

Submarine Simple Machine Challenge

STEM Skills & Careers

Read/Interpret Technical Drawings

Operate Machinery

Calculate/Understand Measurement

Conduct Inspections

Critical Thinking Skills

Problem Solving Skills

Naval
Architect

Welder

Ocean
Engineer

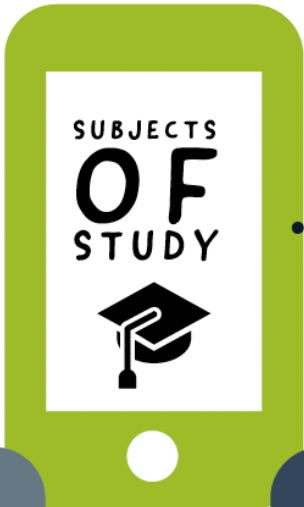
Shipfitter

WELDER



A welder's primary duty is joining metal parts together. They work on metal parts of buildings, maritime, or construction industries.

Attention to Detail
Hand & Eye Coordination
Measurement Skills
Interpret Blueprints
Knowledge & Interest in Construction



Programs for welders are often found in apprentice schools or institutions which can offer either certificates or extended learning opportunities. These programs allow learners to study construction principles, applications in measurement, and metal working.

High School Diploma
OR
Apprentice School
OR
Community College



Average
\$13-28/hour



Average
\$55,000/year



2018-2028
16%



NAVAL ARCHITECT

A naval architect is responsible for the design, research, repair, and construction of marine vessels. From sailboats to naval aircraft carriers, a naval architect also conducts research and development of new designs.

Leadership
Problem Solving
Risk Analysis
Engineering Background
Communication Skills
Mathematics & Geometry
Knowledge of Fluid Dynamics & Physics



Programs and subjects to study for naval architects include coursework in math, statistics, engineering mechanics and systems, and fluid dynamics.

High School Diploma AND Bachelor's Degree OR Master's Degree



Average \$25-35/hour



Average \$70,000/year



2018-2028 9%



OCEAN ENGINEERING

Ocean Engineers design, build, test, and improve instruments and equipment that operate on offshore vessels.

Problem Solving
Critical Thinking
Love of Nature
Background in
Math, Physics,
and Chemistry
Attention to
Detail

ESSENTIAL
SKILLS



SUBJECTS
OF
STUDY



Ocean Engineers design various equipment that operate at sea. Some examples of courses for this career include: physics, calculus, applied mathematics, fluid mechanics, wave water labs, and other engineering classes.

High School Diploma
OR
Community College
OR
Bachelor's/Master's
Degree

CAREER
PATHWAY



Average
\$35-45/hour

WHAT'S
HOT



Average
\$92,000/year

JOB
GROWTH



2018-2028
9%



SHIPFITTER

A ship fitter is skilled at fabricating metal structural parts of a boat hull and braces them in position for a welder to permanently adhere the pieces together.

Physical Strength
Mathematical Skills
Measurement Skills
Mechanical Skills
Time Management
Teamwork
Critical Thinking Skills

ESSENTIAL
SKILLS



SUBJECTS
OF
STUDY



Programs for ship fitters are often found in apprentice schools or institutions which can offer either certificates or extended learning opportunities. These programs emphasize learning the structural phases of ship's hull construction, steel work, fabrication, and assembly. Courses in math, technical drawing, technology, and construction are taken.

High School Diploma
AND
Shipfitter Certificate
OR
Apprentice School
OR
Bachelor's/Master's
in Business (own
your own company)

CAREER
PATHWAY



Average
\$19-36/hour

WHAT'S
HOT



Average
\$60,000/year

JOB
GROWTH



2018-2028
7%