**Chemistry Syllabus**

**Syllabus may be revised for Elements 110-118**

Week One/Two

* Introduction to Chemistry Overview
* Presentation: Slides 1-6
* Science List 001
* Corresponding slides
* **Related Articles to Chemistry and Physics topic about the nature of particle science (TBA weekly).**

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| 1. Atom |
| 2. Isotopes  |
| 3. Allotropes |
| 4. Molecule |
| 5. Neutron |
| 6. IUPAC |
| 7. Proton |
| 8. Electron |
| 9. Adsorption |
| 10. Ununquadium |
| 11. Ununbium |
| 12. Unununnium |
| 13. Ununnilium |
| 14. Meitnerium |
| 15. Hassium |
| 16. Hydrogen |
| 17. Helium |
| 18. Lithium |
| 19. Beryllium |
| 20. Boron |

Week Three/Four

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| **Science List 002** |
| 1. Cyclotron |
| 2. HILAC |
| 3. Valence |
| 4. Bohrium |
| 5. Seaborgium |
| 6. Dubnium |
| 7. Rutherfordium |
| 8. Lawrencium |
| 9. Carbon |
| 10. Nitrogen |
| 11. Oxygen |
| 12. Fluorine |
| 13. Neon |
| 14. Sodium |
| 15. Magnesium |
| 16. Aluminum |
| 17. Silicon |
| 18. Phosphorus |
| 19. Sulfur |
| 20. Chlorine |
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| Week Five/Six |
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| **Science List 003** |
| 1. Cation |
| 2. Anion |
| 3. Ion |
| 4. Cathode |
| 5. Anode |
| 6. Covalent |
| 7. Nobelium |
| 8. Mendelevium |
| 9. Fermium  |
| 10. Einsteinium |
| 11. Californium |
| 12. Berkelium |
| 13. Curium |
| 14. Americium |
| 15. Argon |
| 16. Potassium |
| 17.Calcium |
| 18. Scandium |
| 19. Titanium |
| 20. Vanadium |
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| Week Seven and Eight |
| List 004 |
| 1. Plutonium |
| 2. Neptunium |
| 3. Protactinium |
| 4. Thorium |
| 5. Actinium |
| 6. Radium |
| 7. Francium |
| 8. Radon |
| 9. Chromium |
| 10. Manganese  |
| 11. Iron |
| 12. Cobalt |
| 13. Nickle |
| 14. Copper |
| 15. Zinc |
| 16. Gallium |
| **17. subatomic**-smaller than or occurring within an atom |
| **18. coefficient**-(in mathematics) a numerical or constant quantity placed before and multiplying the variable in an algebraic equation (4 in 4xʸ); (in physics) a multiplier or factor that measures a particular property. (The drag coefficient) mass of reactions must equal the mass of the products |
| **19.** nucleus-the central and most important part of an object, movement, or group, forming the basis for its activity and growth. (physics) the positively charged central core of an atom that contains most of its mass. |
| 20. Erwin Schrodinger-(1887-1961), Austrian theoretical physicist. He founded the study of the wave mechanics, deriving the equation whose roots define the energy levels of atoms. (Nobel Prize 1933)  |
| 21. Uranium |
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| **Week Nine/Ten** |
| List 005 |
| 1. Astatine |
| 2. Polonium  |
| 3. Bismuth |
| 4. Lead |
| 5. Thallium |
| 6. Mercury |
| 7. Gold |
| 8. Platinum |
| 9. Iridium |
| 10. Osmium |
| 11. Rhenium |
| 12. Tungsten |
| 13. Tantalum |
| 14. Hafnium |
| 15. Geranium |
| 16. Arsenic |
| 17. Selenium |
| 18. Bromine |
| 19. Krypton |
| 20. Rubidium |
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| **Week Eleven/Twelve** |
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| 1. Ytterbium |
| 2. Thulium |
| 3. Erbium |
| 4. Holmium |
| 5. Dysprosium |
| 6. Terbium |
| 7. Gadolinium |
| 8. Europium |
| 9. Samarium |
| 10. Promethium |
| 11. Strontium  |
| 12. Yttrium |
| 13. Zirconium |
| 14. Niobium |
| 15. Molybdenum |
| 16. Technetium |
| 17. Chemistry-the branch of science that deals with the identification of the substances of which matter is composed; the investigation of their properties and the ways in which they interact, combine, and change; and the use of these processes to form new substances. |
| 18. Physics-the branch of science concerned with the nature and properties of matter and energy. The subject matter of physics, distinguished from that of chemistry and biology, includes mechanics, heat, light and other radiation, sound, electricity, magnetism, and the structure of atoms. |
| 19. Meta Physics-the branch of philosophy that deals with the first principles of things, including abstract concepts such as being, knowing, substance, cause, identity, time, and space. (abstract theory or talk with no basis in reality.) |
| 20. Quantum Physics-Theoretical expressions of values related to subatomic, atomes, or molecules and can only have certain integral or half-integral values (numbers) |
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| **Week Thirteen/Fourteen** |
| list 007 |
| 1. Neodymium |
| 2. Praseodymium |
| 3. Cerium |
| 4. Lanthanum |
| 5. Barium |
| 6. Cesium |
| 7. Xenon |
| 8. Iodine |
| 9. Tellurium |
| 10. Antimony |
| 11. Tin |
| 12. Indium |
| 13. Cadmium |
| 14. Ruthenium |
| 15. Rhodium |
| 16. Palladium |
| 17. Silver |
| 18. Parasitism- an organism which lives in or on another organism (its host) and benefits by deriving nutrients at the other's expense. |
| 19. Commensalism-an association between two organisms in which one benefits and the other derives neither benefit nor harm. |
| 20. Symbiosis-interaction between two different organisms living in close physical association, typically to the advantage of both. |
| 21. Mutualism-the doctrine that mutual dependence is necessary to social well-being. Symbiosis which is beneficial to both organisms involved.  |

**Winter Break**