

**Course Report**

**Post grad.**

**Pharmaceutical**

**Analytical**

**Chemistry**

**Department**

**2019-2020**

## Annual Course Report

**University:** Zagazig

**Faculty:** Pharmacy

**Department:** Pharmaceutical Analytical chemistry

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### A – Basic Information:

**1- Title and Code** Physical and general chemistry      **M106**

**2- Program(s) on which this course is given:** Pre-Master

**3- Year / Level of programs:** Pre-Master

**4- Credit hours:** -----

<b>Lectures</b>	4hrs/week
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**5- Names of lecturers contributing to the delivery of the course:**

- Prof. Dr/ Magda Ayad
- Prof. Dr/ Mervat Hosny
- Prof. Dr/ Wafaa Hassan

**6- Course coordinator:**

- Prof. Dr. / Wafaa Hassan

**7- External evaluator:**

- Prof.Dr. / Gamal Saleh (Assuit University)

### B- Statistical Information:

No. of students attending the course:	No. 18	100%
No. of students completing the course:	No. 17	94.44%

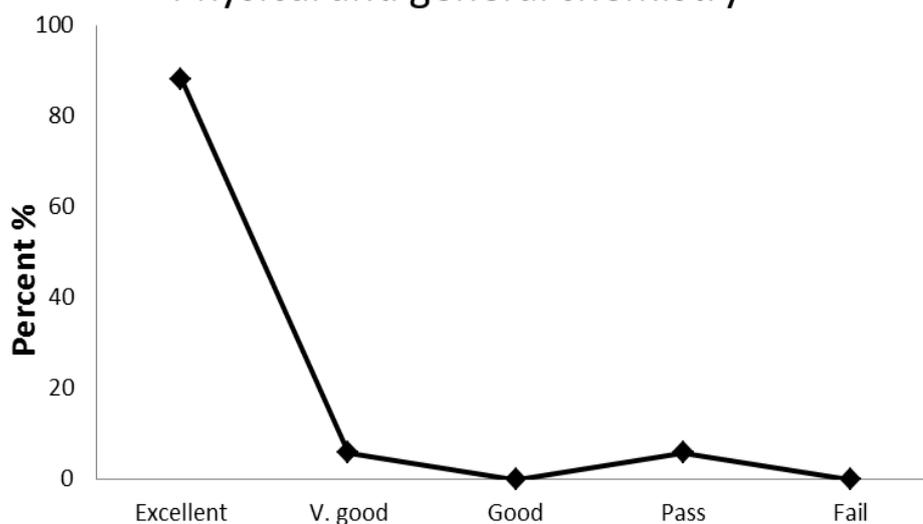
**Results:**

Passed	No.17	100%	Failed	No.0	0%
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**Grading of successful students:**

Excellent	No.15	88.24%	Very Good	No.1	5.88%
Good	No.0	0%	Pass	No.1	5.88%

المنحني التكراري لطلبة مقرر تمهيدى ماجستير  
Physical and general chemistry

**C- Professional Information:****1- Course Teaching:**

Week number	Contents	lecturer
1	<ul style="list-style-type: none"> <li>Introduction of kinetics and rate of reactions</li> </ul>	Prof. Dr/ Magda Ayad

2	<ul style="list-style-type: none"><li>• Molecular and order of reaction.</li></ul>	
3	<ul style="list-style-type: none"><li>• Parallel and consecutive reactions.</li></ul>	
4	<ul style="list-style-type: none"><li>• Methods used for determination of the order of reactions</li></ul>	
5	<ul style="list-style-type: none"><li>• Theories of reaction rates and chain reaction</li></ul>	
6	<ul style="list-style-type: none"><li>• Criteria of catalysis.</li></ul>	Prof. Dr/ Mervat Hosny
7	<ul style="list-style-type: none"><li>• Homogenous and enzyme catalysis</li></ul>	
8	<ul style="list-style-type: none"><li>• Heterogeneous catalysis</li></ul>	
9	<ul style="list-style-type: none"><li>• Nature of electrolytes in solution.</li></ul>	
10	<ul style="list-style-type: none"><li>• Photochemistry and properties of electromagnetic radiations.</li></ul>	Prof. Dr/ Wafaa Hassan
11	<ul style="list-style-type: none"><li>• Laws of photochemical process, quantum yield and chain reaction.</li></ul>	
12	<ul style="list-style-type: none"><li>• Solutions:</li><li>• Principles and concentration and solubility.</li></ul>	
13	<ul style="list-style-type: none"><li>• Factors affecting solubility</li><li>• Solute-solvent interaction.</li></ul>	Prof. Dr/ Hawaa Mohamed

