Marine Service technology I
Competency List

Demonstrating Workplace Readiness Skills: Personal Qualities and People Skills
1. Demonstrate positive work ethic.
2. Demonstrate integrity.
3. Demonstrate teamwork skills.
4. Demonstrate self-representation skills.
5. Demonstrate diversity awareness.
6. Demonstrate conflict-resolution skills.
7. Demonstrate creativity and resourcefulness.

Demonstrating Workplace Readiness Skills: Professional Knowledge and Skills
8. Demonstrate effective speaking and listening skills.
9. Demonstrate effective reading and writing skills.
10. Demonstrate critical-thinking and problem-solving skills.
11. Demonstrate healthy behaviors and safety skills.
12. Demonstrate an understanding of workplace organizations, systems, and climates.
13. Demonstrate lifelong-learning skills.
14. Demonstrate job-acquisition and advancement skills.
15. Demonstrate time-, task-, and resource-management skills.
16. Demonstrate job-specific mathematics skills.
17. Demonstrate customer-service skills.

Demonstrating Workplace Readiness Skills: Technology Knowledge and Skills
18. Demonstrate proficiency with technologies common to a specific occupation.
19. Demonstrate information technology skills.
20. Demonstrate an understanding of Internet use and security issues.
21. Demonstrate telecommunications skills.

Examining All Aspects of an Industry
22. Examine aspects of planning within an industry/organization.
23. Examine aspects of management within an industry/organization.
24. Examine aspects of financial responsibility within an industry/organization.
25. Examine technical and production skills required of workers within an industry/organization.
26. Examine principles of technology that underlie an industry/organization.
27. Examine labor issues related to an industry/organization.
28. Examine community issues related to an industry/organization.
29. Examine health, safety, and environmental issues related to an industry/organization.

Addressing Elements of Student Life
30. Identify the purposes and goals of the student organization.
31. Explain the benefits and responsibilities of membership in the student organization as a student and in professional/civic organizations as an adult.
32. Demonstrate leadership skills through participation in student organization activities, such as meetings, programs, and projects.
33. Identify Internet safety issues and procedures for complying with acceptable use standards.

Ensuring Shop Safety
34. Explain the importance of workplace safety.
35. Follow general workplace safety procedures.
36. Practice ergonomically correct work methods.
37. Follow emergency safety procedures.
38. Maintain safe work area.
39. Identify, use, and store hazardous materials.
40. Use personal protective equipment.
41. Operate fire suppression equipment.
42. Achieve recognized first aid/CPR certification.
43. Practice safe work procedures with ladders and scaffolds.

**Practicing Boating Safety, Handling, and Basic Navigation Skills**
44. Pass Virginia boating safety course.
45. Select, coil, throw, and handle the lines used for securing, lashing, and towing vessels.
46. Secure boat to a dock, mooring, and/or anchor.
47. Maneuver a small boat on water in close quarters.
48. Create knots used for securing, lashing, and towing vessels.

**Understanding the Fundamentals of Boat Design and Construction**
49. Identify various hull types and their intended uses.
50. Describe fundamental elements of boat design.

**Demonstrating Woodworking Skills**
51. Use squares, measuring tapes, or rules to measure materials or distances.
52. Perform mathematical calculations related to woodworking.
53. Describe the types and characteristics of wood used for various kinds of boat construction and repair.
54. Select correct fastener for a specific application.

**Applying Finishes**
55. Select finishing materials, identifying precautions for their use.
56. Prepare surface.
57. Prepare/apply primer.
58. Apply masking and pull tapes.
59. Apply finish by hand.
60. Apply finish with spray equipment.

**Performing Fiberglass Construction and Repair**
61. Describe common composite construction/fiberglass-reinforced plastics (FRP) and equipment used in fiberglass construction and repair.

**Maintaining and Repairing Inboard and Inboard/Outboard Engine Systems**
62. Identify basic engine systems, subsystems, and components.
63. Follow correct procedures in the installation of marine components in compliance with the U.S. Coast Guard Code of Federal Regulations (CFR) and standard-compliant installations.

**Maintaining and Repairing Outboard Engine Systems**
64. Identify basic engine systems (two-and four-cycle), subsystems, and components.

**Understanding Marine Systems**
65. Explain basic electrical theory.
66. Describe basic maintenance procedures for a marine electrical system, using appropriate marine electrical connectors, according to ABYC standards.
67. Identify various components of a fuel system and their uses and the process of rigging a fuel system according to ABYC standards.
68. Explain basic plumbing practices and maintenance related to marine use, according to ABYC installation standards.

**Practicing Safe Vessel Transportation on Land**
69. Describe the techniques for safely launching and recovering a boat from/onto a trailer.

**Performing Marina Operations and Yard Services**
70. Describe the procedures for preparing a boat for seasonal storage or usage by using manufacturer recommendations or best industry practice.
71. Describe the process for stepping/unstepping a spar.
72. Describe the procedure for shrink-wrapping an object, according to best industry practice, identifying problems that can arise during the process.
73. Explain the purposes and safe operation of yard equipment.

**Preparing for a Career**
74. Research the diverse career opportunities available in the marine trades and the training, education, and other credentials required for each.
75. Research job openings.