Space - Time - Matter, Enlightenment Style

1. Introduction: Kant’s *Metaphysical Foundations of Natural Science* and Its Context (Week 1)

- **Topics:**
  (a) Context, Structure, and Purpose of Kant’s work
  (b) Contemporary debates regarding foundations of Newtonian science, matter theory
  (c) What is a science? What is the proper taxonomy of sciences?

- **Readings:**
  (a) Friedman’s Introduction to the Cambridge edition of Kant’s *Metaphysical Foundations*
  (b) “Metaphysics and Exact Science in the Evolution of Kant’s Thought” from Michael Friedman’s *Kant and the Exact Sciences*
  (c) Friedman’s “Matter and Motion in the *Metaphysical Foundations* and the First *Critique*” in Watkins, ed. *Kant and the Sciences*

2. Phoronomy and Phenomenology Sections of Kant’s *Metaphysical Foundations* (Weeks 2-3)

- **Topics:**
  (a) Review of earlier debates regarding relativity of motion, space and time
  (b) Kant’s position on space and time in the transcendental aesthetic and earlier works
  (c) What is Phoronomy?: Construction of motion as a quantity; continuity

- **Primary Readings:**
  (a) Newton: *Scholium* on space and time (*Principia*), selections from *De Gravitatione*
  (b) Leibniz: On Copernicanism and the Relativity of Motion, *Specimen Dynamicum*, *De Ipsa Natura* (§13), *A New System of Nature* and Note on Foucher’s objection, selections from correspondence with Huygens, Clarke
  (c) Kant: “Concerning the Ultimate Foundation...” (1768), Transcendental Aesthetic, Phenomenology and Phoronomy Sections of the *Metaphysical Foundations*

- **Background Readings:**
  (a) Michael Friedman *Kant’s Construction of Nature*, Chapter 1.
  (b) Earman’s “Kant, Incongruous Counterparts, and the Nature of Space and Space-Time.”

3. Dynamics Section of the *Metaphysical Foundations* (Weeks 4-6)

- **Topics:**
(a) Metaphysical-Dynamical view of matter versus Mathematical-Mechanical view of matter
(b) Matter as continuous (later Kant) versus matter as an aggregate of point-masses (Boscovich; early Kant)
(c) Continuity and Impenetrability

**Primary Readings:**
(a) Kant’s *Physical Monadology.*
(b) Leibniz: *Specimen Dynamicum, De Ipsa Natura, A New System of Nature;* selections from Leibniz-Arnauld correspondence
(c) Part I of Boscovich’s *A Theory of Natural Philosophy.*
(d) Selections from Euler’s *Letters to a German Princess.*

**Background Readings:**
(a) Friedman, Chapter 2.
(b) “Action at a Distance” (Chapter VII) and “Euler’s Hydrodynamics” from Mary Hesse’s *Forces and Fields* (e.g. Chapter 7)
(c) Daniel Warren’s “Kant’s Dynamics” from Eric Watkins, ed. *Kant and the Sciences*
(d) P.M. Harman *Metaphysics and Natural Philosophy* up to page 80.
(f) Mark Wilson “Back to ‘Back to Kant’.”

4. Mechanics in the *Metaphysical Foundations* (Week 7-8)

**Topics:**
(a) Kant’s Laws of Motion and (versus?) Newton’s Laws of Motion
(b) The Vis Viva Controversy

**Primary Readings:**
(b) Kant’s “True Estimation of Living Forces”
(c) Mechanics Section of the *Metaphysical Foundations*

**Background Readings:**
(a) Eric Watkins “Kant’s Justification of the Laws of Mechanics” from Eric Watkins, ed.
5. Opus Postumum (Weeks 9-10)

- **Topics:**
  - (a) What is the alleged gap in the Critical Project?
  - (b) What is Kant trying to do in the *Opus Postumum* that he didn’t do in the *Metaphysical Foundations*?

- **Primary Readings:**
  - (a) Kant’s *Opus Postumum* (selections).

- **Background Readings:**
  - (a) Friedman, *Kant and the Exact Sciences*, Part 2.
  - (b) Eckart Förster, *Kant’s Final Synthesis*. 