

# Access to H.E. National Programme Unit



Unit Title:	Fluid Mechanics		
Graded Unit Code:	GA33PHY08	Ungraded Unit Code:	UA33PHY08
Pathway(s):	Science and Engineering Construction and the Built Environment		
Module(s):	Physics		
Level:	3	Credit Value:	3
Valid from:	31 <sup>st</sup> July 2021	Valid to:	31 <sup>st</sup> July 2026

The following QAA grade descriptors must be applied if you are delivering the graded version of this unit:

1	Understanding of the subject
2	Application of knowledge
3	Application of skill
7	Quality

LEARNING OUTCOMES	ASSESSMENT CRITERIA
<b>The learner will:</b>	<b>The learner can:</b>
1. Understand the properties of fluids and the principles of fluid statics	1.1 Define fluid properties of pressure, density and viscosity and solve problems involving these
	1.2 Distinguish between ideal fluids and real fluids
2. Understand static pressure in fluids and its applications	2.1 Explain absolute pressure and gauge pressure and calculate how atmospheric pressure changes with altitude
	2.2 Solve problems involving static pressure
	2.3 Define Pascal's principle and apply it to engineering examples
	2.4 Define Archimedes' principle and apply it to solve problems

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3. Understand the concepts involved in fluid flow	3.1 Define the terms incompressible flow, compressible flow and flow rate
	3.2 Explain and apply the principle of fluid continuity
	3.3 Define velocity of flow, pressure and friction loss in terms of fluid head and solve problems involving these
4. Understand the dynamics of fluids and conservation of energy for a steady flow	4.1 Derive Bernoulli's equation of motion for a steady incompressible flow
	4.2 Apply Bernoulli's equation to the flow of liquids in pipes