	<ul style="list-style-type: none"> <li>• Solubility and temperature.</li> <li>• Effect of pressure on solubility.</li> </ul>	
14	<ul style="list-style-type: none"> <li>• Solutions of liquids in liquids</li> <li>• Solutions of solid in liquids (Colligative properties of solutions.)</li> </ul>	
15	<ul style="list-style-type: none"> <li>• Written Exam</li> </ul>	•

**Topics taught as a percentage of the content specified:**

>90 %	√	70 – 90 %		<70%	
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- **Reasons in detail for not teaching any topics:** -----
- **If any topics were taught are not specified , give reasons in detail:** -----

**2- Teaching and learning Methods:**

<b>Lectures:</b>	√
<b>Seminar / Workshop:</b>	√
<b>Case study:</b>	-
<b>Other assignment / homework:</b>	√

**3- Student assessment:**

Method of Assessment	Percentage %
Written examination	75
Oral examination	15
Activity	10
<b>Total</b>	<b>100</b>

**Members of examination committee:**

- Prof. Dr/ Magda Ayad
- Prof. Dr/ Mervat Hosny
- Prof. Dr/ Wafaa Hassan

**4- Facilities and Teaching Materials:**

Totally adequate	√
Adequate to some extent	
Inadequate	

**5- Administrative Constraints:** no constrain**6- Students Evaluation of the Course:**

Students evaluation of the course	Response of course team
Increase number of the practice cases within the course	The department will discuss this suggestion.

**7- Comments from external evaluator(s):**

Comments from external evaluator	Response of course team
The course aims are clear, well designed and linked to program ILOS	-----

**8- Course Enhancement:**

Action required	State whether or not complete and give reasons for any non-completion
Revision of the course with updating references used.	completed

**9- Action plan for academic year 2020– 2021:**

Action required	Completion date	Person responsible
Course update according to the benchmark	2020	Course team

**Course Coordinator:** Prof. Dr. / Wafaa Hassan

**Head of Department:**

تم اعتماد التقرير في مجلس القسم بتاريخ

## **Annual Course Report**

**University:** Zagazig

**Faculty:** Pharmacy

**Department:** Pharmaceutical Analytical chemistry

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### **A – Basic Information:**

**1- Title and Code:** Advanced Instrumental Analysis and Chromatography I  
**M101**

**2- Program(s) on which this course is given:** Pre-Master

**3- Year / Level of programs:** Pre-Master

**4- Credit hours:** -----

Lectures	4 hrs/week
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**5- Names of lecturers contributing to the delivery of the course:**

- Prof.Dr/ Hisham Ezzat
- Prof Dr/ Afaf Abu El-Kheir

**6- Course coordinator:**

- Prof.Dr/ Hisham Ezzat

**7- External evaluator:**

- Prof. Dr. Gamal Saleh (Assuit University)

