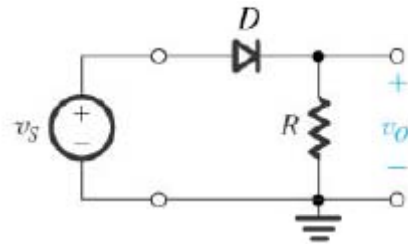
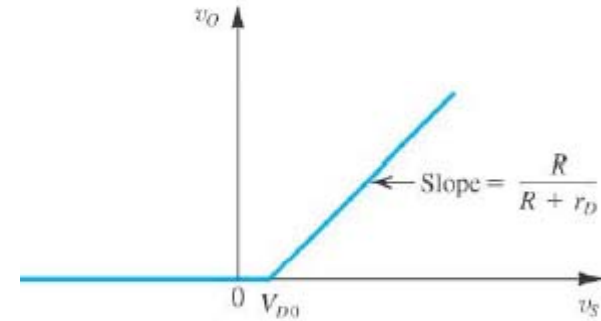
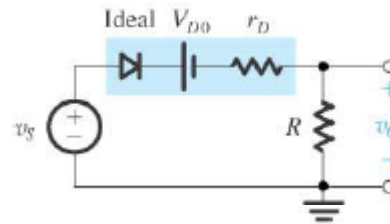


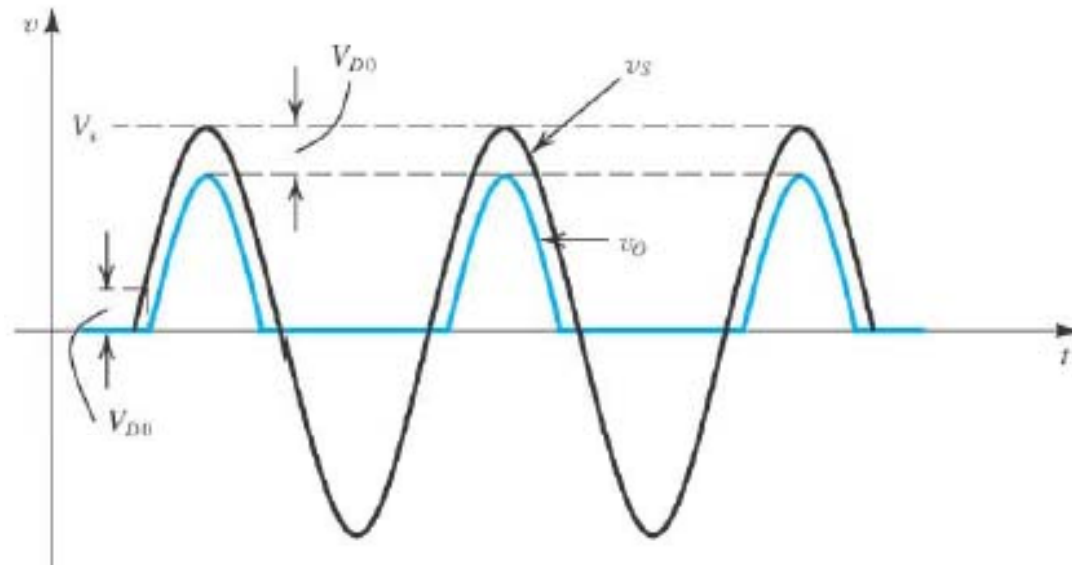
Lect. 8: Diode Rectifier (3.5 in Razavi)



