

مواصفات المقرر كيمياء 2

- البرنامج الذي يقدم المقرر من خلاله (إعداد معلم الفيزياء)
- يمثل المقرر عنصرا (رئيسيا) بالنسبة للبرنامج
- القسم العلمي المسئول عن البرنامج (متعدد)
- القسم العلمي المسئول عن تدريس المقرر (قسم الكيمياء)
- السنة الدراسية / المستوى (الفرقة الثانية-شعبة الفيزياء/ الفصل الدراسي الأول)
- تاريخ اعتماد توصيف البرنامج ()

Basic Data

بيانات أساسية

1. (1) Course Title: Inorganic Chemistry (Main Groups and transition Elements).
2. Course Number: 221ch
3. Number of Hours: five credit hours
Lectures: 2 credit hours
Lab.: 2 hours

Professional Data

بيانات مهنية

1) General goals of the course

(1) الأهداف العامة للمقرر

- 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 row 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

(2) الأهداف الإجرائية للمقرر

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.

Contents

المحتويات

week	Topics	Lecture	Lab.	Total
First	<u>Main Groups and Transition Elements:</u> introduction	2	2	4
Second	* <u>Chemistry of s:</u> general trends and properties, chemistry of most important compounds	2	2	4
Third	<u>Chemistry of s</u> general trends and properties, chemistry of most important compounds	2	2	4
Fourth	<u>Chemistry of s</u> general trends and properties, chemistry of most important compounds	2	2	4
Fifth	* <u>Chemistry of p block elements:</u> general trends and properties ,chemistry of most important compounds	2	2	4
Sixth	* <u>Chemistry of s and p block elements:</u> general trends and properties, chemistry of most important compounds.	2	2	4
Seventh	* <u>Chemistry of p block elements:</u> general trends and properties, chemistry of most important compounds	2	2	4
Eighth	<u>Chemistry of transition elements:</u> general trends and properties of d	2	2	4
Ninth	<u>Chemistry of transition elements:</u> general trends and properties of d	2	2	4
Tenth	<u>Chemistry of transition elements:</u> general trends and properties of d	2	2	4
Eleventh	<u>Chemistry of transition elements:</u> general trends and properties of d	2	2	4
Twelfth	<u>Chemistry of transition elements:</u> general trends and properties of d	2	2	4
Thirteenth	<u>Chemistry of transition elements:</u> general trends and properties of d	2	2	4

Activities, tasks and assignments:

أساليب التعليم والتعلم

- 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:

أساليب التقييم

- 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

جدول التقييم

Assessment	Final exam	Fifteenth Week	الأسبوع الخامس عشر	نهاية الفصل الدراسي	التقييم
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النسبة المئوية لكل تقييم

Assessment	Score ^{وزن الدرجة} Weight	التقييم
2. Final written exam	70	1. امتحان نهاية الفصل الدراسي
3. Final practical exam	20	2. الامتحان العملي
4. assignments	10	3. أعمال فصلية
Total	100	المجموع

References:

قائمة المراجع

Students' Textbooks

(1) كتب 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,

Resources

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

الإمكانات المطلوبة للتعليم والتعلم

Course coordinator:

- منسق المقرر: د / اسماعيل عابد

Head of the Department:

- رئيس القسم: د / مدحت شاكر

Date

- التاريخ :



رؤية الكلية: انطلاقا من رؤية جامعة الإسكندرية تسعى كلية التربية بدمنهور إلى تحقيق الجودة والحصول على الاعتماد الأكاديمي لتحتل مكانة متميزة بين كليات التربية على المستوى القومي و العالمي (مجلس الكلية ، 8 مارس 2009) .

رسالة الكلية: إعداد المعلمين والكوادر المؤهلة القادرة على تطوير النظم التعليمية والإدارية بالتعليم العام والفني ، والباحثين القادرين على تطوير

