

3306 physics lectures, Spring 2026

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https://www.physics.smu.edu/saptarnab/PH3306_Spring_2026/

Based on Simon Dalley's lectures delivered in spring 2025



WARM UP 2: Fluids in motion

Write your answers in the space following the warm-up question if you can. Write as if you are explaining to a fellow student. If you need more space, you are probably over-thinking things.

What do each the four characteristics of an “ideal fluid” imply about streamlines (if anything)?

Run a tap slowly and draw how the shape of the water column changes with height. What has this to do with continuity of an ideal fluid?

Explain how Bernoulli's equation for an ideal fluid is a manifestation of energy conservation, referring explicitly to each term, and how it reduces to Archimedes Principle for a fluid at rest.