### **B- Statistical Information:**

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No. of students attending the course	No.18	100 %
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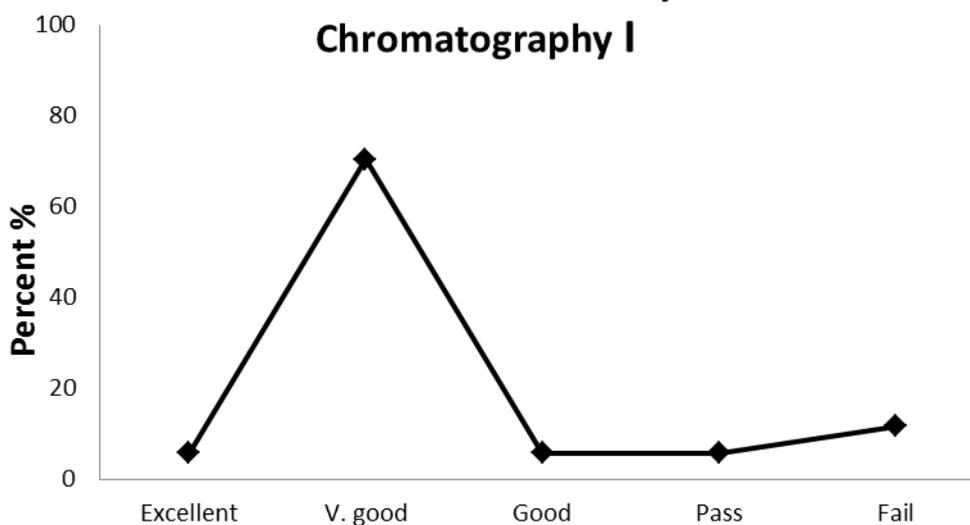
**Results:**

Passed	No. 15	88.24%	Failed	No.2	11.76%
No. of students completing the course			No.17	94.44%	

**Grading of successful students:**

Excellent	No.1	5.88%	Very Good	No.12	70.59%
Good	No.1	5.88%	Pass	No.1	5.88%

المنحني التكراري لطلبة مقررتمهيدى ماجستير  
Advanced Instrumental Analysis and  
Chromatography I

**C- Professional Information:**

**1- Course Teaching:**

<b>Topic</b>	<b>No of hours</b>	<b>Lecturers</b>	
Advanced Ultra-violet spectroscopy	4	Prof.Dr. Elsayed Lashen	
New aspects in vibrational spectroscopy (IR spectroscopy )	4		
Application of Nuclear magnetic resonance (NMR)	4		
Application of Mass spectrometry(MS)	4		
Medicinal application of spectroscopy in diagnosis of diseases	4		
Raman spectroscopy.	4		
Advanced HPLC.	4		Prof.Dr. Hisham Ezzet
<b>Activity (Reports)</b>			
HPLC & its medicinal and pharmaceutical application	4		
High performance thin layer chromatography (HPTLC).	4		
Advanced Gas chromatography.	4		
GC & its medicinal and pharmaceutical	4		

application		
New aspects of Supercritical fluid chromatography (SFC) and ion exchange chromatography (IEC).	4	
Capillary electrophoresis(CE)	4	
Analytical application of dimeric and polymeric molecules.	4	
<b>Activity (Reports)</b>		

### **Topics taught as a percentage of the content specified:**

>90 %	√	70 – 90 %		<70%	
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- **Reasons in detail for not teaching any topics: -----**
- **If any topics were taught are not specified , give reasons in detail: -----**

### **2- Teaching and learning Methods:**

<b>Lectures:</b>	√
<b>Seminar / Workshop:</b>	√
<b>Case study:</b>	-
<b>Other assignment / homework:</b>	√

### **3- Student Assessment:**

Method of Assessment	Percentage %
Written examination	75
Oral examination	15
Activity	10
Total	100

### Members of examination committee:

- Prof.Dr/ Hisham Ezzat
- Prof Dr/ Afaf Abu El-Kheir

### 4- Facilities and Teaching Materials:

Totally adequate	√
Adequate to some extent	
Inadequate	

### 5- Administrative Constraints: no constrain

### 6- Students Evaluation of the Course:

Students evaluation of the course	Response of course team
Practical sessions are required to carry out some experiments to clarify the theoretical content.	The department will discuss this suggestion.

### 7- Comments from external evaluator(s):

Comments from external evaluator	Response of course

	<b>team</b>
Other methods in addition to the previous teaching methods are required for increase the ability to solve problem e.g: practical analysis of drugs.	Evaluator's comments will be carefully considered.

