

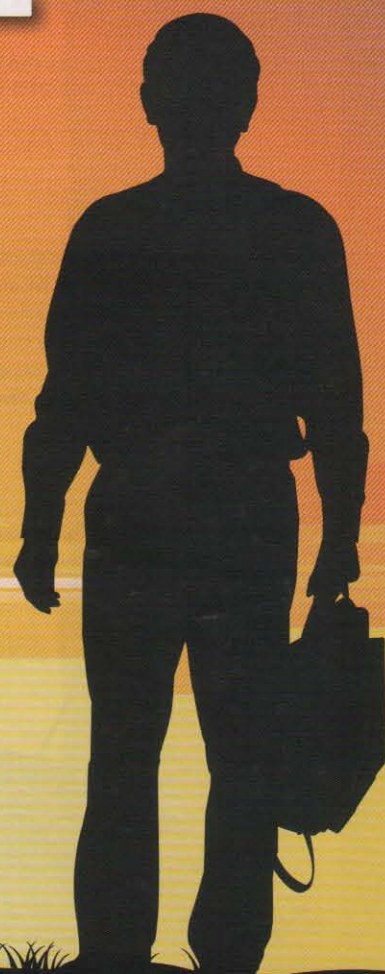
# Techniques

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# BOOT CAMP



# BASICS

By Nancy Mann Jackson

In the growing shipbuilding industry along the Gulf Coast, not only is it difficult to find skilled workers to fill open positions, but the problem is also compounded because various shipyards have different definitions of what a welder or shipfitter does. To combat the issue, the Alabama Technology Network (ATN)—the state’s Manufacturing Extension Partnership—led the charge to standardize the curriculum and job expectations for shipfitters and train workers to enter the profession on a fast track by offering Shipfitter Boot Camps. These intensive, 10-week training events, which prepare individuals to work as entry-level shipfitters within the maritime industry, are now being adapted for use by community colleges and other training organizations across the region, and graduates are now staffing local shipyards.

The boot camps provide knowledge-based and performance-based skills training on such topics as blueprint reading, tack welding, burning and cutting, and shipfitting. They also address important soft skills like workplace ethics, effective communication and team building, and are helping to meet the workforce needs of ship manufacturers along the Gulf Coast.

After Hurricane Katrina battered the Gulf Coast in late 2005, ATN led shipbuilding companies in the region to form the Gulf State Shipbuilders Consortium (GSSC) to apply for grants that would help rebuild the local maritime industry. One of the first challenges that became apparent was the shortage of skilled craft

workers in the shipbuilding and repair industry. When GSSC first convened, “we asked member shipyards which craft was most critical as far as curriculum development,” says Byron Dunn, southern regional director of ATN and president of GSSC. “They indicated there was no standardized shipfitting curriculum, so we decided to take that on.”

ATN and GSSC partnered to develop the curriculum and stage a boot camp to vet the curriculum and improve it before final release. While the curriculum would be built as a series of modules so that any module could stand on its own, the organizations wanted to validate and vet the entire curriculum, and a boot camp model seemed ideal. “Our plan was to develop a program that could be replicated for other industry sectors or other professions within the maritime industry,” says Audrey Bandy, technology specialist at ATN. “We needed to make sure it worked well so it would be ready for adoption by community colleges or other organizations.”

## Developing a Winning Program

After deciding to offer a boot camp, ATN and GSSC looked across the country for best practices. Organizers found a manufacturing boot camp being used successfully in North Dakota, which became a loose model for the shipfitting program, Bandy says. With a general idea of what the final product should look like, curriculum developers dove into the project.

“This was an incredible undertaking,”



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Dunn says. “We first had to define the shipfitting job. More than once we heard, ‘I know a good shipfitter when I see one, but I can’t tell you what one needs to know and do.’”

To help the team develop a clear picture of the skills and knowledge that a shipfitter has to possess, industry partners representing a number of shipyards provided subject matter experts (SMEs) to help define the job, skills, tools and knowledge required of a shipfitter. “We had to find out what tools they use and what tasks they have to perform, what terms they need to know, what math skills they need,” Dunn says. “Then we had to get the SMEs to describe in detail how to perform each task. As you might expect, [the definition of a shipfitter] varied form yard to yard.”

ATN hired a curriculum writer to flesh out a rough draft of the learning modules and took it back to the SMEs for corrections and additional input. Bandy spent hours gathering images, pictures, illustrations and charts to support the material, editing, formatting and creating PowerPoint presentations. Even as the first mod-

ules were being taught in the boot camp, Bandy and her team continued refining some of the later modules.

The involvement of shipbuilding companies was vital, Dunn says. Not only did they provide SMEs to offer detailed information and review the training content, but they also remained involved during the delivery of the training and reviewed the results after each boot camp, helping trainers improve the process each time.

