

Energidiagram

$$W = -\Delta U$$

↑ arbeid ↙ potensiell energi

i en dimensjon: $W = F_x \Delta x$

$$F_x \Delta x = -\Delta U \quad \longrightarrow \quad F_x = -\frac{\Delta U}{\Delta x}$$

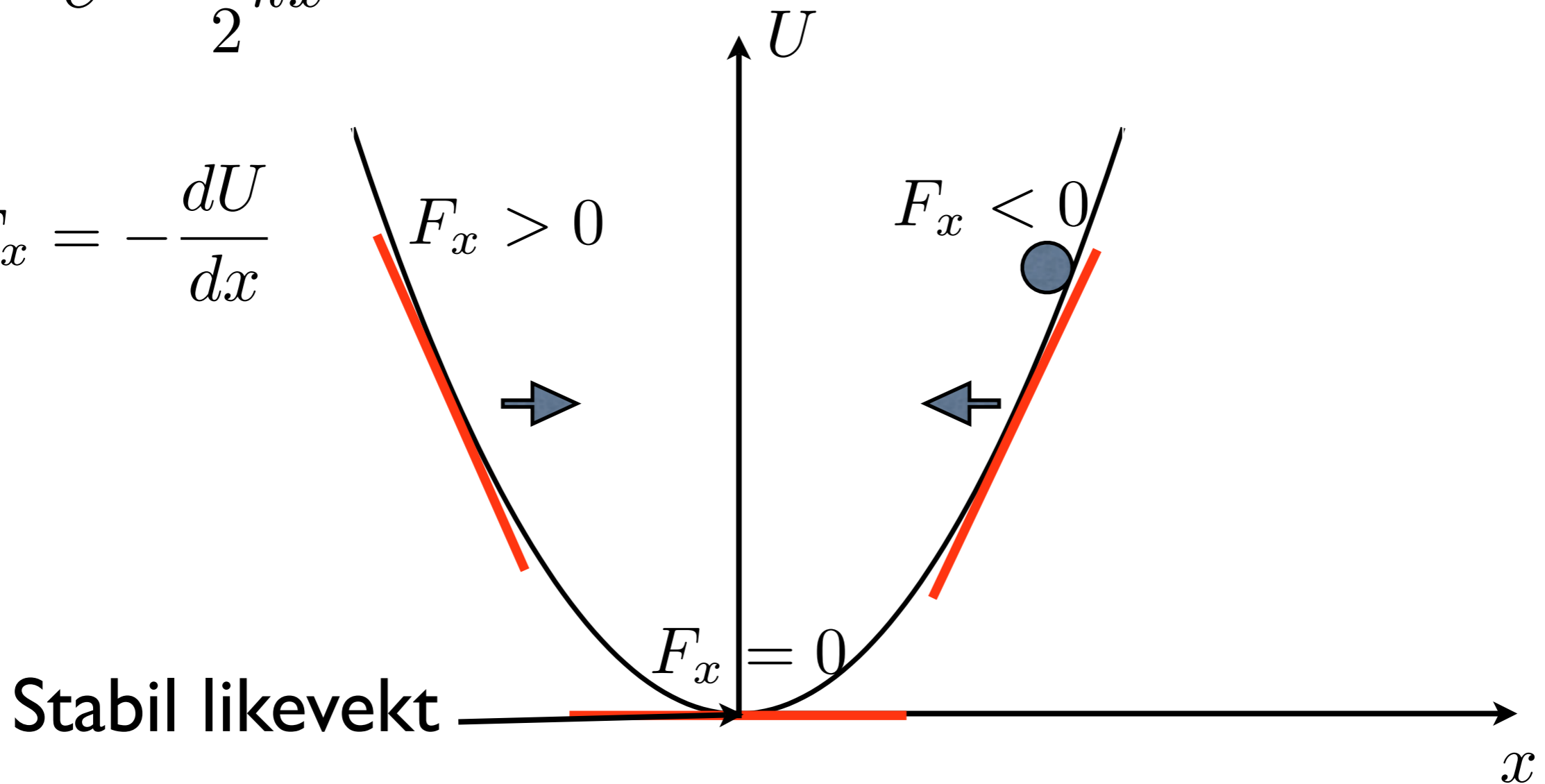
