



Faculty of Science  
Chemistry Department

"إن جودة العلوم الأساسية هي الضمان للعلوم الأخرى"

The Quality of Basic Sciences is the Assurance for Other Sciences



وحدة ضمان الجودة

جامعة حماة  
كلية العلوم  
قسم الكيمياء  
مرحلة الدراسات العليا  
(عام ٢٠١٦ / ٢٠١٧)  
برنامج الكيمياء التطبيقية  
ماجستير

منسق البرنامج أ.د سامية الشرييني

رئيس القسم أ. د وفاء غنيم



Faculty of Science  
Chemistry Department

"إن جودة العلوم الأساسية هي الضمان للعلوم الأخرى"

The Quality of Basic Sciences is the Assurance for Other Sciences



وحدة ضمان الجودة

ملف توصيف البرنامج و مصفوفات  
مخرجات التعلم الخاصة بالبرنامج و  
مقرراته الدراسية  
(برنامج الكيمياء التطبيقية)

مرحلة الماجستير

٢٠١٧/٢٠١٦

نموذج رقم ( ١٣ )

جامعة: حلوان.

كلية: العلوم.

قسم: الكيمياء.

توصيف برنامج دراسي

( عام ٢٠١٧/2016 )

أ - معلومات أساسية:

١- إسم البرنامج: Master degree in Applied Chemistry

٢ - طبيعة البرنامج: (أحادي) single major

القسم المسئول عن البرنامج : الكيمياء

اسم منسق البرنامج: أ.د سامية الشربيني استاذ الكيمياء التطبيقية بقسم الكيمياء

تاريخ إقرار البرنامج : قرار وزارى رقم ١٢٣٤ بتاريخ ٢٠٠٩/٦/١١

تاريخ اعتماد توصيف البرنامج بمجلس القسم رقم ( ٤ ) بتاريخ ٢٠١٧/١٢/١٣ ومجلس الكلية رقم ( ٤٤٠ ) بتاريخ

٢٠١٧/١٢/١٨

ب- معلومات متخصصة:

1- General aims of the program:

١- الأهداف العامة للبرنامج :

- 1- Provide the postgraduate with the advanced applied chemistry knowledge and skills essential for the mastery practice of specialty.
- 2- Enable the graduates to analyse complex issues both systematically and creatively in the applied field.
- 3- provide special knowledge and integrate it with the knowledge related to the professional practice.
- 4- Identify professional problems in applied and industrial chemistry and find logical solutions.
- 5- Provide students with the skills, ethics, and methodologies to serve the needs of the environment and society.
- 6- Enable the graduate's to increase his knowledge in applied chemistry and to be a decision maker in various professional contexts.
- 7- Enable graduates ability to use the available resources to bring the greatest benefit and preserve it and to benefit the waste by recycling and reusing.
- 8- Develop graduates responsible attitude towards the needs of society and the environment conservation and awareness of the dangers of industrial effluents and the importance of his role in finding developed solutions to deal with, in light of global and

regional changes.

9- Develop the student's integrity, credibility and commitment to the rules of the profession.

10- Encourage graduates to think creatively and self-reliance in solving complex problems in an orderly fashion. And independence and the ability to develop himself professionally.

11- Developing presentational skills of the graduate and developing ability to write professional reports

12- Enable the graduate writing skills of projects in both industrial and academic fields

2 - المخرجات التعليمية المستهدفة من البرنامج:

## 2. Intended Learning Outcomes (ILOs):

1/2 المعرفة والفهم:

### a- Knowledge and Understanding:

**By the end of the program the graduate is expected to:**

A1. Identify the principles fundamentals of the industrial business administration and chemical technology, basics of material and energy balance unit operations in the manufacture of major industries.

A2. Demonstrate the solid waste systems, the quality managements and various packaging materials beside their properties including the ways of development and the major standards used in national and international industries.

A3. Identify the advanced techniques in electrochemistry, analytical chemistry, the theories of the colloidal and surface chemistry. Following the scientific developments in various industries such as paper, paints, fertilizers, petroleum,...etc.

A4. Identify ethical and legal principles of professional practice in the academic and industrial area.

A5. Show the effect of industrial chemistry on the society and environmental problems.

A6. Outline the culture and the basics of quality in professional practice in both academic and industry and applying the international standers.

A7. Show the importance of commitment basics and ethics of scientific research in terms of research methodology and scientific integrity.

