Faraday's and Lenz's Law

Faraday: Induced emf = rate of change of magnetic flux

$$\varepsilon = -\frac{\Delta\Phi}{\Delta t} = -\frac{\Phi_f - \Phi_i}{t_f - t_i}$$

Lenz: Induced emf <u>opposes change</u> in flux

Since $\Phi = B\,A\cos(\phi)$, 3 things can change Φ

✓ 1. Area of loop

✓ 2. Magnetic field B

Next lecture 3. Angle ϕ between normal and B