$$\Delta x \rightarrow 0$$

$$F_x = -\frac{dU}{dx}$$

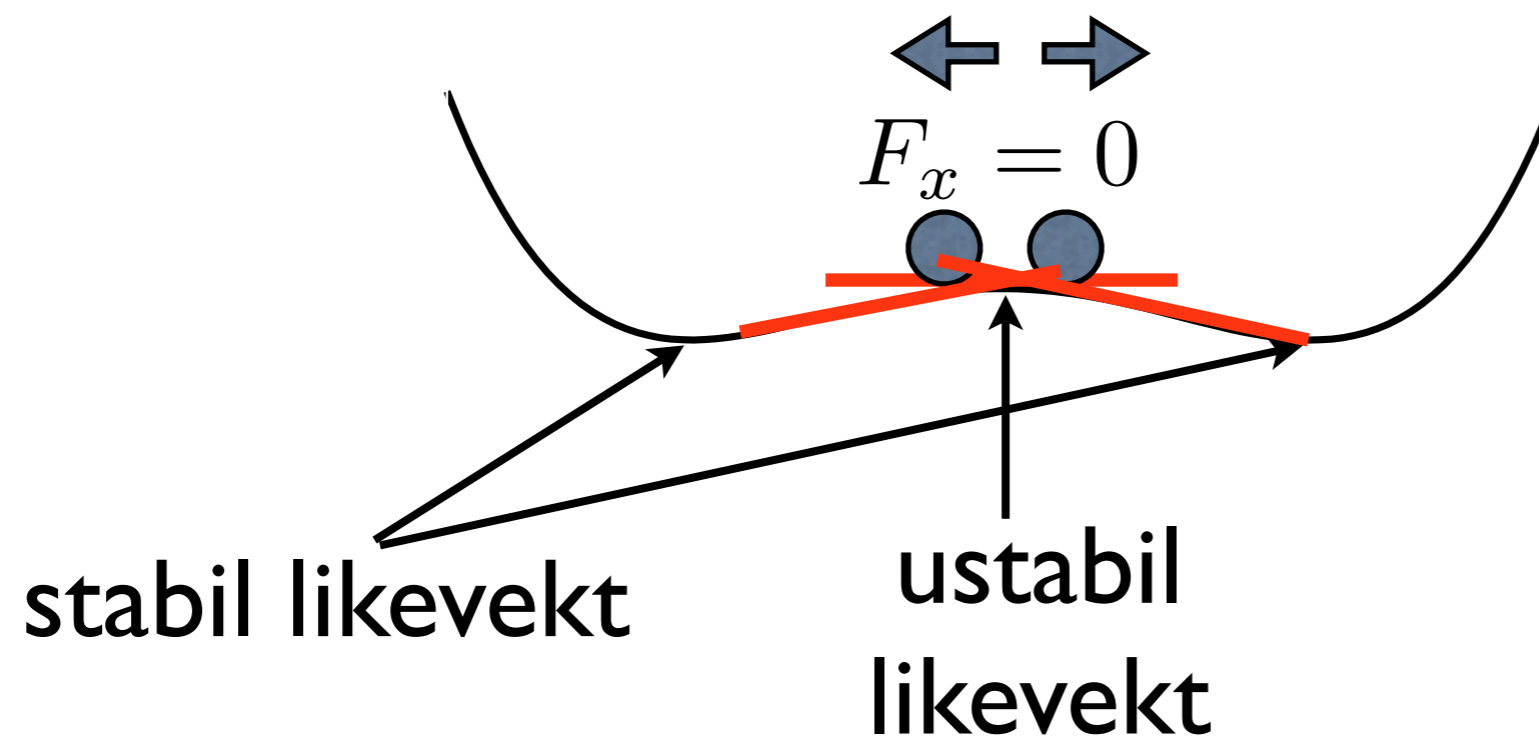
Energidiagram

$$U = \frac{1}{2}kx^2$$

