**FIRST SEMESTER**

1. Atomic structure history
2. Metric system
3. Metric conversions
4. Atomic #’s
5. Isotopes
6. The mole
7. Molar mass
8. Dimensional analysis
9. Molar conversions
10. Electron orbitals
11. Electron configuration
12. Atomic absorption and emission
13. Orbital diagrams
14. Nuclear chemistry
15. Nuclear equations
16. Half life
17. Periodic table structure – periodic table history
18. Periodic table structure – groups and periods
19. Periodic table structure – classes of elements
20. Periodic table structure – group names
21. Periodic trends – electronegativity
22. Periodic trends – ionization energy
23. Periodic trends – radius
24. Common ions
25. Naming ionic
26. Naming covalent
27. Writing ionic formulas
28. Writing covalent formulas
29. Lewis structures

**SECOND SEMESTER**

1. Lewis Structures
2. Polarity
3. Properties due to IMFs
4. Types of IMFs
5. Bulk Solids
6. Ranking IMFs
7. Balancing Equations
8. Phases and Changes
9. Types of Reactions
10. Predicting products
11. Molar conversions
12. Stoichiometry
13. Thermochemistry basics
14. Q=mCAT
15. Q=mL
16. Heating curves
17. Reaction diagrams
18. Rate affecting factors
19. Rate expressions
20. Rate Calculations
21. Equilibrium basics
22. Le Chatelier’s Principle problems