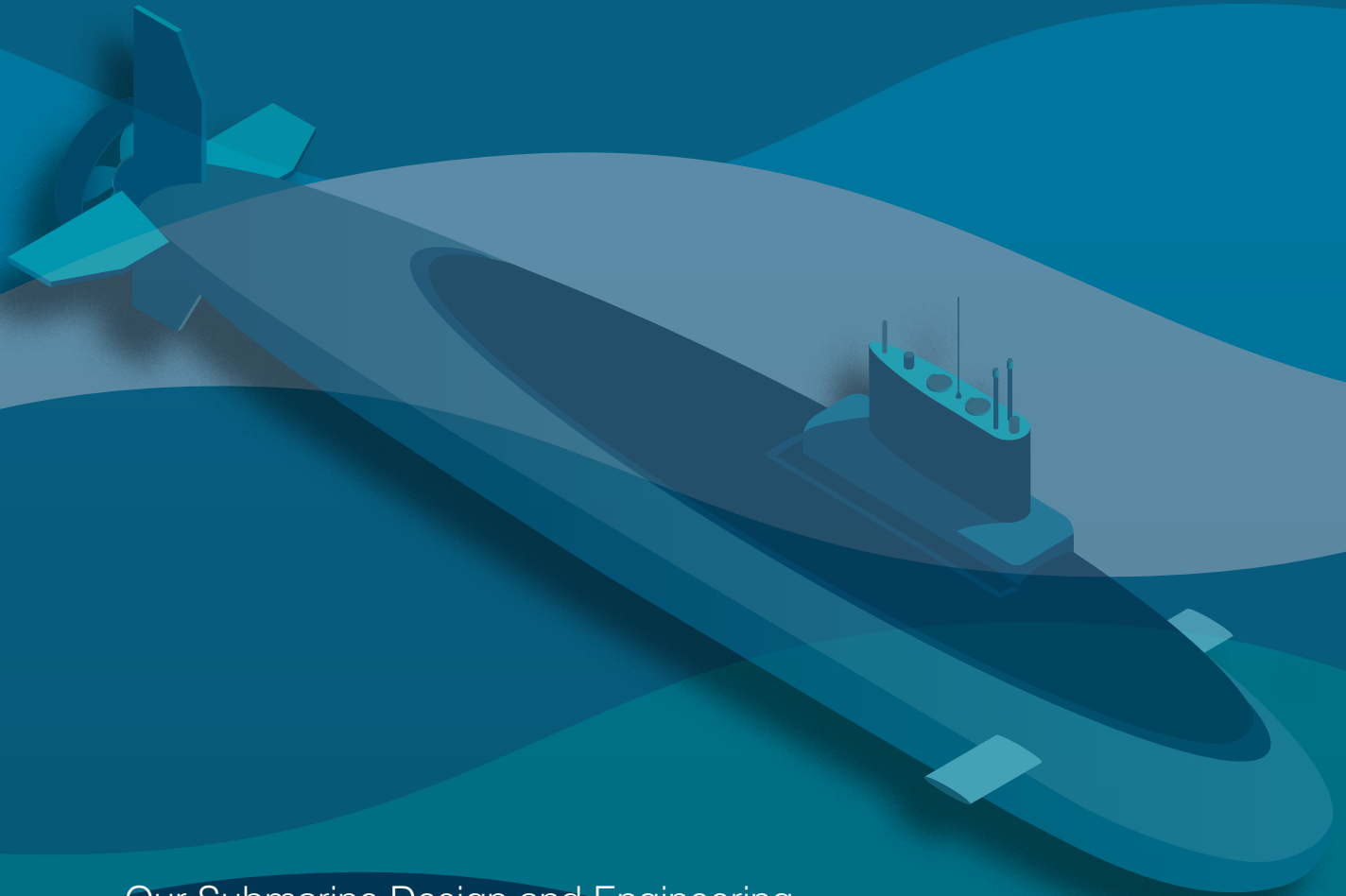




# Submarine Design and Engineering Course

Prepare for the next step  
in your career



Our Submarine Design and Engineering Course, certified by The Royal Institution of Naval Architects, has been running for over 15 years, earning a reputation for providing delegates with practical and current knowledge.