### 8- Course Enhancement:

Action required	State whether or not complete and give reasons for any non-completion
. Revision of the course with updating references used.	completed

### 9- Action plan for academic year 2020– 2021:

Action required	Completion date	Person responsible
Revision of the course content for the preparation of new post graduates by laws	2020	Course team

**Course coordinator:** -Prof.Dr/ Hisham Ezzat

**Head of Department:**

تم اعتماد التقرير في مجلس القسم بتاريخ

## **Annual Course Report**

**University:** Zagazig

**Faculty:** Pharmacy

**Department:** Pharmaceutical Analytical chemistry

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### **A – Basic Information:**

**1- Title and Code:** Instrumental Analysis II    **M102**

**2- Program(s) on which this course is given:** Pre-Master

**3- Year / Level of programs:** Pre-Master

**4- Credit hours:** -----

Lectures	4 hrs/week
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**5- Names of lecturers contributing to the delivery of the course:**

- Prof.Dr/ Hisham Ezzat
- Prof Dr/ Magda El Henawee
- Prof Dr/ Hawaa Khalil
- Prof Dr/Mohammed El Balkiny

**6- Course coordinator:**

- Prof.Dr/ Magda El Henawee

**7- External evaluator:**

- Prof. Dr. Gamal Saleh (Assuit University)

**B- Statistical Information:**

No. of students attending the course	No.4	100 %
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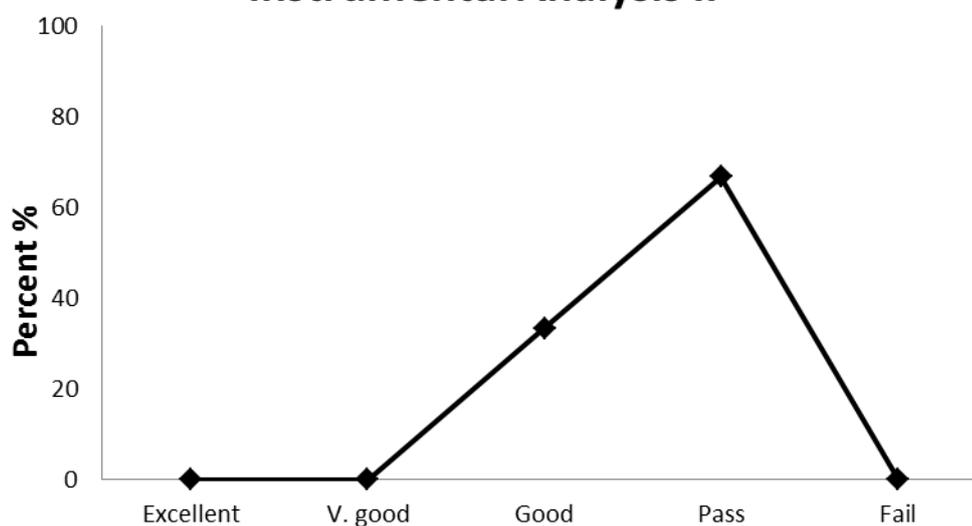
**Results:**

Passed	No. 3	100%	Failed	No.0	0%
No. of students completing the course			No.3	75%	

**Grading of successful students:**

Excellent	No.0	0%	Very Good	No.0	0%
Good	No.1	33.33%	Pass	No.2	66.67%

المنحني التكراري لطلبة مقرر ماجستير

**Instrumental Analysis II****C- Professional Information:**

**2- Course Teaching:**

Topic	No of hours	Lecturers
Introduction and classification of chromatographic methods, quantitative and qualitative TLC.  Gas chromatography, HPLC, Electrophoresis.	30	Prof.Dr/ Hisham Ezzat  Prof Dr/ Magda El Henawee  Prof Dr/ Hawaa Khalil
Polarography and voltametry , UV spectrophotometry, Spectrofluorimetry, Atomic absorption spectrophotometry	30	Prof Dr/Mohammed El Balkiny

**Topics taught as a percentage of the content specified:**

>90 %	√	70 – 90 %		<70%	
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- **Reasons in detail for not teaching any topics: -----**
- **If any topics were taught are not specified , give reasons in detail: -----**

**2- Teaching and learning Methods:**

<b>Lectures:</b>	√
<b>Seminar / Workshop:</b>	√
<b>Case study:</b>	-
<b>Other assignment / homework:</b>	√

**3- Student Assessment:**

Method of Assessment	Percentage %
Written examination	75
Oral examination	15
Activity	10
<b>Total</b>	<b>100</b>