When On



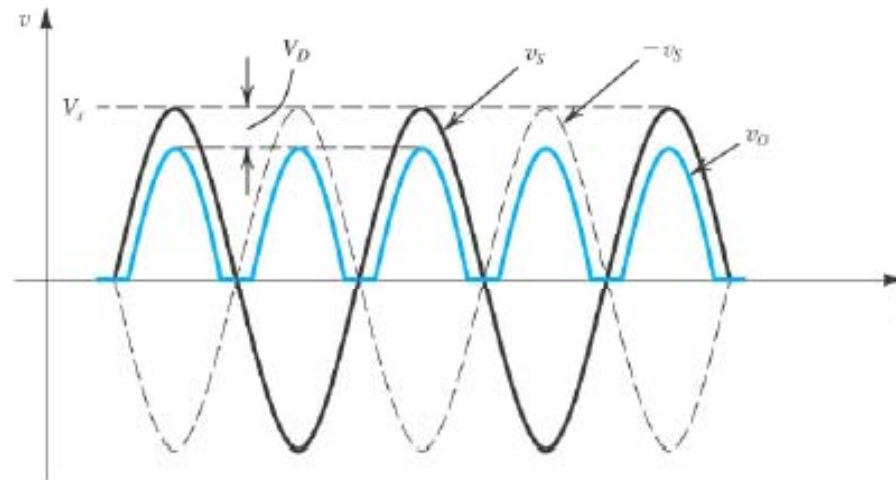
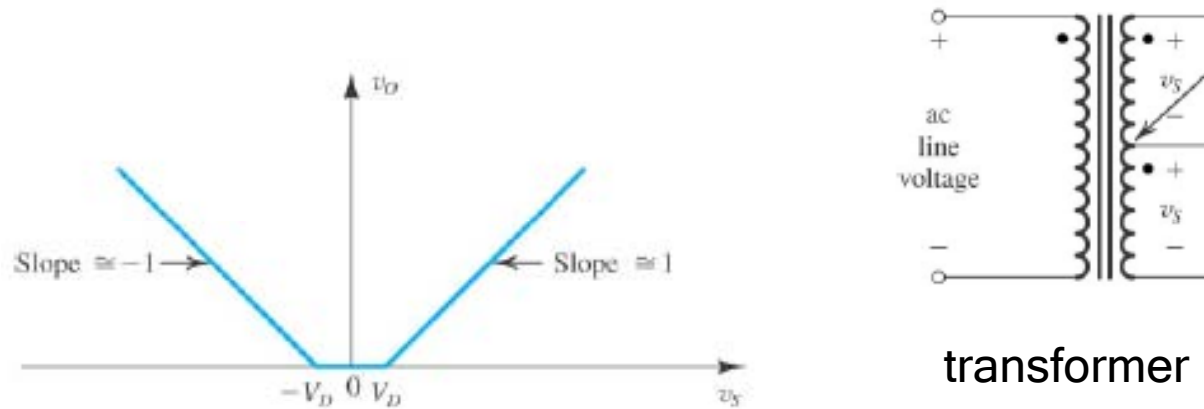
With Sinusoidal input,



→ Diode Rectifier But only half-wave ...

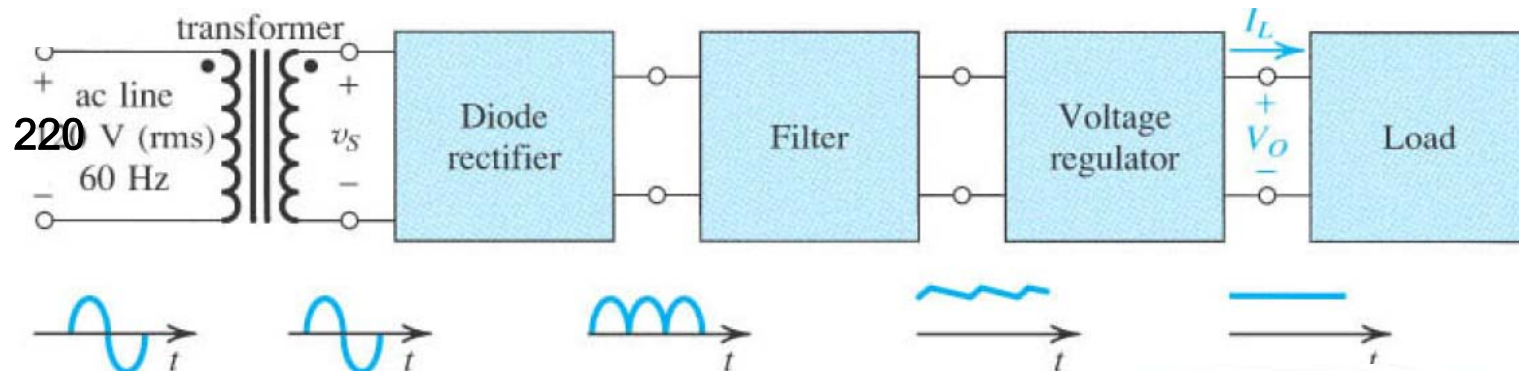
Lect. 8: Diode Rectifier

Diode Rectifier (Full-Wave)