**Course Price**  
**AUD\$4950** (inc)

# Prepare for the next step in your career . . .

**As the defence industry prepares for a substantial shift to shipbuilding, having a workforce that is well trained and informed about the critical elements of submarine design is crucial.**

Our Submarine Design and Engineering Course, certified by **The Royal Institution of Naval Architects**, provides detailed insight into the acquisition and capability management of a warship, throughout the complete life-cycle.

For us, ensuring the industry remains well-trained and informed about the critical elements of ship and submarine design and management is crucial, now more than ever.

Our courses are created and presented by **industry professionals** who are passionate and highly experienced in their field. This guarantees that what you learn is both relevant and applicable to the problems we face in today's industry.

Our **week-long**, in-person courses include catering and opportunities for **networking** across industry. These sessions are designed to provide immersive learning experiences, combining top-tier instruction with valuable digital resources.



**Course Price**  
**AUD\$4950** (inc)

## Submarine Design and Engineering Course

Our Submarine Design and Engineering Course will present you with the latest thinking and innovations in submarine design.

### General Course Details

**Duration:** 5 days

**Date:** 28 April - Perth

*Location:*

Delivered online with the support of leading industry experts.

*Who should attend:*

Designed for engineers, technicians, and project managers but we can tailor delivery to individual needs.

