College Mission Statement
Honolulu Community College’s mission is to:

- Serve the community as an affordable, flexible, learning centered, open-door comprehensive Community College that meets the post-secondary educational needs of individuals, businesses, and the community.
- Serve the Pacific Rim as the primary technical training center in areas such as transportation, information technology, education, communications, construction, and public and personal services.

Program Mission Statement
The Small Vessel Fabrication & Repair program’s mission is to serve the community as a learning-centered, open-door program providing technical training to meet the demands of companies within the small vessel fabrication and repair industry as well as the needs of the individual. An open-exit option allows students to identify their career objectives and participate in program exploration.

Part I: Executive Summary of Program Status
<Overview of your current program status, including what has been done in the program since your last program review report.>

Part II: Program Overview
Program Description
The Small Vessel Fabrication and Repair program is a two-year Associate in Applied Science program whose main goal is to prepare individuals for employment in the boat maintenance, repair, and manufacturing industries. Students work on a variety of "real world" repair, service and construction projects. Hands-on instruction is provided in composite boat construction and repair, marine woodworking and joinery, lofting, plug and mold construction and marine spray painting systems. Boat yard operation skills are practiced year round including marine straddle-lift operation, crane operation, forklift and hydraulic trailer operation. There are also courses that focus on the rigging, mechanical, plumbing, propulsion, and electrical systems of boats.

The majority of instruction for the program is held at the Marine Education and Training Center (METC) located on Sand Island, Keehi Lagoon, which is a state-of-the-art training facility. The METC ranks as one of the premier training facilities in the United States featuring four large work bays to allow work on vessels up to 45 feet, a concrete pier equipped with two cranes to allow work on vessels in the water, finger piers for removing vessels from the water employing a marine straddle-lift, as well as classroom, laboratory, and office space.

For enrollment in the program, students must be able to climb a twelve-foot ladder onto a vessel's deck, get on the deck, walk around the cabin and descend to the ground in a time period of not more than twice the time it takes the instructor to perform these tasks. The students must be able to jump onto the deck of a boat that is 18 inches below pier
level, work in a crouching or standing position for hours at a time, lift 40 pounds from the floor onto a 34 inch high table top, and be physically fit to wear an organic respirator. Each student will be required to obtain a note from a physician stating that the student is capable of wearing an organic respirator. There are many physical demands and hazards in the boat maintenance and repair industry and the program. These include, but are not limited to, occasional heavy lifting, bending, crouching, and working in a cramped position. There will be exposure to woodworking saw blades and cutters, rapidly moving parts, and live electrical circuits. There will also be exposure to resins, solvents, fuel, paints, exhaust fumes, and dust. Students may get cuts, abrasions, burns, aches, and pains.

Program History

- To your knowledge, how old is this program? Do you know how this program started up?

- The Marine Education and Training Center was dedicated in 1995 with the program, Marine Maintenance and Repair having its initial intake during the Fall semester of that same year. The program (and facility) was developed in order to fulfill what was perceived by State legislators to be a future market for marine technicians in the pleasure as well as small commercial marine markets in Hawaii and beyond.

Program SLOs

Upon successful completion of the Small Vessel Fabrication and Repair program, students will be able to:

- Secure vessels, safely operate machinery and perform operations associated with dry-docking operations.
- Operate and maintain standard woodshop stationary and portable tools; sharpen, tune, and use standard woodworking hand tools; true wood stock accurately, safely, and efficiently; construct shop fixtures and jigs; and, read, interpret and create blueprints.
- Identify a variety of composite materials, formulate laminate schedules and demonstrate proficiency in laminating techniques, perform standard composite quality control tests, practice quality assurance and safety, and utilize the practical principals of composite-resin chemistry.
- Present a systematic approach to surveying damaged composite vessels and be able to execute marine-quality composite repairs.
- Perform pre-paint preparation and procedures, understand air compressor requirements, utilize common coating application systems, techniques and equipment, and understand and employ multicomponent paint systems.
- Fabricate components necessary to build a boat hull from a lofting, practice principals of attaining quality molds, apply spray and manual mold release systems, and calibrate and operate a plural component "chopper gun".
- State the basic operational principals and maintenance of common marine propulsion systems, and perform basic service and troubleshooting of marine engines.
- Perform trouble-shooting and testing of marine circuits, perform installation of electrical components commonly found on a vessel, perform marine battery
service, recharging and installation, and understand and employ corrosion control systems.

- Understand State and Federal wastewater discharge regulations and perform installation and maintenance of plumbing components commonly found on a vessel.
- Survey a sailboat’s rig including running and standing rigging and perform installation and maintenance of systems commonly found on sailboats rigs.

Admission Requirements
- What are the admission requirements for students to get into this program?

