

Modification history

Release	Comments
Release 1	This version released with SFI Seafood Industry Training Package Version 1.0.

SFIAQU508	Plan and design stock culture or holding systems and structures
Application	<p>This unit of competency describes the skills and knowledge required to plan and design stock culture or holding systems and structures involving determining requirements and managing expenses and budget.</p> <p>This unit applies to individuals who have specialised knowledge and technical and/or management responsibility for stock culture or holding systems and structures for an aquaculture facility or workplace.</p> <p>No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
Prerequisite Unit	Nil
Unit Sector	Aquaculture (AQU)

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine appropriate location or orientation	1.1 Determine type of culture or holding structure or system to ensure appropriate environment is provided for cultured or held stock 1.2 Determine numbers of structures to ensure stock is available in sufficient quantity at harvest 1.3 Design, locate and orientate water use and culture or holding structure or system to make the best use of water resources 1.4 Research mechanisation or automation of process or activity, including the use of specialised contract services, and make recommendations about their introduction 1.5 Document design calculations and construction specifications for the work required 1.6 Identify and protect environmentally sensitive areas according to legislative requirements and identify land degradation issues
2. Design culture or holding structures and systems	2.1 Design individual culture or holding structures to provide optimal conditions for stock 2.2 Consider all production inputs and culture or holding activities in the design of the systems 2.3 Select construction materials to suit the design specifications and design calculations 2.4 Optimise relationship between capital and operational costs, including a comparison of energy sources 2.5 Check power supply design specifications with power authorities 2.6 Select accessories and performance indicators and integrate into functional systems which can be monitored and maintained 2.7 Define construction specifications to achieve the required standards of uniformity and efficiency

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
3. Determine capital expense budget	3.1 Document design calculations and decisions and ensure relevant information is communicated clearly through plans, specifications and manuals 3.2 Ensure design output is checked by a competent designer against workplace objectives 3.3 Determine and document material requirements from plans and specifications 3.4 Estimate labour requirements, based on documented work schedule allowing reasonable variances in work schedules 3.5 Negotiate external labour and hire contracts, if required, and confirm with management 3.6 Attribute costing to each component based upon quoted information from suppliers or sound analysis of individual elements
4. Determine operating expense budget	4.1 Confirm operating expense budget with senior personnel 4.2 Apply all expenses to the completed stock culture or holding system

Foundation Skills	
<i>This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.</i>	
Skill	Description
Reading	<ul style="list-style-type: none"> Research and extract technical information relating to stock culture or holding systems from a range of sources
Writing	<ul style="list-style-type: none"> Document plans, specifications and procedures using appropriate format, clear language and accurate technical terminology
Numeracy	<ul style="list-style-type: none"> Calculate and itemise costs to prepare and analyse budgets and expenditure
Oral communication	<ul style="list-style-type: none"> Participate in verbal exchanges to consult others and organise requirements using accurate technical terminology and specifications
Navigate the world of work	<ul style="list-style-type: none"> Understand legislative and regulatory requirements, including safety and environmental requirements, relating to own role and area of responsibility
Interact with others	<ul style="list-style-type: none"> Liaise collaboratively and consult others for specialist planning and design advice, influencing direction and taking a leadership role on occasion Select and use appropriate communication protocols and conventions when seeking or sharing information with others
Get the work done	<ul style="list-style-type: none"> Plan and coordinate multiple, complex activities and resources to design and establish stock culture or holding systems and structures, monitoring actions against stated goals, adjusting plans and resources to cope with contingencies Use workplace digital systems and tools to access, organise, and analyse costs, data and information relevant to stock culture or holding systems and structures

Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
SFIAQU508 Plan and design stock culture or holding systems and structures	SFIAQUA508C Plan and design stock culture or holding systems and structures	Updated to meet Standards for Training Packages. Minor changes to elements for clarity.	Equivalent unit

Links	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273
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TITLE	Assessment requirements for SFIAQU508 Plan and design stock culture or holding systems and structures
Performance Evidence	
<p>An individual demonstrating competency must satisfy all the elements and performance criteria of this unit. There must be evidence that the individual developed at least one design plan for a stock culture or holding system and structure, including:</p> <ul style="list-style-type: none"> • researching and planning design requirements for a culture or holding system or structure • analysing labour and resource costs and savings • determining capital expense budget and operating expense budget • documenting design and specifications for stock culture or holding systems and structures and their components. 	
Knowledge Evidence	
<p>An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:</p> <ul style="list-style-type: none"> • types, functions and options for stock culture or holding systems and their components • key design features and processes for planning stock culture or holding systems and structures • features and options for automatic control and monitoring systems • biological requirements of cultured or held stock relevant to holding systems and structures • overview of stock biological and production cycles relevant to holding systems and structures • waste management and environmental issues relevant to stock culture or holding systems and structures • key features of contracts and contract management • basic bookkeeping for budgeting • key government regulations relating to aquaculture operations • features of latest culture technology • biosecurity relevant to culture or holding systems • sustainability practices relating to aquaculture operations. 	
Assessment Conditions	
<p>Assessment of this unit of competency must take place under the following conditions:</p> <ul style="list-style-type: none"> • physical conditions: <ul style="list-style-type: none"> • skills must be demonstrated in an aquaculture workplace or an environment that accurately represents workplace conditions • resources, equipment and materials: <ul style="list-style-type: none"> • opportunities to access personnel for specialist advice • relevant workplace operational and financial information needed to plan and design stock culture or holding systems and structures • technology for recording and documenting information. <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
Links	Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=e31d8c6b-1608-4d77-9f71-9ee749456273