

From the Clockwork Universe to the Standard Model: The Unraveling and Reweaving of Physics in the 20th Century

A Ten-Hour Course in Five 2-hour Weekly Sessions

Instructor:

Alfred B. (Fred) Bortz, Ph.D.
Monroeville, PA 15146
412-856-1440
DrFredB@worldnet.att.net

Textbook: *Physics: Decade by Decade* (Twentieth-Century Science, Facts On File, 2007) by Alfred B. Bortz, Ph.D.

Course outline:

Session 1: Setting the scene: Physics before 1895; The Dawn of Modern Physics, 1895-1910 (Introduction and Chapter 1)

Session 2: New Views of Matter, 1911-1920; The Quantum Revolution, 1921-1930 (Chapters 2-3)

Session 3: Particles and Politics, 1931-1940; Physics in a Time of War, 1941-1950 (Chapters 4-5)

Session 4: Physics and the Rise of New Technologies, 1951-1960; Explorations, 1961-1970; A New Synthesis Begins, 1971-1980 (Chapters 6-8)

Session 5: Broadening Public Discourse, 1981-1990; Cosmic Connections, 1991-2000; Challenges for the Twenty-first Century (Chapters 9-10 and Conclusion)

Instructor's Web Sites:

"Dr. Fred's Place" -- Science books for young readers -- www.fredbortz.com

"The Science Shelf" -- Science book reviews for adults -- www.scienceshelf.com