Basic Data

1. (1) Course Title: Inorganic Chemistry I (Main Groups and transition Elements).
2. Course Number: 222 ch
3. Number of Hours: Four credit hours
   Lectures: 2 credit hours
   Lab.: 2 hours
4. Prerequisites: Chem 102 Corequisites

Professional Data

1) General goals of the course

   The course is designed to help student-teachers achieve the following goals:
   - Explain the trends and properties of s and p block elements and their most important compounds.
   - Identify the trends and properties of the first law transition elements and their most important compounds.
   - Describe the importance of transition elements in industrial and life processes.

2) Operational learning objectives of the course

   By the end of this course, student teachers are expected to achieve the following objectives:

   A) Knowledge and Comprehension:
   A-1 Identify the main group elements.
   A-2 Identify the general trends of s and p block elements.
   A-3 Acquaintance with chemical reactions of some representative elements.
   A-4 Identify transition elements.
   A-5 Compare the general trends of the transition series.
   A-6 Explain industrial and biological applications of the concepts of inorganic chemistry.

   B) Cognitive Skills:
   B-1 construct a correct mental model of chemical reactions
C) **Practical Skills:**
C-1 Locate resources, design and conduct inquiry-based open-ended investigations in inorganic chemistry, interpret findings, communicate results, and make judgments based on evidence.
C-2 Acquire hands on practical skills in inorganic Chemistry.

D) **Enabling Skills:**
D-1 Construct new knowledge for themselves through research, reading and discussion, and reflect in an informed way on the role of science in human affairs.
D-2 Relate the concepts of inorganic chemistry to contemporary, historical, technological, and societal issues; in particular, relate concepts of inorganic chemistry, to current controversies.

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Activities, tasks and assignments:

- Solves and discusses problem sets.
- Submission and class presentation of term papers.
- Computer aided and web based assignments and assessment.
- Molecular modeling to elucidate inorganic compounds and related structure – property – chemical reactivity relationships.
- Visits to relevant industrial and submission of subsequent reports chemical reactivity relationships.

Assessment and Evaluation tools:

- Quizzes.
- Hourly and midterm exams.
- Final Exam.
- Oral assessment.
- Assessment of term paper, reports and group discussions.
- Evaluation of performance in the lab, group projects, and reports.

Summative Evaluation table

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<td>المجموع</td>
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References:

Students’ Textbooks
(1) كتاب الطالب
Periodicals and websites
(2) مجلات علمية، ومواقع الإنترنت

The Journal of chemical physics
The journal of physical chemistry. A.
The journal of physical chemistry. B.
رؤية الكلية: انطلاقًا من رؤية جامعة الإسكندرية تسعى كلية التربية بدمونور إلى تحقيق الجودة والحصول على الاعتماد الأكاديمي لتحقيق مكانة مرموقة بين كليات التربية على المستوى القومي والعالمي (مجلس الكلية، 8 مارس 2009).

رسالة الكلية: إعداد المعلمين والكادر الموهوب القادر على تطوير النظم التعليمية والإدارية بالتعليم العام وال الفني، والباحثين القادرين على تطوير المعايير والمهارات القيمة.

الإمكانات المطلوبة للتعليم والتعلم

- Chemistry library
- Textbooks
- Handouts and problem sets.
- Electronic, web, and multimedia based resources

Course coordinator: منiscal المقرر:
Head of the Department: رئيس القسم:
Date التاريخ:
رؤية الكلية: انطلاقاً من رؤية جامعة الإسكندرية تسعى كلية التربية بدمنهور إلى تحقيق الجودة والحصول على الاعتماد الأكاديمي لتحقيق مكانة متميزة بين كليات التربية على المستوى القومي والعالمي (مجلس الكلية، 8 مارس 2009).

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