HISC 107: The Emergence of Modern Science
Fall 2010
Professor Tal Golan
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Lecture Times and place: Tu Th, 8 – 9:20 am, SEQUO 147
Office Hours and place: Tu 1-2 pm, H&SS 4044

Week 1:
Meeting 1 (Sep 23) Introduction
   Reading: http://en.wikipedia.org/wiki/History_of_science

Week 2:
Meeting 2 (Sep 28) Young Newton goes to college
   Reading: Lindberg, pp. 47-68; Westfall, pp. 3-42
Meeting 3 (Sep 30) the Newtonian Synthesis
   Reading: Westfall, pp. 139-158; Newton’s excerpts: TBA

Week 3:
Meeting 4 (Oct 5) Enlightened science
   Reading: Hankins pp. 1-45
Meeting 5 (Oct 7) Experimental Philosophy
   Reading: Hankins, pp. 46-112

Week 4:
Meeting 6 (Oct 12) The Science of Life
   Reading: Hankins, pp. 113-157
Meeting 7 (Oct 14) the Science of Man
   Reading: Hankins, 158-190

Week 5:
Meeting 8 (Oct 19) The Industrial Revolution
   Reading: Dorn, 23-58
Meeting 9 (Oct 21) Natural Theology
   Reading: Paley, Natural Theology, excerpts

Week 6:
Meeting 10 (Oct 26) Mid term test
Meeting 11 (Oct 28) Nineteenth Century physics - the grand synthesis
   Reading: Purrington, pp. 32-74

Week 7:
Meeting 12 (Nov 2) Thermodynamics
   Reading: Purrington, pp. 75-112
Meeting 13 (Nov 4) Evolution
   Reading: Bowler 1-49

Week 8:
Meeting 14 (Nov 9) Darwin and Darwinism
   Reading: Coleman 57-91

Week 9
Meeting 15 (Nov 16) the sciences of society and the soul – sociology and psychology
   Reading - TBA
Meeting 16 (Nov 18) Nineteenth-Century Medicine
   Reading: TBA

**Week 10:**
Meeting 17 (Nov 23) The Rise of genetics
   Reading: TBA

**Week 11**
Meeting 18 (Nov 30) Fin-De-Siecle science – Growing Uncertainties
   Reading: John Heilbron, Fin-de-siecle physics
Meeting 19 (Dec 2) What have we learned?

**Course Policies**

- Full participation in class is required to successfully complete this course.
- All submitted work must be your own.
- Weekly commentaries on the assigned readings
  - Before each meeting the students will comment on the assigned readings.
  - The comment should be short, not longer than half a page.
  - The comments will be checked but not graded.
  - No late commentaries will be accepted without an documented excuse (health or family emergency).

**Grading**

- **Weekly commentaries** %10
- **Mid-term exam** 45%:
- **Final exam** 45%:

**Bibliography**

**Required Books (available for purchase at UCSD Bookstore)**


All other readings will be posted on the course web site