

المحتوى العلمي للمقرر:

- *Colors of complexes*
- *Complementary colors*
- *Term Symbols*
- *Multiplicity*
- *Relation between electronic transitions and colors*
- *Expecting the number of transitions*
- *Expecting the color of complex*
- *Spectral Calculations*
- *Orgel and Tanabe- Sugano diagrams*
- *The nephelauxetic effect and inter- electronic repulsion parameters*
- *Simple spectral calculations*
- *The Trans effect*
- *The Trans – Series*
- *Use in Synthesis*
- *Theories of Trans – effect*
- *Chelate Effect*
- *Effect of chelate ligands on stability of complex*
- *Introduction to Mechanisms of substitution reactions*
- *SN1-CB mechanism*
- *D- and A- mechanism*
- *Evidence for SN1-CB mechanism*
- *VI Redox Reactions mechanisms*
- *Outer – sphere mechanism*
- *Inner- sphere mechanism*

الكتب الأساسية:

Inorganic chemistry, principle of structure and reactivity, James E. Huheey, 4th ed., 1993.

المرجع المساند:

Advanced inorganic chemistry, F. A. Cotton, G. Wilkinson and P.L. Gaus, 3rd ed., 1999, Wiley & Sons.