  - The same as Honolulu Community College with the following additional requirements:
    Be able to wear a respirator.
    Be able to climb up and down ladders.
    Be able to jump onto the deck of a boat that is lower than dock height.
    Have no allergic reaction to the chemicals used.

Credentials / Licensures Offered
- Is there any city, state, or national credentials or licenses offered in this field that students can obtain while in this program? If yes, please describe or list what they are.
- Are these credentials or licenses necessary for working in this field? Which ones are necessary?

  - The Marine Composite Technician license, offered through the American Composite Manufacturers Association, is an internationally recognized license. This is offered at the Marine Center for all second-year students. At this time, there are no licenses within the United States that are necessary in order to work as a marine technician, although this is changing.

Faculty and Staff
- Please list the names of your faculty and staff who teach in your program and whether they are full or part time.

  - Red Griffiths-Seewerker-Full-time lecturer (should be Instructor)
  - Mark Keala Kimura-Part-time lecturer
  - Richard McCreedy- Part-time lecturer

Resources
- Please list the various physical resources in your program that are essential for operation (especially any expensive equipment you may have).

  - Complete wood-working shop, including all floor machinery.
  - Complete fiberglass fabrication shop, including chopper guns, vacuum and vacuum infusion systems, resin impregnator.
  - Paint Bay, all spray guns (HVLP, Pressure pot, Gravity feed, siphon feed)
• Marine engine/propulsion bay.
• Heavy equipment, including:
  Marine Straddle lift
  Bridge cranes
  Pedestal Cranes
  Hydraulic boom deck crane
  Forklift
  Hydraulic boat-moving trailer
  Power hand tools

Articulation Agreements

• Does this program have any articulation agreements with other educational programs, especially any 4-year degree programs? If yes, who with and to pursue what degree/certification?

Not at this time

Community Connections / Advisory Committees / Internships / Coops / DOE

• Please list the names of everyone currently on your advisory committee. How often do you meet with your advisory committee?
• Barry Choy, Designer, Choy Designs
  Freeman Correa, Apprentice Program Director, Pearl Harbor Shipyard
  Frank Gilbert, Operations Manager, Keehi Marine Center
  George Norcross, President, Epoxy Sales Hawaii
  Chandler Rowe, President, Plas-Tech, Ltd.
  Eric Schiff, Manager, Navatec
  Dennis Smith, President, Marine Surveyors and Consultants
  Larry Stenek, Owner, Art Nelson Sailmakers
  We have not met for the past 3-years but will be meeting this December.
• Does your program include any internships or coops? If yes, please list some of the businesses that the students participate with.
• No. Though some work part-time for marine businesses within the area.
• Does your program have any other ties in any way to the community or the department of education? If yes, what are they?
• Yes. We are partnering with the Polynesian Voyaging Society to develop curriculum centered on non-instrument navigation, traditional voyaging and piloting/seamanship.
• Hawaii Ocean Safety Team (HOST) has its monthly meetings at the METC facility, which we attend.
• Provide a venue for most all the marine engine manufacturers to hold training seminars.
• Work with various DOE schools, both regular and charter, as well as Assets school, and several private schools in canoe-paddle building for students.
• Provide a venue for Kamehameha Schools’ paddling classes.
• Provide training area and storage space for the University of Hawaii’s Sailing team.
Distance Delivered / Off Campus Program

- Are there any courses in your program that are delivered via distance education (this includes via cable television or the web)? If yes, please list which courses, how it is delivered, and who the instructor is.
- No—due to the hands-on nature of the curriculum.
- Are there any courses delivered off campus? If yes, please list which courses, where it is delivered, and who the instructor is.
- Not at this time.

Part III. Quantitative Indicators for Program Review

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Part IV: Assessment Results for Program SLOs

- How do you know that students are achieving your stated Program SLOs?
- Through quizzes and exams as well as observational evidence during lab (shop) time.
- What kinds of evidence can you provide? (You don’t have to include the evidence in this report. Just list some of the ways that you collect evidence on student learning. Examples include knowledge surveys, projects, writing samples, observations, portfolios, performance tests, capstone experiences, etc.)
• Projects are the single biggest form of evidence that the SLO’s are being achieved. Secondly, observable behavior/procedures. We also do entry/leaver exams to determine whether we (the Instructors) are fulfilling the SLO’s.