**Members of examination committee:**

- Prof.Dr/ Hisham Ezzat
- Prof Dr/ Magda El Henawee
- Prof Dr/ Hawaa Khalil
- Prof Dr/Mohammed El Balkiny

**4- Facilities and Teaching Materials:**

Totally adequate	√
Adequate to some extent	
Inadequate	

**5- Administrative Constraints:** no constrain**6- Students Evaluation of the Course:**

Students evaluation of the course	Response of course team
Practical sessions are required to carry out some experiments to clarify the	The department will discuss this

theoretical content.	suggestion.
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### 7- Comments from external evaluator(s):

Comments from external evaluator	Response of course team
Other methods in addition to the previous teaching methods are required for increase the ability to solve problem e.g: practical analysis of drugs.	Evaluator's comments will be carefully considered.

### 8- Course Enhancement:

Action required	State whether or not complete and give reasons for any non-completion
Revision of the course with updating references used.	completed

### 9- Action plan for academic year 2020– 2021:

Action required	Completion date	Person responsible
Revision of the course content for the preparation of new post graduates by laws	2020	Course team

**Course coordinator:** -Prof.Dr/ Magda El Henawee

**Head of Department:**

تم اعتماد التقرير في مجلس القسم بتاريخ

## **Annual Course Report**

**University:** Zagazig

**Faculty:** Pharmacy

**Department:** Pharmaceutical Analytical chemistry

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### **A – Basic Information:**

**1- Title and Code:** Quality control ME1

**2- Program(s) on which this course is given:** Pre-Master

**3- Year / Level of programs:** Pre-Master

**4- Credit hours:** -----

Lectures	4 hrs/week
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**5- Names of lecturers contributing to the delivery of the course:**

- Prof.Dr/ Hisham Ezzat
- Prof Dr/ Gamal Ragab
- Prof Dr/ Heba El Said

**6- Course coordinator:**

- Prof.Dr/ Hisham Ezzat

**7- External evaluator:**

- Prof. Dr. Gamal Saleh (Assuit University)

**B- Statistical Information:**

No. of students attending the course	No.23	100 %
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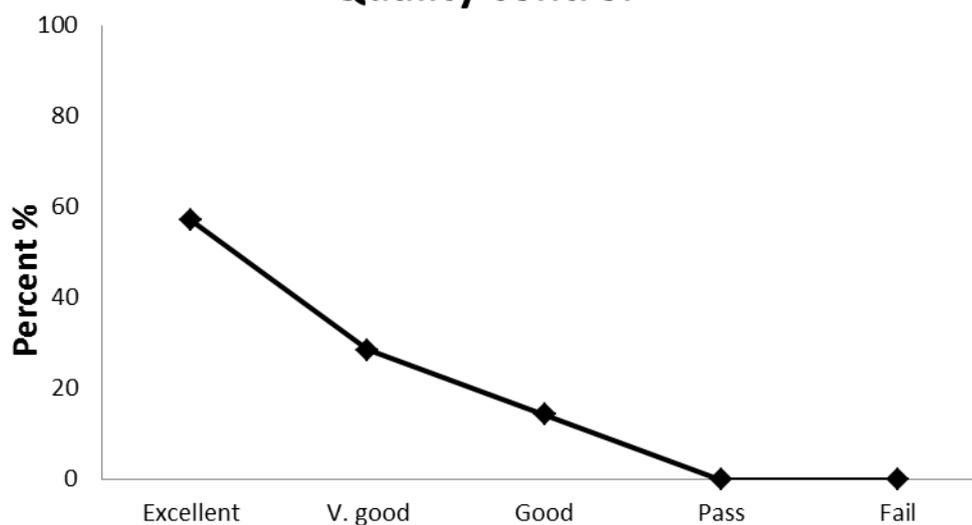
**Results:**

Passed	No. 21	100%	Failed	No.0	0%
No. of students completing the course		No.21	91.30%		

