Feynman Rules
(Momentum Space)

Propagators

$$Scalar \quad : \quad \frac{i}{p^2 - m_S^2 + i\epsilon}$$

$$Fermion \quad : \quad \frac{i(\gamma^\mu p_\mu + m_f)}{p^2 - m_f^2 + i\epsilon}$$

$$Photon \quad : \quad \frac{-i}{p^2 + i\epsilon}\{g^{\mu\nu} - (1-\xi)\frac{p^\mu p^\nu}{p^2}\}$$

Vertices

$$QED \quad : \quad -ie\gamma^\mu$$
$$Yukawa \quad : \quad -iy$$
$$\phi^4\ theory \quad : \quad -i\lambda$$

External lines

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

Additional rules

Momentum conserving δ-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 δ-functions.

Divide by symmetry factors (diagram specific).