Mr. Feynman and Mr. Lagrangian go to Mr. Dirac's House

Pre-Lecture Reading/Post-Lecture Summary

I figure since you aren't reading these anyway, I might as well have fun. Today we will get a look at how some of the ingredients of the Feynman rules can be extracted from a Lagrangian. We will not be able to prove anything rigorously as this s the point where full blown quantum field theory would be required. However, I will try to make things as plausible as possible. After consideration of the ABC theory we will turn to QED based on the locally $U(1)$ invariant form of the Dirac Lagrangian. We will collect some useful information from the Dirac formalism and lay out the Feynman rules for QED. We may even get to write down an expression for M, but it turns out that evaluating it will require a bit more work than just doing integrals. We will save those steps for next time. Then you will leave and be happy.