**Grading of successful students:**

Excellent	No.12	57.14%	Very Good	No.6	28.57%
Good	No.3	14.29%	Pass	No.0	4.17%

المنحني التكراري لطلبة مقررتمهيدى ماجستير

**Quality control**

**C- Professional Information:****3- Course Teaching:**

Topic	No of hours	Lecturers
Validation parameters in analysis, quality control, quality assurance and application of quantitative analysis for different drugs. Applications of spectrophotometric analysis for dosage forms. NMR, advanced techniques in mass spectroscopy, atomic absorption, fluorimetric analysis, radioimmune assay Electrophoresis, advanced GC-MS chemistry, spectrodensitometric and forensic chemistry.	60	Prof.Dr/ Hisham Ezzat Prof Dr/ Gamal Ragab Prof Dr/ Heba El Said

**Topics taught as a percentage of the content specified:**

>90 %	√	70 – 90 %		<70%	
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- Reasons in detail for not teaching any topics: -----
- If any topics were taught are not specified , give reasons in detail: -----

**2- Teaching and learning Methods:**

Lectures:	√
Seminar / Workshop:	√

<b>Case study:</b>	-
<b>Other assignment / homework:</b>	√

### 3- Student Assessment:

Method of Assessment	Percentage %
Written examination	75
Oral examination	15
Activity	10
<b>Total</b>	<b>100</b>

### Members of examination committee:

- Prof.Dr/ Hisham Ezzat
- Prof Dr/ Gamal Ragab
- Prof Dr/ Heba El Said

### 4- Facilities and Teaching Materials:

<b>Totally adequate</b>	√
<b>Adequate to some extent</b>	
<b>Inadequate</b>	

### 5- Administrative Constraints: no constrain

### 6- Students Evaluation of the Course:

Students evaluation of the course	Response of course team
Practical sessions are required to carry out some experiments to clarify the theoretical content.	The department will discuss this suggestion.

### 7- Comments from external evaluator(s):

Comments from external evaluator	Response of course team
Other methods in addition to the previous teaching methods are required for increase the ability to solve problem e.g: practical analysis of drugs.	Evaluator's comments will be carefully considered.

### 8- Course Enhancement:

Action required	State whether or not complete and give reasons for any non-completion
Revision of the course with updating references used.	Completed

### 9- Action plan for academic year 2020– 2021:

Action required	Completion date	Person responsible
Revision of the course content for the preparation of new post graduates by laws	2020	Course team

**Course coordinator:** -Prof.Dr/ Hisham Ezzat

**Head of Department:**

تم اعتماد التقرير في مجلس القسم بتاريخ

## Annual Course Report

**University:** Zagazig

**Faculty:** Pharmacy

**Department:** Pharmaceutical Analytical chemistry

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### A – Basic Information:

**1- Title and Code:** Voltammetry, Potentiometry and Electrochemical sensors **ASP1**

**2- Program(s) on which this course is given:** Master

**3- Year / Level of programs:** Master

**4- Credit hours:** -----

<b>Lectures</b>	4hrs/week
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**5- Names of lecturers contributing to the delivery of the course:**

- Prof. Dr/ Wafaa Hasan
- Prof. Dr/ Abdallah Shalaby
- Ass. Prof. Dr/ Manal El Masry