Part V: Curriculum Revisions
• How many of your courses have up-to-date curriculum forms (on file in building 6) with the stated course student learning outcomes, methods of evaluation, and methods of instruction? (Check your course files at the central file collection on the 2nd floor of the administration building – the goal is to have all courses up-to-date within a 5 year period)
• I believe all our current courses have up-to-date curriculum forms.
• Which courses, if any, have you made revisions to, briefly describe the revisions made, and when were the revisions implemented?
• No revisions have been made in recent years, however, we are considering including the basic Physics theory into our propulsion class, doing away with Physics 56 as a required course and replacing it with HWST 280. Also, we are thinking about doing away with ICS 100 and introducing a course on utilizing the computer for marine design.
• Do all of your instructors (both faculty and lecturers)) include the course (not program) SLOs into their syllabus? How do you ensure that everyone is doing so?
• Yes, because I authored all the syllabi used.
• Where do the instructors get the course SLOs from? (Do they get them from the program coordinator? From the division secretary? From the HCC Website?)
• From the syllabus for each course. As we do not have Instructor turnover like some other programs, this question doesn’t really apply to Marine.

Part VI: Survey Results
• Does your program utilize any types of surveys to gather data on student performance (such as knowledge surveys), student satisfaction (such as satisfaction surveys), or student placement (either placement in jobs or passing a state licensure exam)? If yes, please provide some of the results. If no, what types of surveys would you like to implement in the program next year?
• We do entry/leaver surveys each semester. Additionally, we keep track as best we can the placement of our graduates. For example, from the period 1999-2006, the percentage of graduates that found jobs within the marine industry or jobs that could be directly related to the training acquired at the METC averaged 83%.

Part VII: Analysis of Data
• What are the strengths of this program?
• Its uniqueness in the curriculum. Most “boatbuilding” schools stress traditional methods of construction, which does not lend itself well for graduates to find jobs.
• What are the weaknesses of this program?
• Lack of adequate budget to keep up with the latest innovations within the industry. Lack of marketing dollars to entice more out-of-state individuals
to attend our program. (The center was built envisioning attracting students from out-of-state)

- What opportunities exist for the program?
- The program could be expanded to include marine machining, marine welding, piloting, seamanship, design, nano-composites, and a myriad of other subject areas.
- What challenges (threats) exist for the program?
- Lack of enrollment, due I believe to the lack of marketing. We are the only program of its kind west of the Mississippi, yet at a recent meeting of Deans of Student Services for the UH Community College system, held at the METC facility, the majority did not know the program even existed!
- Are the measurement of your Program and Course SLOs providing adequate information to evaluate student learning or should new measures be developed?
- I believe they are, yes.
- Does the program have sufficient resources to promote student learning? Are other resources needed such as personnel, facilities, or equipment? If additional resources are required, what evidence/rationale is there to support this?
- More resources are absolutely needed. We are hoping that, with the generous endowment from the Loui family, we will be able to purchase new equipment in order to keep pace with what is being seen within the marine industry. My one Lecturer who is full-time, needs to be given an Instructor position, tenure tracked so that some of the reporting issues now done entirely by me can be shared by an additional individual. Also to give him a sense of permanency with his teaching position.
- Are all safety issues addressed?
- We pride ourselves on our safety record and recordation of hazardous materials through MSDS and hazardous materials reporting to the University.

Part VIII: Action Plan

- What tasks/goals have you accomplished from your previous action plan items on last year’s annual review report?
- Have more strongly solidified the partnering relationship between HCC/METC and Polynesian Voyaging Society. Successful in being granted Title III funds to develop additional curriculum, and secure some needed equipment.
- What tasks/goals have you set for the upcoming year (Fall 2007/Spring 2008)?
- Continue to develop additional curriculum. Work closely with the Polynesian Voyaging Society (PVS) and the Native Hawaiian Center to facilitate a community centered student driven learning environment centered around voyaging. And as always, additional marketing if the dollars are available.
- Who will be responsible for completing these tasks/goals?
- For the most part me, from METC. Additional assistance will come from PVS and the Native Hawaiian Center.
- What is the timeline for achieving these tasks/goals?
- We have set a six-year time frame in order to implement.
Part IX: Resource Implications (physical, human, financial)

- Are there any budgetary impacts for carrying out your action plan?
- Of course. We are hoping that additional Title III grant monies along with the Loui endowment will help.
- Do any of your action plan items require integration into the strategic plan? (If so, have you notified your division chair/Dean of this action?)
- Both are aware in principal what the goals are.

Part X: Strategic Planning Items

- Does your program have any funding requests on the current strategic plan (equipment, positions, etc.)? If yes, please write an explanation on how your program review report supports the need to fund the program’s strategic plan request.
- I am hoping that the additional Instructor position I discussed earlier is included in the strategic plan. I had also asked for $ for equipment. As stated earlier, in order to keep the curriculum current with the latest technologies being seen in the Marine industry it is necessary to have the equipment with which to train our students. Title III monies have allowed us to develop a computer lab which will be used to demonstrate to students Computer Aided Design and give them hands-on experience. The next step is Computer Numerically Controlled machining and tooling.