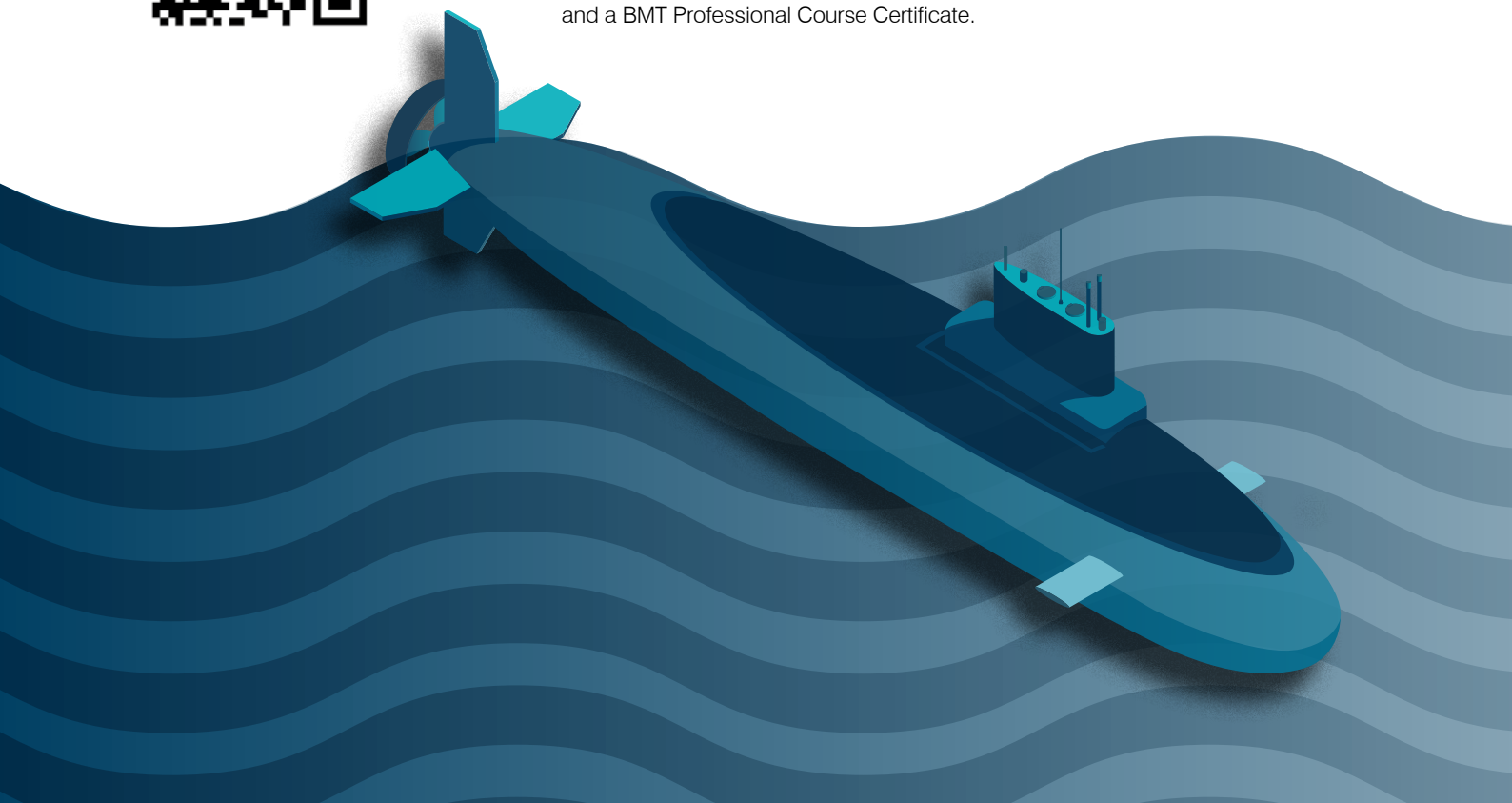
*Accreditation:*

Our courses have been certified by the Royal institution of Naval Architects and by Australia's Asset Institute.

*What is included:*

Live training with leading industry experts, all course materials sent to your door, and a BMT Professional Course Certificate.

Scan the QR code for the next course dates and more information



# Course content

Equipping you with the knowledge to understand all stages of submarine ownership.

## **Military Capability**

Why submarines are a critical component in providing military capability.

## **Submarine Operations**

Full range of roles performed by a submarine and the implications for submariners.

## **Submarine Program**

Planning and implementation process for a new submarine build, focusing on the roles of Government, Navy and Industry.

## **Submarine History and Arrangement**

Evolution of the modern conventional submarine. External forms used in the design of submarines.

## **Resistance & Propulsion**

Technical introduction to the components of resistance and the effects of submarine form and appendages. Including propulsors available to a submarine designer.

## **Maneuvering**

Generation of forces and moments using control surfaces.

## **Hydrostatics**

Submarine hydrostatic principles involved in stability and control.

## **Nuclear Safety and Regulation**

IAEA rules for Nuclear operation through the life cycle - including licensing and stewardship

## **Safety Management**

Safety programs as applied to major Defence projects.

## **Submarine Escape and Rescue Systems**

Rescue systems carried onboard a submarine.

## **Materials Selection**

Material selection in submarine design for the operational environment.

## **Structures**

Internal structures and manufacturing techniques.

## **Space & Weight**

Major components and materials driving submarine design.

## **Distributed Systems**

Hydraulics, fire suppression and HP/LP air on a modern submarine.

## **Habitability Systems**

HVAC, lighting, potable water, refrigeration and waste disposal.

## **Electric Systems**

Electric system necessary to support all power requirements.

## **Energy Generation Plant**

Energy generation plant options from the diesel engine through to developing air independent technologies.

## **Nuclear Generation and AIP Systems**

Nuclear Generation and AIP systems, their current implementation and intergration.

## **Battery Systems**

Lead-acid systems including a comparison with developing technologies.

## **Signature Management**

Signature management on a modern submarine.

## **Sonars**

Sonar technology, such as arrays and sensors, through to operational aspects of functional processing.

## **Weapons & Sensors**

Full range of weapons and sensors available to a modern conventional submarine.