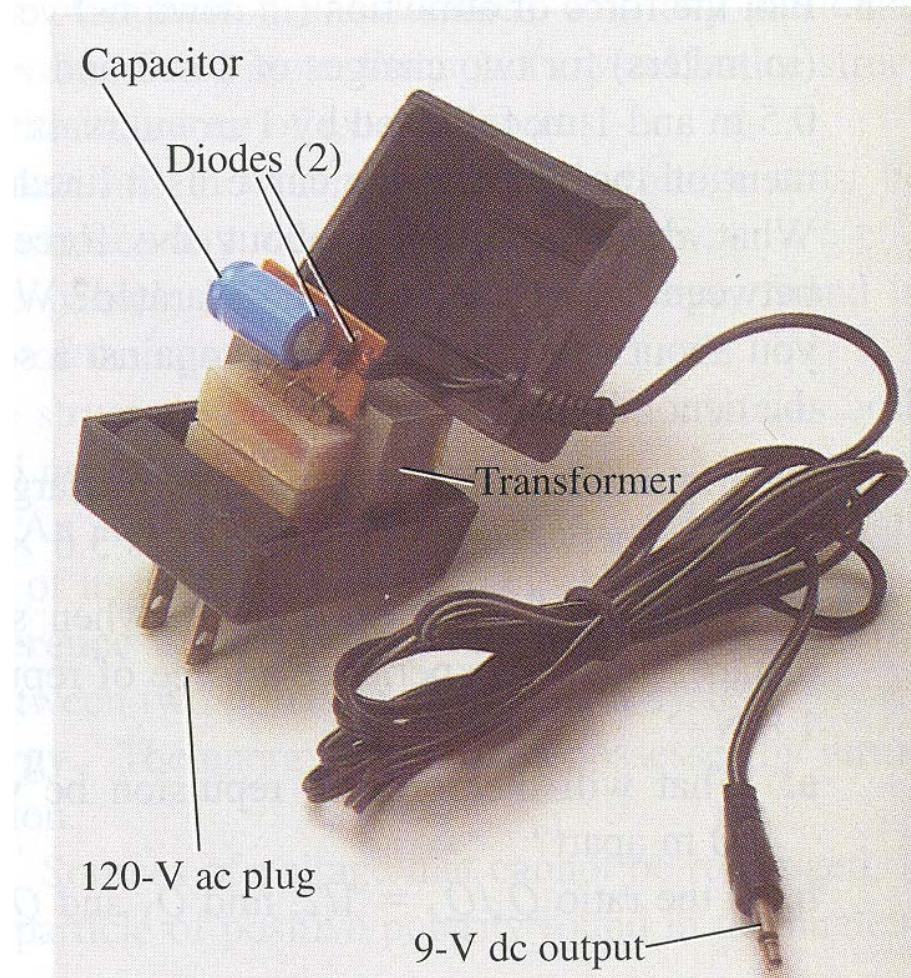
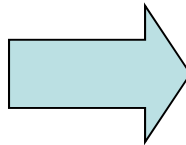
Lect. 8: Diode Rectifier

DC Power Supply

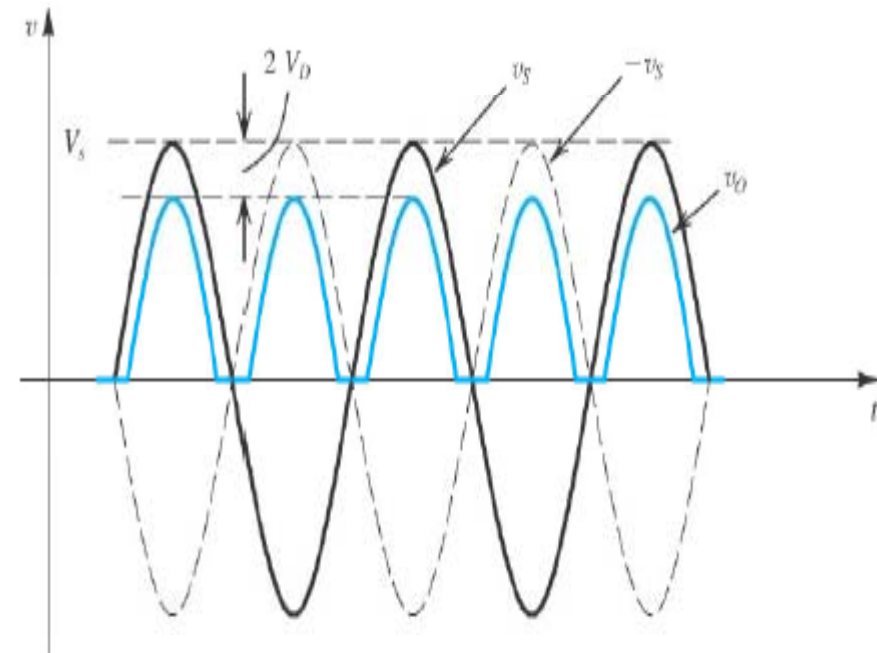
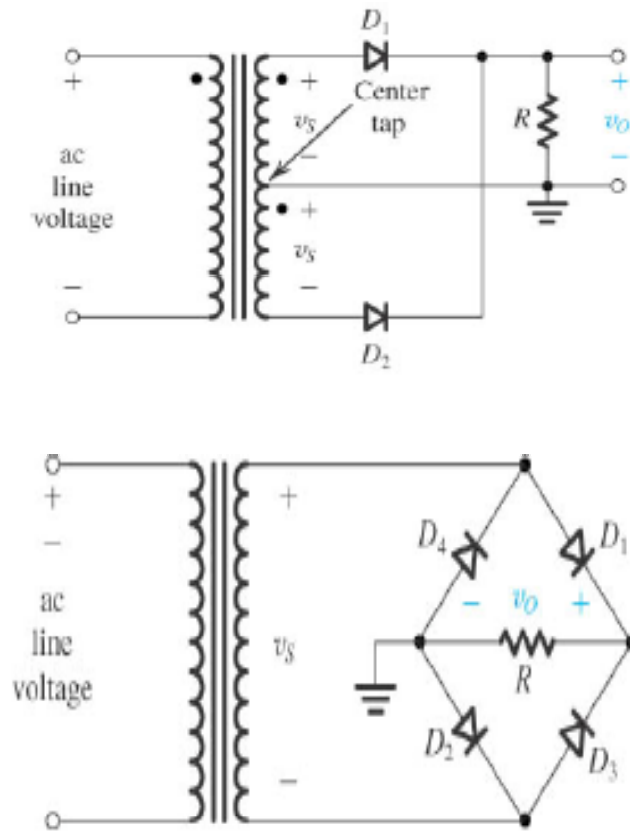


