

Lecture 4 - The First Law (Ch. 1)

Monday January 14th

- Finish previous class: functions of state
- Reversible work
- Enthalpy and specific heat
- Adiabatic processes

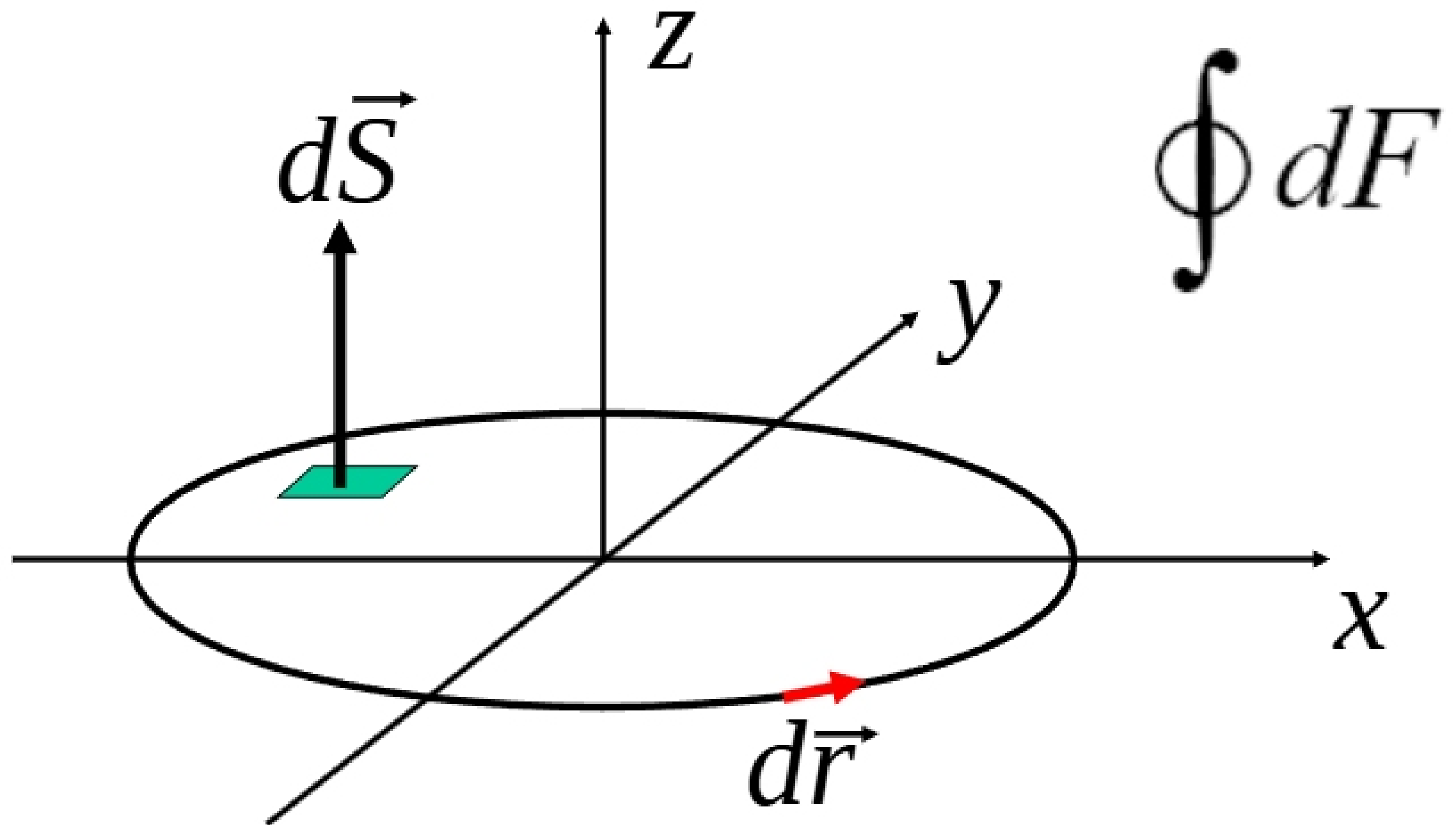
Reading: All of chapter 1 (pages 1 - 23)
1st homework set due next Friday
(18th).