$$F_x = -\frac{dU}{dx}$$



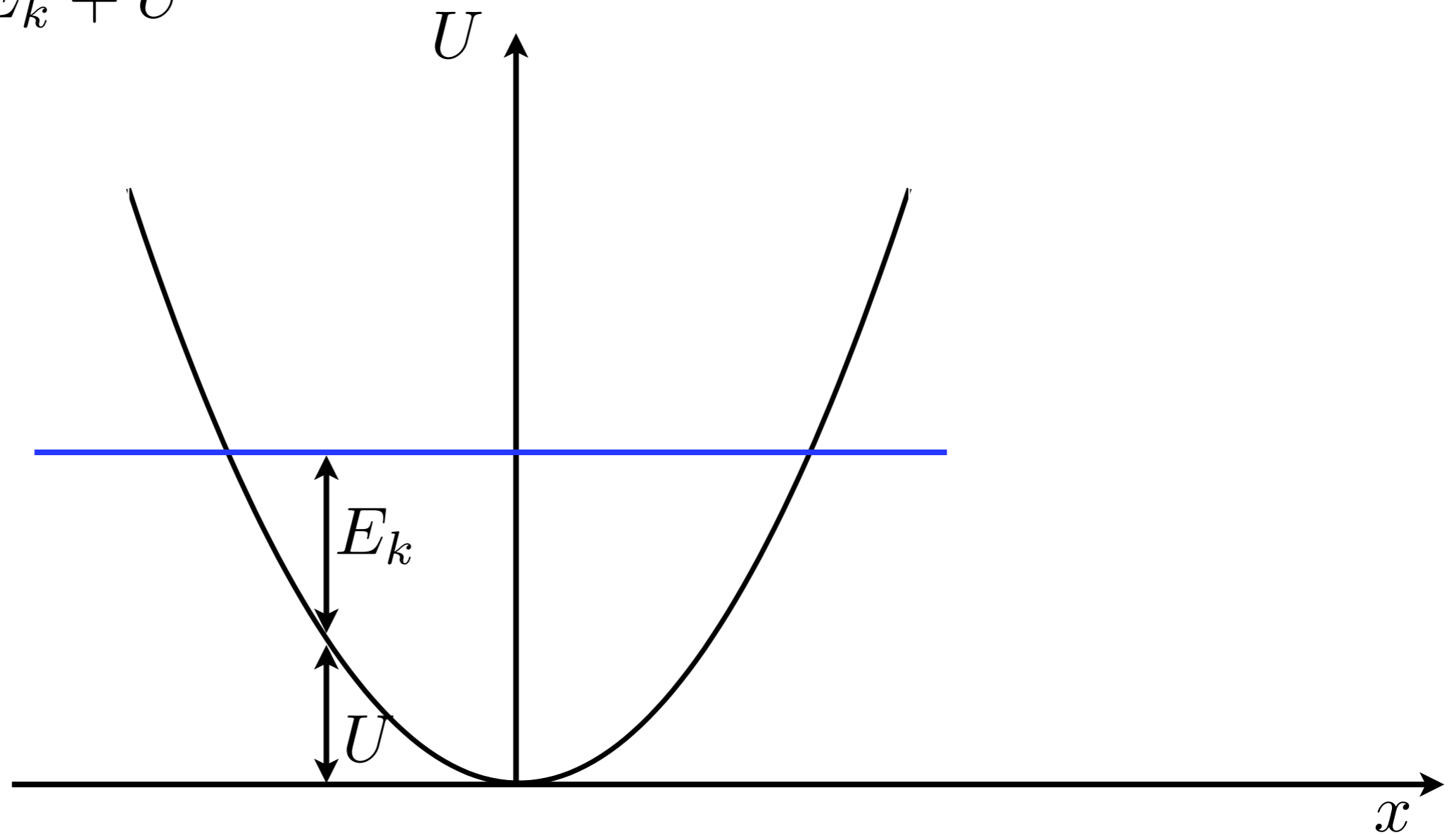
Energidiagram



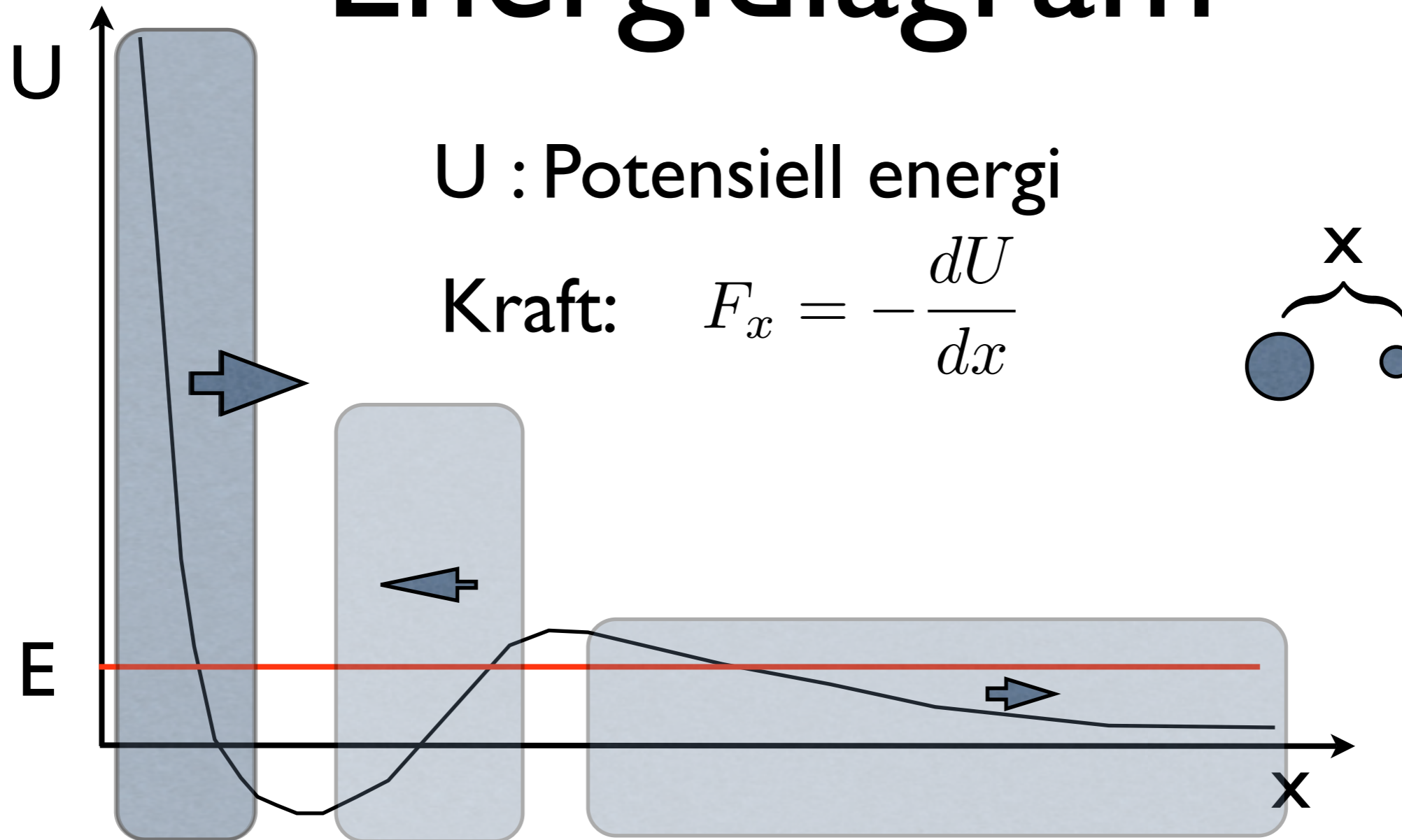
