Feynman Rules
(Momentum Space)

Propagators

Scalar : \[ \frac{i}{p^2 - m_S^2 + i\epsilon} \]
Fermion : \[ \frac{i(\gamma^\mu p_\mu + m_f)}{p^2 - m_f^2 + i\epsilon} \]
Photon : \[ \frac{-i}{p^2 + i\epsilon} \{g^{\mu\nu} - (1 - \xi)\frac{p^\mu p^\nu}{p^2} \} \]

Vertices

QED : \[ -ie\gamma^\mu \]
Yukawa : \[ -iy \]
\(\phi^4\) theory : \[ -i\lambda \]

External lines

incoming fermion : \[ u(k, s) \]
outgoing fermion : \[ \bar{u}(p, s) \]
incoming antifermion : \[ \bar{v}(k, s) \]
outgoing antifermion : \[ v(p, s) \]
scalars : \[ 1 \]
incoming photon : \[ \epsilon_\mu(p) \]
outgoing photon : \[ \epsilon^*_\mu(p) \]

Additional rules
Momentum conserving \(\delta\)-function at each vertex : \( (2\pi)^4 \delta^{(4)}(\sum p_i) \)
Momentum integral for each internal line : \( \int \frac{d^4q}{(2\pi)^4} \)
One should carry out as many of these integrals as possible using the above \(\delta\)-functions.
Divide by symmetry factors (diagram specific).