

## 3306 physics lectures, Spring 2026

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[https://www.physics.smu.edu/saptarnab/PH3306\\_Spring\\_2026/](https://www.physics.smu.edu/saptarnab/PH3306_Spring_2026/)

Based on Simon Dalley's lectures delivered in spring 2025



### **WARM UP 13: Maxwell's Equations (Halliday: 32.1 & 32.3)**

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*Write your answers in the space following the warm-up question if you can. Write as if you are explaining to a fellow student. If you need more space, you are probably over-thinking things.*

**How does displacement current differ from regular current?**

**Explain why electric current flows on and off a capacitor when there is a gap in the capacitor that prevents regular current flow.**

**Write the Maxwell equations in vacuum in whatever way you feel most comfortable with. Be careful to label correctly vectors and dot products of vectors.**