Energidiagram

$$E = E_k + U$$

Total
mekanisk
energi E

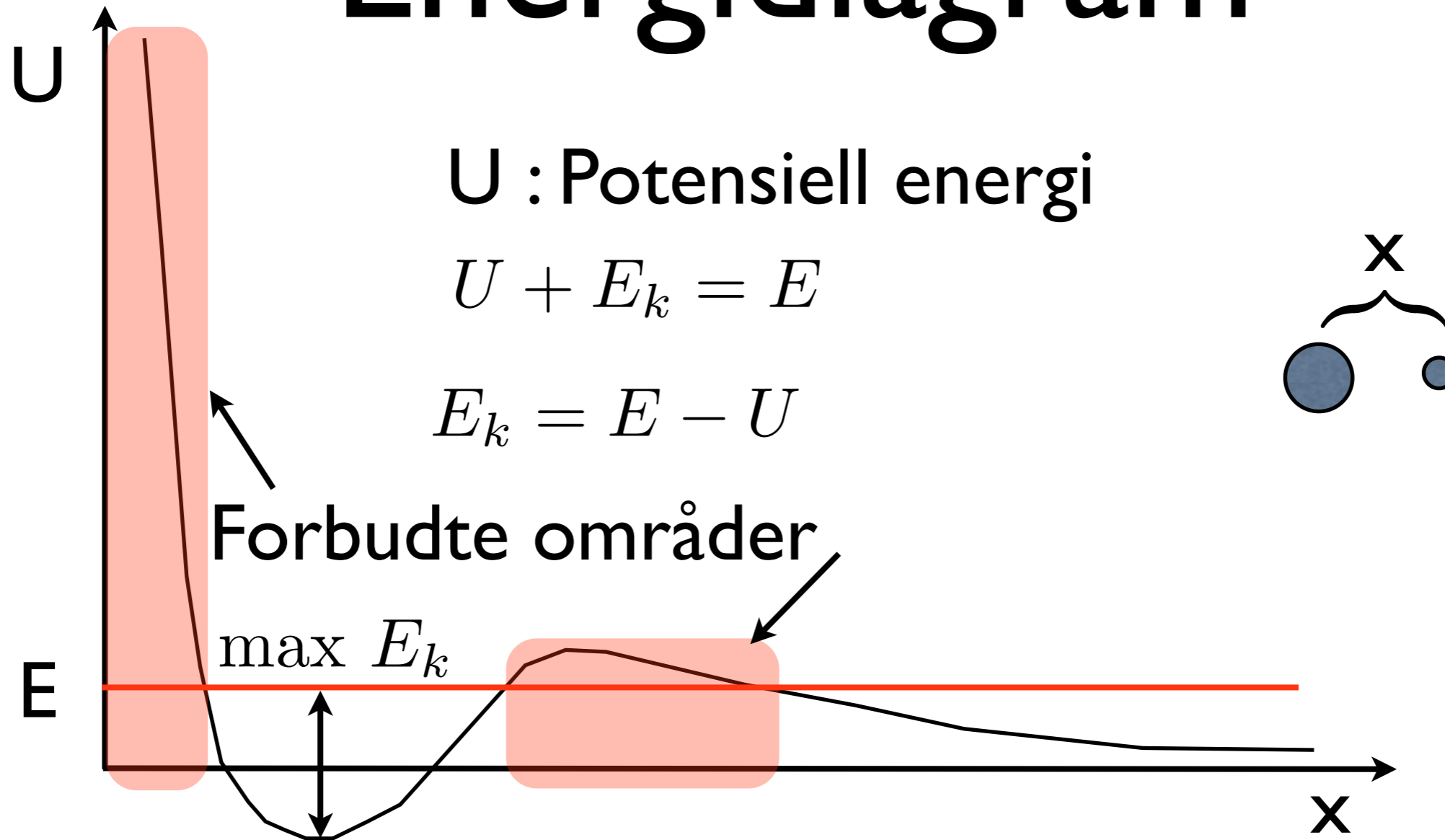


