

## QED Practice

### Pre-Lecture Reading/Post-Lecture Summary

We will continue our evaluation of amplitudes in QED by evaluating the trace expressions we left off with last time. For the example of electron-muon scattering, we will take the spin averaged/summed amplitude and use it in the 2-body Golden rule to obtain the (possibly familiar) Rutherford formula. We will also consider loop-diagrams and the need for one final Feynman rule. This will open the door to the infinities that demand renormalization and a useful little trick called Furry's theorem. Then you will leave and be happy.