Vector double cross product:
$\mathbf{a} \times (\mathbf{b} \times \mathbf{c}) = (\mathbf{a} \cdot \mathbf{c})\mathbf{b} - (\mathbf{a} \cdot \mathbf{b})\mathbf{c}$

Characteristic plasma parameters:
$\lambda_{dB} = \sqrt{\frac{\epsilon_o k_B T_e}{n_e e^2}} = 743 \sqrt{\frac{T_e(\mathrm{eV})}{n_e(\mathrm{cm}^{-3})}}\ (\mathrm{cm}) \quad ; \quad \nu_{pe} = \frac{\omega_{p,e}}{2\pi} = \frac{1}{2\pi}\sqrt{\frac{e^2 n_e}{m_e \epsilon_o}} = 8.98\sqrt{n_e(\mathrm{cm}^{-3})}\ (\mathrm{kHz})$
$\nu_{ce}(\mathrm{GHz}) = 28\, B(\mathrm{T}) \quad ; \quad \nu_{ee}(\mathrm{s}^{-1}) = 4 \cdot 10^{-12} \frac{n_e(\mathrm{m}^{-3}) \ln\Lambda}{T_e^{3/2}(\mathrm{eV})}$

Guiding center drifts:
$\mathbf{v}_{gc,E\times B} = \frac{\mathbf{E}\times\mathbf{B}}{B^2} \quad ; \quad \mathbf{v}_{gc,\nabla B} = \frac{m v_\perp^2}{2qB^3}\,\mathbf{B} \times \boldsymbol{\nabla} B \quad ; \quad \mathbf{v}_{gc,cB} = \frac{m v_\parallel^2}{qB^3}\,\mathbf{B} \times \boldsymbol{\nabla} B$

Boltzmann equation: $\frac{\partial f_\alpha}{\partial t} + \mathbf{v} \cdot \frac{\partial f_\alpha}{\partial \mathbf{r}} + \frac{q_\alpha}{m_\alpha}\left[\mathbf{E} + \mathbf{v} \times \mathbf{B}\right] \cdot \frac{\partial f_\alpha}{\partial \mathbf{v}} = \left(\frac{\partial f_\alpha}{\partial t}\right)_c$

Electro- and magnetostatics:
$\epsilon_0 \oint_S \mathbf{E} \cdot \mathbf{n}\, d\sigma = Q_{encl} \quad ; \quad \oint_C \mathbf{B} \cdot \mathbf{t}\, ds = \mu_0 I_{encl}$

Maxwell's equations:
$\nabla \cdot \mathbf{E} = \frac{\rho}{\epsilon_0} \quad ; \quad \nabla \times \mathbf{B} = \mu_0 \mathbf{j} + \epsilon_0 \mu_0 \frac{\partial \mathbf{E}}{\partial t} \quad ; \quad \nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t} \quad ; \quad \nabla \cdot \mathbf{B} = 0$
with $\rho = \sum_\alpha q_\alpha \int f_\alpha(\mathbf{r}, \mathbf{v}, t)\, d\mathbf{v}$ and $\mathbf{j} = \sum_\alpha q_\alpha \int \mathbf{v} f_\alpha(\mathbf{r}, \mathbf{v}, t)\, d\mathbf{v}$.

Single-fluid MHD equations:
$\frac{d\rho}{dt} = \frac{\partial \rho}{\partial t} + \nabla \cdot (\rho \mathbf{u}) = 0 \quad ; \quad \rho \frac{d\mathbf{u}}{dt} = \rho\left(\frac{\partial \mathbf{u}}{\partial t} + \mathbf{u} \cdot \nabla \mathbf{u}\right) = \mathbf{j} \times \mathbf{B} - \nabla p \quad ; \quad \frac{d}{dt}(p\,\rho^{-\gamma}) = 0$
$\nabla \times \mathbf{E} = -\frac{\partial \mathbf{B}}{\partial t} \quad ; \quad \nabla \times \mathbf{B} = \mu_0 \mathbf{j} \quad ; \quad \mathbf{E} + \mathbf{u} \times \mathbf{B} = \mathbf{j}$

Two-fluid MHD equations:
$\frac{\partial n_s}{\partial t} + \nabla \cdot (n_s \mathbf{u}_s) = 0$
$m_s n_s \left[\frac{\partial \mathbf{u}_s}{\partial t} + (\mathbf{u}_s \cdot \nabla)\mathbf{u}_s\right] = q_s n_s(\mathbf{E} + \mathbf{u}_s \times \mathbf{B}) - \nabla \cdot \mathbf{P}_s - m_s n_s \sum_t \nu_{st}(\mathbf{u}_s - \mathbf{u}_t)$