Energidiagram



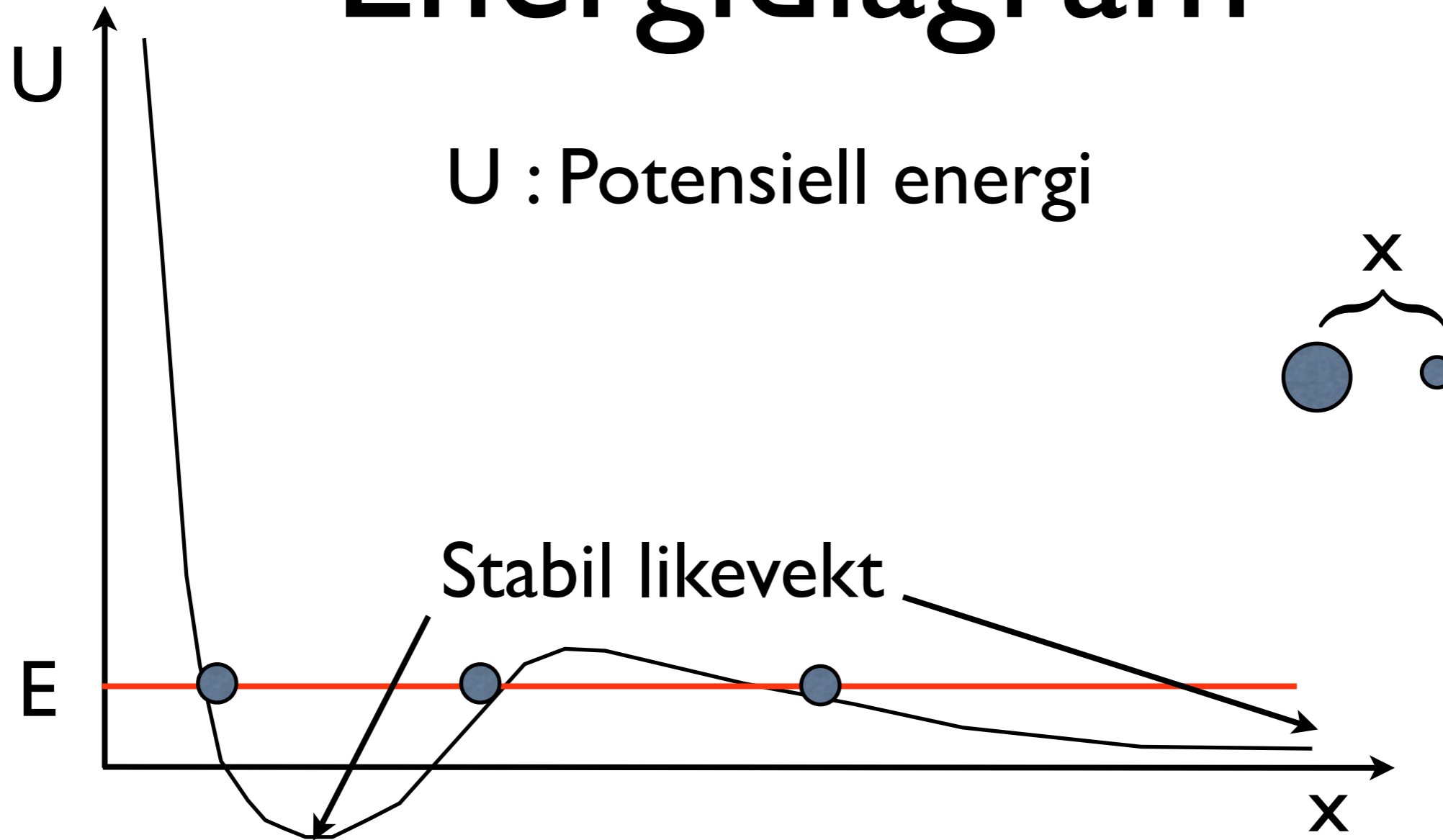
- Hvor er kraften størst?
- Hvor er den kinetiske energien størst?