**6- Course coordinator:**

- Prof. Dr/ Wafaa Hasan

**7- External evaluator:**

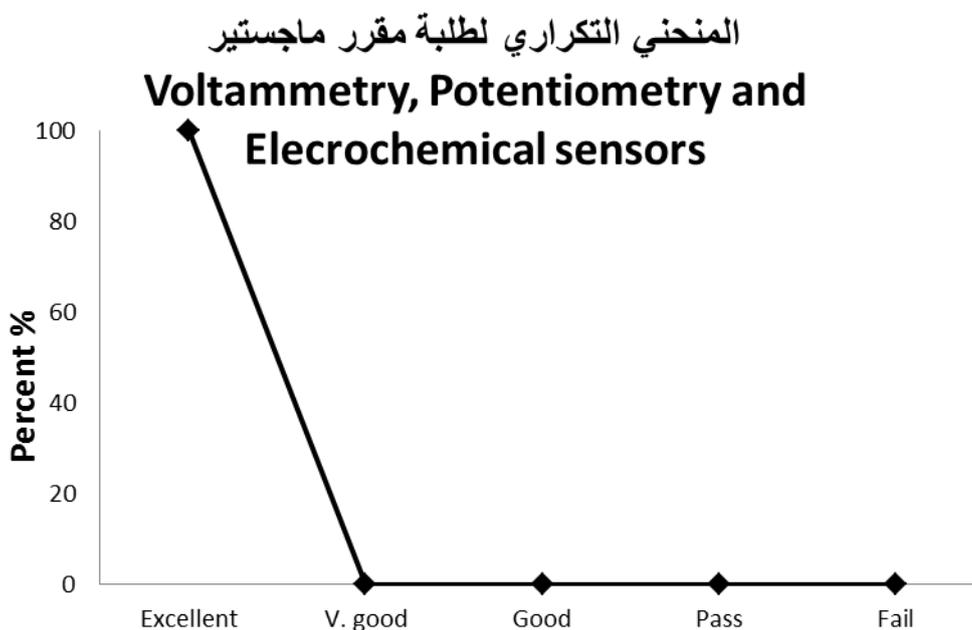
- Prof.Dr. / Gamal Saleh (Assuit University)

### B- Statistical Information:

No. of students attending the course:	No. 5	100%
No. of students completing the course:	No. 4	80%

<b>Results:</b>					
Passed	No.4	100%	Failed	No.0	0%

<b>Grading of successful students:</b>					
Excellent	No.4	100%	Very Good	No.0	0%
Good	No.0	0%	Pass	No.0	0%



## **C- Professional Information:**

### **1- Course Teaching:**

<b>Topic</b>	<b>No of hours</b>	<b>Lecturers</b>
Introduction to electrochemistry	60	Prof. Dr/ Wafaa Hasan

<p>Potentiometry(Principles, Reference electrodes and Metallic indicator electrodes.</p> <p>Ion Selective electrodes (Glass electrodes, Liquid membrane electrodes, Solid state electrodes, Coated wire electrodes)</p> <p>Voltammetry(principles,Voltammogram, applications)</p> <p>Electrochemical sensors.</p>	<p>Prof. Dr/ Abdallah Shalaby Ass. Prof. Dr/ Manal El Masry</p>
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**Topics taught as a percentage of the content specified:**

>90 %	√	70 – 90 %		<70%	
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- **Reasons in detail for not teaching any topics:** -----
- **If any topics were taught are not specified , give reasons in detail:** -----

**2- Teaching and learning Methods:**

<b>Lectures:</b>	√
<b>Seminar / Workshop:</b>	√
<b>Case study:</b>	-
<b>Other assignment / homework:</b>	√

**3- Student assessment:**

<b>Method of Assessment</b>	Percentage %
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<b>Written examination</b>	75
<b>Oral examination</b>	15
<b>Activity</b>	10
<b>Total</b>	100

### Members of examination committee:

- Prof. Dr/ Wafaa Hasan
- Prof. Dr/ Abdallah Shalaby
- Ass. Prof. Dr/ Manal El Masry

### 4- Facilities and Teaching Materials:

<b>Totally adequate</b>	√
<b>Adequate to some extent</b>	
<b>Inadequate</b>	

### 5- Administrative Constraints: no constrain -----

### 6- Students Evaluation of the Course:

<b>Students evaluation of the course</b>	<b>Response of course team</b>
Practical sessions are required to carry out some experiments to clarify the theoretical content.	The department will discuss this suggestion.

### 7- Comments from external evaluator(s):

Comments from external evaluator	Response of course team
Other methods in addition to the previous teaching methods are required for increase the ability to solve problem e.g: practical analysis of drugs.	Evaluator's comments will be carefully considered.

### 8- Course Enhancement:

Action required	State whether or not complete and give reasons for any non-completion
Revision of the course with updating references used.	Completed

### 9- Action plan for academic year 2020– 2021:

Action required	Completion date	Person responsible
Revision of the course content for the preparation of new post graduates by laws	2020	Course team

- **Course Coordinator:** Prof. Dr/ Wafaa Hasan
- **Head of Department:**

تم اعتماد التقرير في مجلس القسم بتاريخ