Lect. 8: Diode Rectifier

Inside a DC power supply



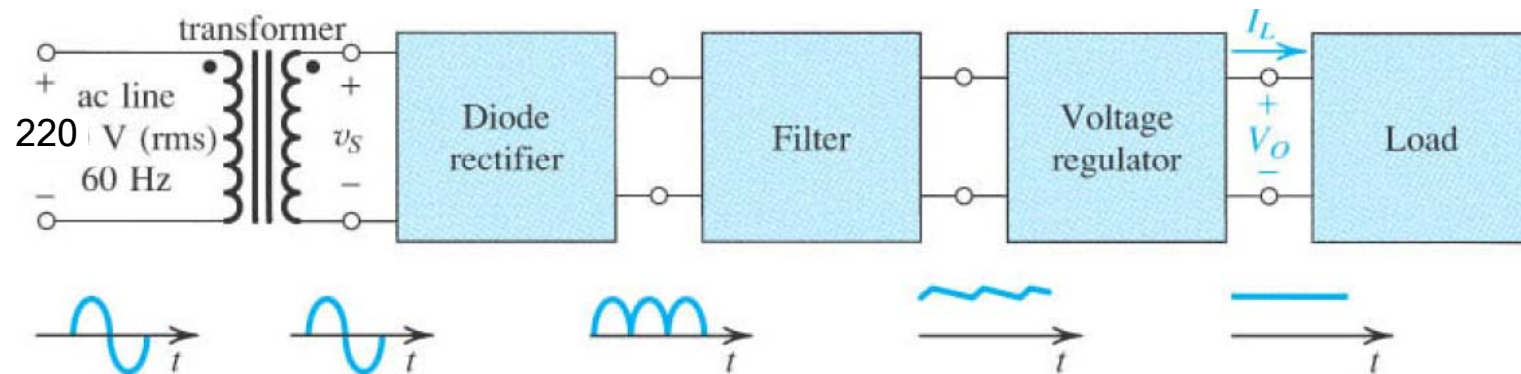
Lect. 8: Diode Rectifier



Bridge Rectifier (Homework Problem for Lect. 7)

Lect. 8: Diode Rectifier

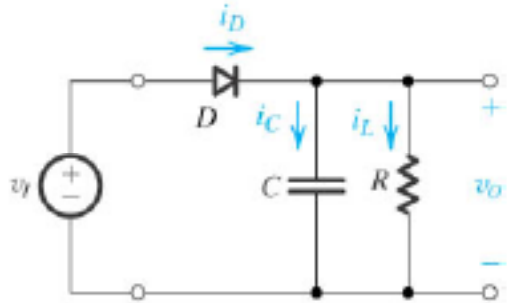
DC Power Supply



How can we make the filter?

