Curtin Credentials

Naval Nuclear Foundations: Technology and Safety

Start:
25-26 March 2026
4-5 June 2026
12-13 Aug 2026

Duration: 30 hours
Length: 2 Days

Delivery Mode:
Blended

Price:
Fully Funded

Join H&B Defence's two-day intensive course designed for professionals supporting nuclear-powered submarines and associated infrastructure.

Delivered by seasoned industry experts, this credential equips you with the essential knowledge, context, and assurance principles required to operate confidently in this highly regulated and safety-critical environment. This two-day intensive course provides a clear, structured pathway for professionals seeking foundational nuclear literacy within the submarine enterprise.

Through expert-led sessions, real-world case studies, and applied learning, you'll build a practical understanding of naval nuclear technology, safety philosophies, and quality frameworks aligned with US and UK standards, tailored specifically to the Australian context.

You'll gain hands-on insight into:
- The history and strategic foundations of US and UK naval nuclear programs
- Pressurised Water Reactor (PWR) fundamentals and inherent safety principles
- Radiation science, risk comparison, and public perception
- Quality assurance, risk-based decision-making, and incident management

With a strong emphasis on safety, assurance, and informed communication, this course prepares you to engage effectively with technical teams, stakeholders, and the broader nuclear enterprise

Who is this credential for?

This credential is suitable for:

- Individuals intending to support the design, build, sustainment or disposal of nuclear-powered submarines and associated infrastructure.
- Individuals overseeing staff involved in the delivery of nuclear-powered submarines, including Tier 2 supplier managers and waterfront enabling teams.

Eligible candidates must:

- Applicants are required to reside in Western Australia at the time of their application.
- Applicants must be employed in, contracted to, or otherwise engaged with an organisation that operates within or supports the maritime Defence industry. This may include shipbuilding, sustainment, engineering, manufacturing, technical services, or supplier organisations connected to maritime Defence capability.

Learning Outcomes

Nuclear technology
Gain a foundational understanding of pressurised water reactor (PWR) systems, including their design, operation and inherent safety principles within nuclear-powered submarines.

Radiation and public perception
Understand radiation types and relative risk in the context of nuclear-powered submarines, and develop the ability to communicate nuclear safety concepts clearly to diverse audiences.

Safety and quality
Apply risk-based decision-making principles to safety, environmental and asset considerations within a nuclear-powered submarine environment.

Assessment

To successfully complete this credential, you are required to pass a final assessment.

To demonstrate what you have learned, you will:

- Identify and explain the key components, design principles, and operational functions of naval nuclear propulsion systems.
- Analyse and evaluate the relative risks associated with nuclear-powered submarines, considering both normal operations and potential nuclear scenarios, using appropriate sector-specific terminology.
- Apply risk-based decision-making frameworks to practical scenarios, with consideration for safety, environmental protection, and asset integrity within a nuclear-powered submarine context.

Earn a badge

Once you successfully complete and pass the final assessment, you'll earn a digital badge that is instantly shareable to your social networks (including LinkedIn) which showcases your new skills and knowledge mastery.

Essentials

This credential provides foundation knowledge in a discipline and doesn't require previous knowledge.

You will also earn 5 credit points which are in line with Australian Qualification Framework Level 8 criteria (https://www.aqf.edu.au/framework/aqf-levels), ensuring comprehensive theoretical and/or technical knowledge of the credential. 100 credit points are required to earn a Graduate Certificate at Curtin.

Discover more

Curtin Credentials focus on five themes, which have been carefully curated based on what's most relevant and valuable to professionals today, and in the future. This credential fits within the following theme:

Future of Work

Thrive and adapt in the changing world of work by developing and broadening your skillset in a range of areas including work design and cognitive flexibility.

Meet your facilitators

David Long

VP of Operations for Nuclear & Environmental Services at HII Mission Technologies, brings 39 years of experience in nuclear operations, program management, and leadership development. He has led DOE contract programs worth $6B, developed 130 managers through structured training, and held senior roles in naval nuclear operations. David holds an EE degree, an MBA, PMP certification, and serves on boards supporting nuclear energy and community initiatives.

Ashley Schneider

Chief Safety, Engineering & Assurance Officer at H&B Defence, oversees safety governance and technical assurance for major defence programs. Formerly Director for AUKUS Emerging Markets at HII, she led strategic planning and new operations in Australia. With 20+ years in nuclear engineering, waste management, and emergency planning, Ashley holds degrees from UCF, Virginia Tech, and UT Knoxville.

Chris Saint

Senior Engineering Manager at H&B Defence, oversees engineering capability and workforce development. A former Royal Naval Artificer Apprentice on Vanguard Class submarines, Chris has 12+ years in nuclear submarine engineering, including serving as UK Naval Nuclear Head of Engineering Capability at Babcock. He holds a Mechanical & Manufacturing Engineering degree from Portsmouth University.

Express Your Interest Now

Expressions of Interest are now open for 2026. Eligible candidates will be contacted with details for enrolment via email. Submitting an expression of interest does not guarantee a funded place within this course. Eligible candidates must reside in Western Australia at the time of application and must be employed in, contracted to, or otherwise engaged with an organisation that operates within or supports the maritime Defence industry.

Make tomorrow better.

creds.curtin.edu.au

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This program includes a limited allocation of funded places through the WA Government's Defence Industry Reskilling and Upskilling Grant Program, State Government of Western Australia. The funding supports the skilling and re-skilling of workers in the Western Australian Defence industry as part of the State's broader workforce development priorities. To qualify for a funded place in this micro credential, applicants must meet both the residency and employment eligibility criteria. These requirements ensure the funding is directed to individuals who are part of, or contributing to, the maritime Defence workforce. Curtin University may cancel or reschedule a credential at any time and for any reason at its discretion. Start dates and all other details relating to this credential are provided as a general guide only and are subject to change. Limited fully funded places may be available for Western Australia–based defence industry professionals. This publication is correct as at December 2025 but may be amended. Curtin University reserves the right to vary course content, delivery methods, assessment requirements and tuition fees; withdraw courses or limit enrolments; and make changes to other arrangements, including the academic area in which courses are offered. For the most current information, please visit study.curtin.edu.au. This publication contains general information only. Readers should consider how the information applies to their personal circumstances and seek independent advice where appropriate. Subject to applicable law, Curtin University accepts no liability for any loss or damage arising from reliance on the information contained in this publication.

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