HISC 107: The Emergence of Modern Science
Winter 2012
Professor Tal Golan
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Lecture, place and time: WLH 2207, Tu Th, 12:30 – 1:50 pm
Office Hours: Tu 11:30-12:30 (or by appointment), H&SS 4044

Week 1:
Meeting 1 (Jan 10) Introduction
   Reading: http://en.wikipedia.org/wiki/History_of_science
Meeting 2 (Jan 12) Young Newton goes to college
   Reading: Debus, pp. 1-15, 74-115

Week 2:
Meeting 3 (Jan 17) The Newtonian Synthesis
   Reading: Westfall, pp. 25-42, 105-119, 139-158; Newton’s excerpts
Meeting 4 (Jan 19) Enlightened science
   Reading: Hankins pp. 1-45

Week 3:
Meeting 5 (Jan 24) The Experimental Philosophy
   Reading: Hankins, pp. 46-80
Meeting 6 (Jan 26) Chemistry
   Reading: Hankins, pp. 81-112

Week 4:
Meeting 7 (Jan 31) The Science of Life
   Reading: Hankins, 113-157
Meeting 8 (Feb 2) The Science of Man
   Reading: Hankins, 158-190

Week 5:
Meeting 9 (Feb 7) The Industrial Revolution
   Reading: Dorn, 23-58
Meeting 10 (Feb 9) Natural Theology
   Reading: Paley, Natural Theology, excerpts

Week 6:
Meeting 11 (Feb 14) Mid term test
Meeting 12 (Feb 16) Nineteenth Century physics - the mechanical synthesis
   Reading: Purrington, pp. 32-74

Week 7:
Meeting 13 (Feb 21) Thermodynamics
   Reading: Purrington, pp. 75-112
Meeting 14 (Feb 23) Evolution
   Reading: Bowler 1-49

Week 8
Meeting 15 (Feb 28) Darwin and Darwinism
   Reading: Coleman 57-91
Meeting 16 (Mar 1) Medicine and Public Health
  Reading: TBA

**Week 9:**
Meeting 17 (March 6) Biological Determinism: Race, Gender, and more
  Reading: TBA
Meeting 18 (March 8) Psychology - the Science of the Soul
  Reading - TBA

**Week 10**
Meeting 18 (Mar 13) Fin-De-Siecle science – Growing Uncertainties
  Reading: John Heilbron, Fin-de-siecle physics
Meeting 19 (Mar 15) What have we learned?

### Course Policies

- All submitted work must be your own.
- Computer are allowed but should be used for class purposes only. If I think it distracts you (or me), I will ask you to turn it off.
- Weekly commentaries on the assigned readings
  - The students will comment on the assigned readings before each meeting.
  - 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.
  - If you fail three times (or more) to put in a commentary, you lose the commentary’s grade contribution.

### 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