

Newton's Law
of viscosity ONLY in unidir
flow.

26 Sept 2019
Thurs
LEC 7

Takeaways:

asked for velocity field?

MUST BE micro momentum balance
(also leads to $Q, \langle v \rangle, F_{-m}$)

Newtonian Constitutive Eqn
stress - deformation

general case (we have a
sheet!)
(slash + burn)

max:
or
min: $\frac{df}{dx} = 0$

HAGEN - POISEUILLE

$$Q = \frac{\pi \Delta P R^4}{8\mu L}$$

steady flow
in a tube
laminar
horizontal