Course Specification

University/Academy: Damanhour University
Faculty/Institute: Faculty of Science
Department: Chemistry

1. Course Data:

<table>
<thead>
<tr>
<th>Course code:</th>
<th>Course title:</th>
<th>Academic year/level:</th>
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</thead>
<tbody>
<tr>
<td>Chem. 307</td>
<td>Inorganic Chemistry</td>
<td>3rd year- first term</td>
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</table>

2009-2010

Specialization: Special Chemistry

<table>
<thead>
<tr>
<th>No. of instructional units:</th>
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<tbody>
<tr>
<td>lecture 2</td>
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course Aim

By the end of the course, students will be able to:

- Name the complexes truly
- List the isomers of any complexes.
- Describe how the complexes were formed.
- Determine the geometric structure of the complexes depending on V.B. |T, C. F. |T and M.O.T.
- Interpret the spectra of the complexes.
- The course deals with what is meant by coordination compound and its applications.

2. Intended learning outcome

Knowledge and understanding

By the end of the course, students will be able to:

- Give difference between simple salts and complexes.
- Apply V.B.T, C.F.T and M.O.T on the complexes to determine the structure, magnetism and discuss the spectra of any complex.

Intellectual skills

On completing this course, students will be able to:

- create the geometric structure of the complexes and their isomers.
- contrast between different complexes in terms of magnetism and spectra, stability.
### Professional skills

By the end of the course, students will be able to:

- Perform synthetic experiments of different complexes.
- Calculate the E. A. N of the complex.
- Conclude the spectral sheet of the complexes.

### a) General skills

- Use IT and web search to collect information to make a report.
- Communicate effectively with the Lecturer and colleagues.
- Write report by scientific method.

### Course content

- Introduction + coordination compounds and their isomers
- Magnetic properties
- V.B.T
- C.F.T
- M.O.T
- Electronic spectra
- Thermodynamic stability

### Teaching and learning methods

- Lectures and seminars using data show and board.
- Laboratory work and assignment.
- Problem classes and group tutorial.
- Reports and discussion groups.

### Teaching and learning methods for students with special needs

- Computer hall to be used in visual labs and simulation experiments.
- Data show, overhead projector, Molecular models and chemistry computer programs.
- Changing to credit hours system, it is more effective.

### Student Assessment

- Mid term exam.
- Reports.
- Final term exam + reports.

### Procedures used:

<table>
<thead>
<tr>
<th>Schedule:</th>
<th>Weighing of</th>
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<tbody>
<tr>
<td>Assessment 1: Mid term exam</td>
<td>Week: 8</td>
</tr>
<tr>
<td>Assessment 2: Reports</td>
<td>Week: 5, 11, 14</td>
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<tr>
<td>Assessment 3: Final term exam</td>
<td>Week: 15</td>
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<td>Quizzes:</td>
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### Assessment:

<table>
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<tr>
<th></th>
<th>Mid-Term Examination:</th>
<th>Final-Term Examination: 60 %</th>
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<tbody>
<tr>
<td></td>
<td>Oral Examination:</td>
<td>40 %</td>
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<td>Practical Examination:</td>
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<td></td>
<td>Semester Work:</td>
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<td></td>
<td>Other types of assessment:</td>
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<tr>
<td>Total</td>
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### List of Textbooks and References:

- Comprehensive Coordination Chemistry - 1St Edition - Wilkinson (Elsevier) 1987

### Course Notes

Lecture notes of Inorganic Chemistry for 3rd year students - faculty of science – Damanhour University.

### Required Books (Textbooks)


### Recommended Books


### Periodicals, websites, etc

- [www.Elesevier.com](http://www.Elesevier.com)
- [www.springer.com](http://www.springer.com)
- etc

### Course Instructor

**Dr. Alaa E. Ali**

**Date:** 20 / 9 / 2008

### Head of Department

**Dr. Medhat A. Shaker**