

**Al al-Bayt University**  
**Department of Chemistry**  
**Electroanalytical Methods (403432)**

**Lecturer: Dr. Hutaf Baker**

**Chemistry Department**

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- **Course Description :** Studies the theory and practical applications of electrochemistry Analysis.

\*Three-hour Lecture. Prerequisite: **CHM 332**

<b>Lectures</b>	<b>Hours</b>
1- Introduction to electrochemical methods.	<b>4</b>
2. Potentiometric methods, direct application.	<b>5</b>
3. potentiometric titrations.	<b>4</b>
4. Mass transfer.	<b>3</b>

**First Hour Exam**

5. Types of ion selective electrodes and their	<b>5</b>
6. Electrogravimetric methods of analysis.	<b>4</b>
7. Coulometric methods of analysis.	<b>4</b>
8. Applications of redox reactions	<b>4</b>

**Second Hour Exam**

9. Conductance and applications.	<b>5</b>
10. Methods of electrical stimulation .	<b>5</b>
11. Polarographic methods.	<b>5</b>

## **Evaluation**

- First Exam: 25%. After about six weeks,
- Second Exam: 25%. After about twelve weeks,
- Final Exam: 50%, to be determined.

## **References**

- 1-Skoog, Douglas A.; Donald M. West, F. James Holler (1995-08-25). Fundamentals of Analytical Chemistry (7th Ed.).
- 2- Skoog, Holler, and Nieman, Principles of Instrumental Analysis (6th Ed).
- 3- Allen J. Bard, Larry R, Electrochemical methods : fundamentals and applications (2<sup>nd</sup> Ed).