## **Combat Systems**

Combat systems, including detection, classification, navigation and communications.

## **Submarine Concept Evaluation**

Evaluation of submarine design at the conceptual design phase, from integrated performance analysis and data quality through to visualization of platform performance.

## **Design Task**

Develop a series of optimised submarine designs to meet the requirements of the mission scenarios provided.



# Looking to upskill your entire team?

We offer corporate packages for all our courses. Please get in touch to ask about bulk discounts, we offer these for groups as small as 10.

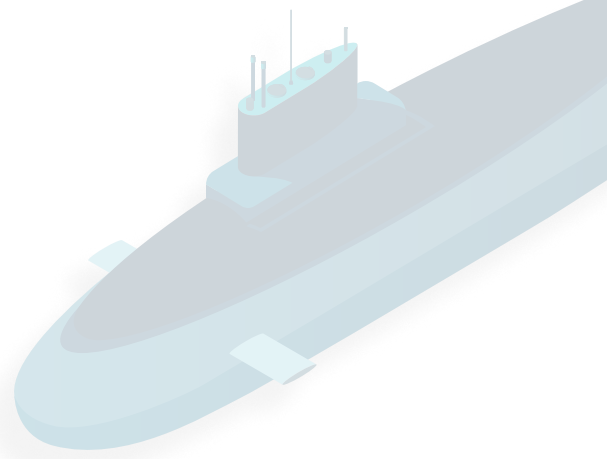
In addition, when you book our corporate package and get free access to our **Warships 101 e-learning courses** as a bonus with your 5-day course.

Our corporate packages allow you to split a 5-day course out over a fortnight or even a month. We work with you to tailor the best outcome.

## Do you have a specific training need?

Ask us how we can incorporate the best modules for your training needs.

Explore our additional courses if you're looking for more options.



### Introduction to Fleet Lifecycle Management Course



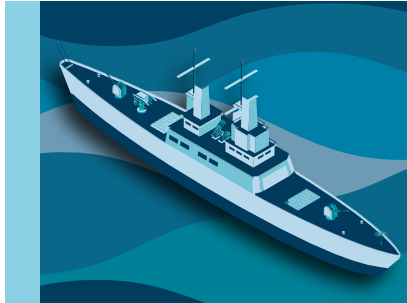
**Course Price**  
**AUD\$5940** (inc)

Our Introduction to Fleet Lifecycle Management course covers all aspects of life cycle management. The modules provide detailed insight into Asset Management and its applications to naval ships and support systems in Defence's maritime environment

**In person, 5-day course**



### Whole Life Warship Capability Management Course



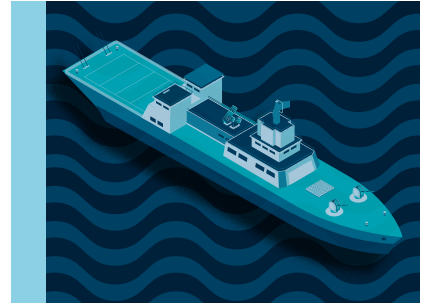
**Course Price**  
**AUD\$4950** (inc)

A unique course for the Australian defence community, tailored to manage the capability, acquisition and sustainment phases of warship ownership.

**In person, 5-day course**



### ONLINE Warship 101 course



**Course Price**  
**AUD\$342.50** (inc)

Warships 101 is an e-Learning course designed to give you an introductory look into warships, their design, capability and systems.

**Online, 18 units over 6 hours**



### Our accreditations are:



THE ROYAL  
INSTITUTION  
OF NAVAL  
ARCHITECTS

Whole Life Warship Capability Management  
and Submarine Design and Engineering



Asset  
Institute®

Fleet Life Cycle Management



### Contact us

[www.bmt.org/courses](http://www.bmt.org/courses)

[trainingcourses@apac.bmt.org](mailto:trainingcourses@apac.bmt.org)

+61 3 8620 6180