Homework assignment available on web

How to know if quantity is a function of

There is a mathematical **state**.

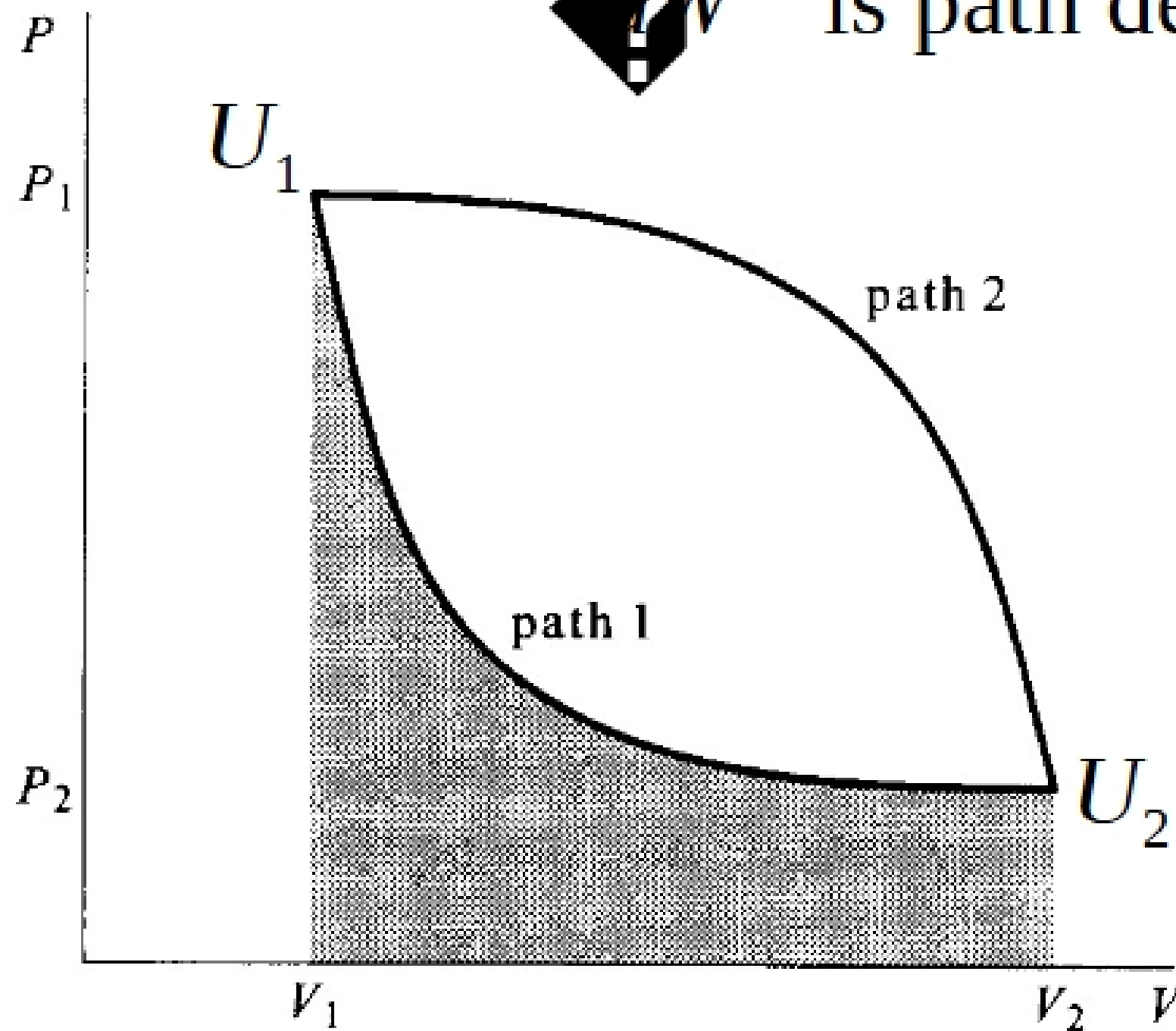
Consider the function $F = f(x,y)$: $dF = \frac{\partial F}{\partial x} dx + \frac{\partial F}{\partial y} dy$



How to know if quantity is a function of state



W is path dependent



$DU = (\text{?} Q + dW)$ does not depend on path