraising.

The R/V Heraclitus is a project of the Institute of Ecotechnics (ecotechnics.edu); the ship's own history, expedition record, rebuild fund and volunteering are at rvheraclitus.org. Archival photographs courtesy of the R/V Heraclitus project and the Institute of Ecotechnics, used with permission.