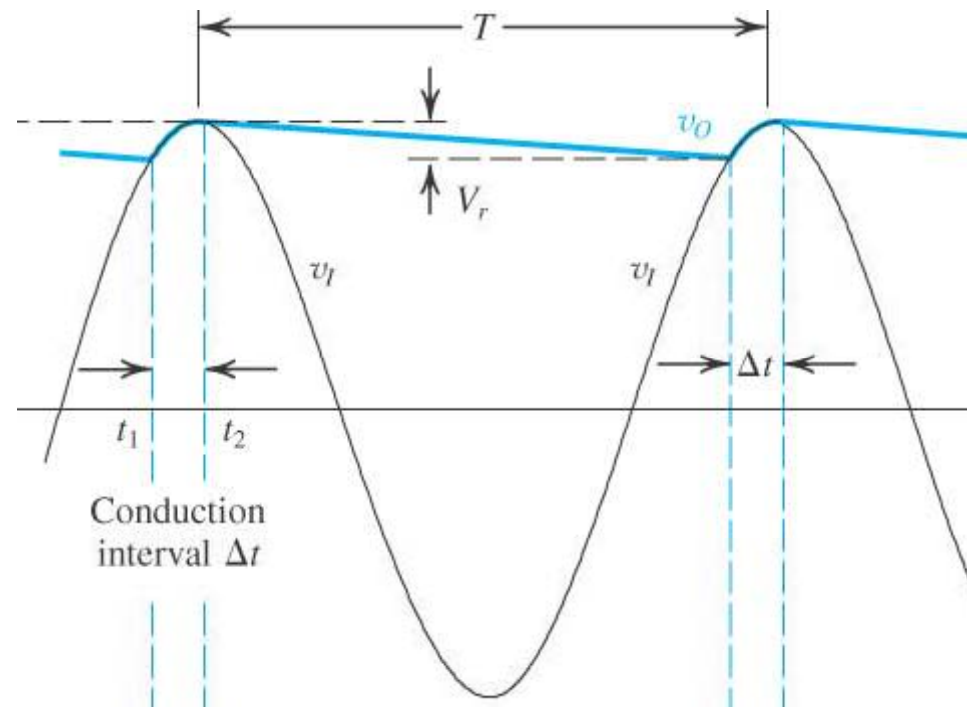
Capacitor

Lect. 8: Diode Rectifier



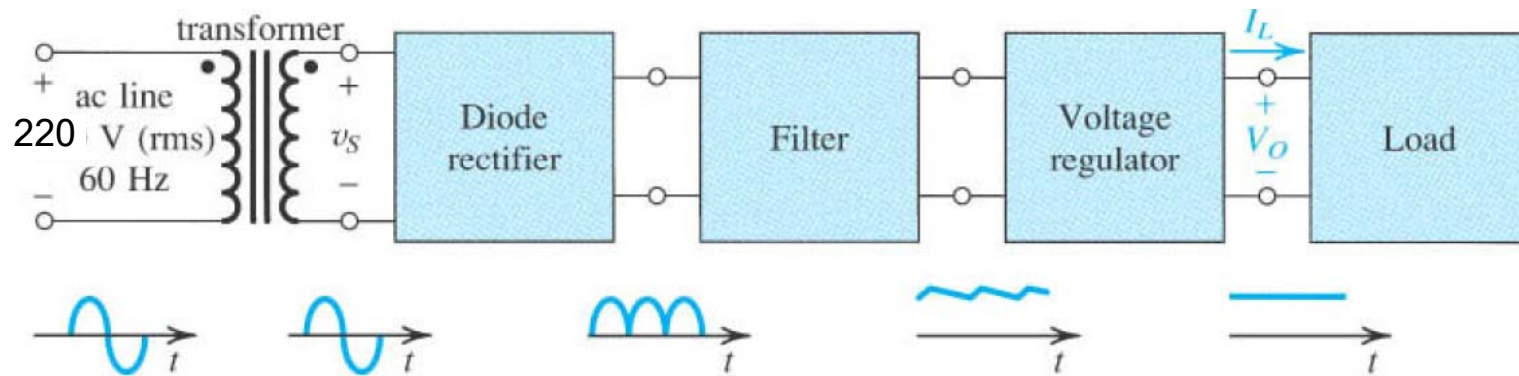
Diode On: Charging C

Diode Off:
Discharging exponentially
With time constant RC



Lect. 8: Diode Rectifier

DC Power Supply



IC's for voltage regulator

Lect. 8: Diode Rectifier

Homework

- Prob. 3.40 in Razavi