Potential lecture or class titles, in rough chronological order by subject matter
Lynn Margulis

Hadean/Archean Eons (4000 - 2500 mya)

1. Overview of cosmic evolution: From the "Big bang to the space age"
2. Origins of life as experimental and observational science
3. Rock-eater's, hot vents and the earliest metabolism
4. Photosynthesis, a bacterial virtuosity
5. Individuality and sense-of-self: Autopoiesis
6. Individuality and sense-of-self: Chemical communication and bacterial social behavior
7. Altruism in the microscopic world
8. Populations, societies and communities
9. Sensitive selves: Responses to touch, gravity and magnetic fields
10. Archean ecologies and the rise of stratified ecologies (without oxygen)
11. The earliest sex lives
12. Genetic promiscuity and the nature of death
13. The first world wide (bacterial) web
14. Ecological cycles and bacterial metabolic virtuosities: The rise of oxygen
15. Comparisons of early Mars and Venus with the Earth
16. Anima: Spirochetes and locomotion

The Proterozoic Eon (2500 - 541 mya)

17. Principles of the Darwinian evolutionary process: Biotic potential, heritable change and natural selection
18. Symbiogenesis as motor of evolutionary complexification
19. The Proterozoic sulfurous oceans
20. The earliest nucleated organisms: Sulfur and protection from rising oxygen
21. What is sex? The uniparental and multiple genders of protists
22. Cannibalism and the origin of meiotic sexuality
23. From bacterial genophores to chromosomes
24. What is multicellularity? Bacterial live on dry land long before plants
25. The oxygen holocaust: Environmental degradation by early life forms
26. Biomineralization: Formation of minerals by life
27. Introduction to the carbon cycle: What happens to trash and garbage?
28. Nitrogen cycling through the biosphere (with and without oxygen)
29. Calcium, sulfur, phosphorus: The origin of aggressive (and defensive) behavior
30. Protist choice and hunting towers: Foraminifera
31. Lovelock's Gaia hypothesis and regulation of environment by life
32. Living sands
33. Worldwide formation of iron ore (BIFs)
34. The microfossil and stromatolitic record of Proterozoic life
35. From swimming to sex and inevitable death
36. Spores, cysts and chromidia: The concept of a propagule

The Phanerozoic Eon (541 - 0 mya)

36. The remains of a cave? Paleopoolfingers, cave pearls, paleosnottite: Moroccan sediments and New Mexico caves
37. Termites, fungi and the origins of agriculture
38. Joseph Leidy's "jointed threads" and the cause of anthrax
39. Composite individuals and the basis of speciation: Who's eating the wood?
40. Williamson's larval transfer (hybridization by "forbidden fertilization")
41. Iron-manganese nodules: Is rock formation accelerated by microbes?
42. Toward a social science: Bowen's theory from microbes to men
43. Nietzsche's pox, spirochetes awake from round bodies: Syphilis and AIDS
44. Without science there is no culture
45. The cosmic evolution myth: An antidote to tribalism
46. DeepTime: the importance of history and energy flow