Formulae that may be useful. The meaning of the symbols is assumed to be known.

$$\bar{\psi} \equiv \psi^\dagger\gamma^0,\ \gamma^5 \equiv i\gamma^0\gamma^1\gamma^2\gamma^3,\ \bar{\Gamma} \equiv \gamma^0\Gamma^\dagger\gamma^0,\ \sum_{s=1,2} u^{(s)}\bar{u}^{(s)} = (\gamma^\mu p_\mu + mc),\ \sum_{s=1,2} v^{(s)}\bar{v}^{(s)} = (\gamma^\mu p_\mu - mc),$$
$$(\gamma^0)^\dagger = \gamma^0,\ (\gamma^0)^2 = 1,\ \gamma^\nu = \gamma^0(\gamma^\nu)^\dagger\gamma^0. \tag{4}$$

Internal lines for some particles: $-ig_{\mu\nu}/q^2,\ \frac{-i(g_{\mu\nu}-q_\mu q_\nu/M^2c^2)}{q^2-M^2c^2}$.

Some vertex factors for various interactions: $ig_e\gamma^\mu, -\frac{ig_{W,Z}}{2\sqrt{2}}\gamma^\mu(1-\gamma^5)$.

A Lagrangian describing some type of field: $\mathcal{L} = i\hbar c\bar{\psi}\gamma^\mu\partial_\mu\psi - mc^2\bar{\psi}\psi$.

Trace theorems: (below I use the notation $a' \equiv a^\mu\gamma_\mu$)

$$Tr(A+B) = Tr(A) + Tr(B),\ Tr(\alpha A) = \alpha Tr(A),\ Tr(ABC) = Tr(CAB) = Tr(BCA). \tag{5}$$

$$g_{\mu\nu}g^{\mu\nu} = 4,\ \{\gamma^\mu, \gamma^\nu\} = 2g^{\mu\nu},\ a'b' + b'a' = 2ab. \tag{6}$$

$$\gamma_\mu\gamma^\mu = 4,\ \gamma_\mu\gamma^\nu\gamma^\mu = -2\gamma^\nu,\ \gamma_\mu\gamma^\nu\gamma^\lambda\gamma^\mu = 4g^{\nu\lambda}. \tag{7}$$

$$\gamma_\mu\gamma^\nu\gamma^\lambda\gamma^\sigma\gamma^\mu = -2\gamma^\sigma\gamma^\lambda\gamma^\nu,\ \gamma_\mu a'\gamma^\mu = -2a'. \tag{8}$$

$$\gamma_\mu a'b'\gamma^\mu = 4ab,\ \gamma_\mu a'b'c'\gamma^\mu = -2c'b'a'. \tag{9}$$

$$Tr(\gamma^\mu\gamma^\nu) = 4g^{\mu\nu},\ Tr(\gamma^\mu\gamma^\nu\gamma^\lambda\gamma^\sigma) = 4(g^{\mu\nu}g^{\lambda\sigma} - g^{\mu\lambda}g^{\nu\sigma} + g^{\mu\sigma}g^{\nu\lambda}). \tag{10}$$

$$Tr(a'b') = 4ab,\ Tr(a'b'c'd') = 4[(ab)(cd) - (ac)(bd) + (ad)(bc)], \gamma^5 = i\gamma^0\gamma^1\gamma^2\gamma^3. \tag{11}$$

$$Tr(\gamma^5) = 0,\ Tr(\gamma^5\gamma^\mu\gamma^\nu) = 0,\ Tr(\gamma^5\gamma^\mu\gamma^\nu\gamma^\lambda\gamma^\sigma) = 4i\varepsilon^{\mu\nu\lambda\sigma}. \tag{12}$$

$$Tr(\gamma^5 a'b') = 0,\ Tr(\gamma^5 a'b'c'd') = 4i\varepsilon^{\mu\nu\lambda\sigma}a_\mu b_\nu c_\lambda d_\sigma, \tag{13}$$

where $\varepsilon^{\mu\nu\lambda\sigma}$ is -1 if $\mu\nu\lambda\sigma$ is an even permutation of 0123, +1 if it is an odd permutation, 0 if any two indices are the same. Finally, the trace over an odd number of γ matrices is zero. One has that $\varepsilon^{\mu\nu\lambda\sigma}\varepsilon_{\mu\nu\kappa\tau} = -2(\delta^\lambda_\kappa\delta^\sigma_\tau - \delta^\lambda_\tau\delta^\sigma_\kappa)$ where δ^μ_ν is the Kronecker delta-function (equal to 1 if $\mu = \nu$, 0 otherwise)