Energidiagram

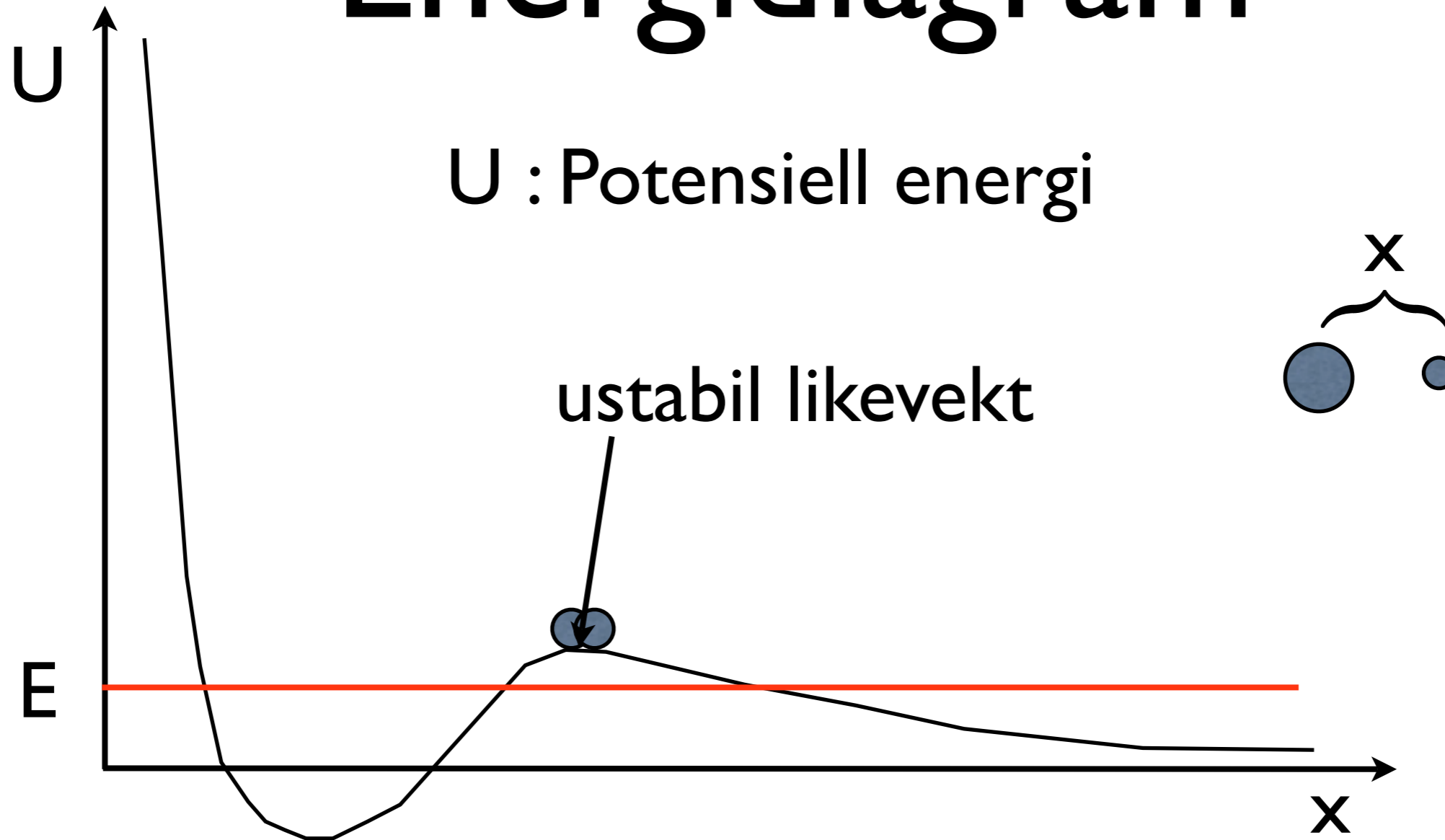


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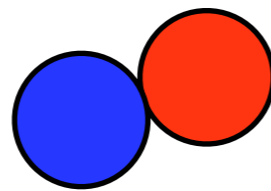
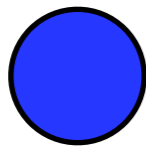


Impuls

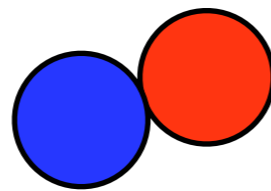
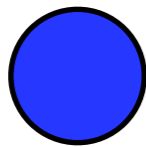


airbagen forlenger kollisjonstiden

Støt



Støt





Golfball mot stålplate



Meteorittkrater- varige deformasjoner

Støt



Dersom den kinetiske energien er bevart: Elastisk støt

Støt



Dersom legemene har samme hastighet etter kollisjonen: Fullstendig uelastisk støt