

# Quick Cheat Sheet

(for fundamentals of physics)

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ReEFT

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*Mechanics*

*Electrodynamics*

*Quantum Mechanics*

*Statistical Mechanics*

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**Part I**

**Mechanics**

# Chapter 1

## Hamilton's Principle

Define the *action* of a system of particles as:

$$S = \int_{t_1}^{t_2} L(q, \dot{q}, t) dt \quad (1.1)$$

## **Chapter 2**

# **Lagrange's Formulation**

## **Chapter 3**

# **Hamilton's Formulation**

# **Part II**

# **Electrodynamics**

## **Part III**

# **Quantum Mechanics**



## **Chapter 4**

# **Formalism**

**Part IV**

**Statistical Mechanics**