

المحتوى العلمي المقرر:

- *Introduction to nuclear chemistry (definitions, category ,interest of study, , , etc)*
- *Nuclear reaction Vs chemical reaction*
- *Nuclear structure and atomic structure*
- *Nucleus and Nuclear properties*
- *Elementary particle and compound particles*
- *Theories and nuclear model (simple in introduction in quantum mechanics, shell model, drop model)*
- *Nuclear reaction (fission, fusion, nuclear bombardment and nuclear decay)*
- *Type of radioactive decay*
- *Radioisotope natural and synthetic (application, preparation, analysis and properties)*
- *Radiation detection and radiation detectors*
- *Nuclear analytical technique*
- *Nuclear reactor and nuclear bombs*
- *Introduction to radiation chemistry*
- *Radiation chemistry of liquid*
- *Ionization radiation monitoring and generation*
- *Radiation health and safety.*

الكتب الأساسية:

Radiochemistry and Nuclear Chemistry, Jan Rydberg, Jan – Olov Liljenzin, 3rd ed., 2001.

المرجع المساند:

Radiochemistry and Nuclear methods of analysis, W. Ehmann & D. Vance, 1993.