## Reworking and Revising

A grant from the U.S. Department of Commerce funded the boot camp and allowed for three pilot sessions to provide time for tweaking and perfecting the program. When organizers were ready to deliver the first pilot, GSSC advertised in local newspapers, inviting potential students to come to a prequalification week. That week, which was reduced to three days at subsequent boot camps, included presentations by industry representatives about the boot camp, the industry and the job of a shipfitter, and tours of two shipyards.

“We wanted them to see the environment a shipfitter would work in and really

understand what they were getting into,” Bandy says. “We didn’t want to spend our resources training people who would decide they weren’t interested in this career when the boot camp was over.”

In addition to educating applicants about the industry, prequalification included drug testing, career-readiness testing and individual interviews with representatives from shipyards and from ATN. Organizers selected about 15 participants for each session.

Once the boot camp started, “we ran it like a job,” Dunn says. Participants were expected to clock in every morning, clock out and back in at lunch, and clock out at the end of the day. They could miss no more than four days of training, or the equivalent number of hours, to maintain their status in the class.

In addition to the rules similar to those found on a job, the class itself simulates a working environment. Students participate in hands-on tasks such as burning, cutting and welding. The boot camp culminates with a work project where students are divided into work teams with designated leaders. “They have to read

## Building on Partnerships

Successful workforce-training programs, like GSSC’s Shipfitter Boot Camp, rely on industry partnerships. Byron Dunn, southern regional director of ATN and president of GSSC, offers four tips for building effective partnerships with industry.

1. **Stay focused on the goal, which is putting people to work.** “Don’t worry about who gets credit,” Dunn says. “Listen and ask questions if you don’t understand. Listen some more. Industry has to know that you will do whatever it takes to meet their needs. If they don’t tell you what those needs are, you will never meet them.”
2. **Communicate the importance of a trained workforce.** “I try to let industry know that labor is another supply chain,” Dunn says. “If they need an engine for a ship, they don’t just call up the company and say, ‘Send some engines over here and let me see if you have one that meets my needs,’ then reject them all and not tell the company why.”
3. **Give it time.** “Industry has to clearly and accurately define the specifications of the product they need delivered, such as knowledge, skills and abilities,” Dunn says. “Give educational and training providers, with a lot of input from the industry,

time to design the training program and curriculum. Then work with the training provider to find a good instructor. Help recruit students and be involved during the training.”

4. **Encourage partners to stay involved.** “Like any supply chain, this all takes time before the product—a capable, knowledgeable worker—can be delivered,” Dunn says. “[Industry partners] being involved during the training program helps the students stay motivated and helps the employer know the students before they offer them a job.”



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a blueprint and assemble a project from it,” Bandy says. “The instructor then acts as a customer and comes in and inspects the work. Students then have to make changes to meet the customer’s needs.”

As planned, ATN and GSSC made changes and tweaks to the program throughout the three pilot sessions. For instance, during the first session, it became apparent that the instructor had spent too much time in the classroom and not enough in the lab for hands-on training, Bandy says. To make up for lost time, organizers extended that first session for two weeks and then revised teaching materials to emphasize hands-on instruction.

Other changes included shortening the prequalification time from one week to three days, and shortening the boot camp from 11 weeks to 10 weeks.

## Finding Success

At the end of each boot camp session, ATN and GSSC held a celebration event that combined a graduation ceremony and a job fair. Participants interviewed on site with shipbuilding companies, and 100

percent of those completing the program received job offers, and many participants received more than one offer. Since the pilots were completed, Mississippi Gulf Coast Community College has conducted the program on its own and has had the same results.

Local industry leaders are thrilled with the well-trained workers they have been able to hire out of the program. “One local shipyard increased their starting pay by \$3 per hour so they could compete for these graduates,” Dunn says.

While the shipfitter curriculum is now standardized, complete and ready for use by other training organizations, ATN and GSSC are not finished. Next, the partnership plans to develop a standardized curriculum and accompanying assessments for each of the 14 maritime crafts. To that end, the group has launched the National Maritime Education Council (NMEC) as a fundraising vehicle. To date, NMEC has raised \$270,000 towards funding the development of curricula and accompanying credentialing. Leaders hope to involve maritime industry partners from

around the country, rather than just the Gulf Coast, to ensure that the curriculum takes a national view and meets the needs of the entire industry, Dunn says.

Bandy points to the success of the shipfitter boot camp as evidence that other crafts can benefit from similar training programs. “Before, everyone had a general idea of what a shipfitter did, but every yard was different,” Bandy says. “Now, if a fitter comes in and says [he] was trained on the GSSC curriculum, a company will know they have the skills they need. And any industry that has the support of [its] industry partners could replicate this model.” ■

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