A8. Explain scientific and mathematics development in the field of applied and industrial chemistry.

### b- Intellectual skills:

2/2 القدرات الذهنية:

**By the end of the program the graduate is expected to:**

- B1. Analyze the information and analysis of problems specialist industrial field to order to resolve them.
- B2. Solve specialized problem with the lack of some data.
- B3. Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.
- B4. Conduct a research study and / or writing a scientific methodological study on a research problem.
- B5. Plan to improve performance in the applied chemistry and industrial chemistry field.
- B6. Take professional decisions in a variety of applied and industrial chemistry contexts.
- B7. Assess risk in professional practices in the area of applied and industrial chemistry.
- B8. Analyze search results using theories and statistical tests.

المهارات: ٣/٢

١/٣/٢ - مهارات مهنية وعملية:

**C-Professional and Practical Skills :**

By the end of the program the graduate is expected to:

- C1. Master both the basic and modern professional skills in the field of applied and industrial fields.
- C2. Evaluate of professional scientific report.
- C3. Rate existing methods and tools in the applied and Industrial fields.
- C4. Propose research project that serves the area of the applied and Industrial fields.
- C5. Determine the originality of practical problems in order to tackling and solving them.

٢/٣/٢ - مهارات عامة و منتقلة:

**D-General and Transferable Skills:**

**By the end of the programme the graduate must be able to:**

- D1. Communicate effectively in different ways of all kinds as conferences, seminars, publications written and visual (posters).
- D2. Use of information technology to serve the professional practice.
- D3. Practice self-assessment to identify personal learning needs.
- D4. Use different sources to get information and knowledge.
- D5. Develop rules and indicators to evaluate the performance of others.
- D6. lead professional teams in different contexts.
- D7. Manage time efficiently.
- D8. Practice self and continuous learning.

D9. Build the ability to think realistic and creative.

D10. Assess available resources effectively.

3- المعايير الأكاديمية للبرنامج:

**\*\*\* Academic Reference Standards (ARS) for Post Graduate Master program**

**1 - Knowledge and Understanding**

By the end of studying master's Applied Chemistry field program graduates must be able to grasp:

- 1 - Recognize the theories and foundations related to the field of learning, as well as in the related areas.
- 2 - Show the mutual influence and impact of professional practice on the environment and community.
- 3 - Explain scientific developments in the field of specialization
- 4 – Identify ethical and legal principles of professional practice in the area of specialization.
- 5 - Identify ethical and legal principles of professional practice in the area of specialization
- 6 - Outline the principles and the basics of quality in professional practice in the field Specialization.
- 7- Recall basics and ethics of scientific research

**2 - Intellectual Skills**

By the end of studying Master's Chemistry program graduates should be able to:

- 1 - Analyze the information in the field of specialization in order to resolve problems.
- 2 – Solve specialized problems with the lake of some data.
- 3 - Link between various profficinal knowledge to solve various professional problems.
- 4 - Conduct a research study and / or write a systematic scientific study on the research problem.
- 5 - Assess risk in professional practices in in the area of specialization
- 6 - Plan for the development of performance in the area of specialization.
- 7 – Take professional decisions in a variety of professional contexts.

**3- Professional Skills**

By the end of studying master's applied chemistry program graduates must be able to:

- 1 - Master the basic and modern professional skills in the applied chemistry specialization.
- 2 - Write and evaluate professional scientific reports.
- 3 - Rate existing methods and tools existing in the the area of specialization.

#### 4- General and transferable skills

By the end of studying applied chemistry Master's program graduates should be able to:

- 1 - Communicate effectively in different ways.
- 2 - Use information technology to serve the professional practice.
- 3 - Practice self-assessment and identify personal learning needs.
- 4 - Use different sources to get information and knowledge.
- 5 - Develop rules and indicators for evaluate the performance of others.
- 6 - Work in teams and lead professional teams in different contexts.
- 7 - manage Time efficiently.
- 8 - Practice self and continuous learning

4- المعايير الأكاديمية للبرنامج

Not applicable

5- هيكل ومكونات البرنامج:

#### 5. Curriculum structure and contents:

##### 5.a- Programme duration:

Full-time: Minimum: 4 essential semesters

Maximum: 10 essential semesters

##### 5.b- Programme structure:

Total: 36 credit hours (18 credit hours compulsory, 6 credit hours elective, 12

credit hours for thesis)

إجمالي	نظري	عدد الساعات / عدد الوحدات :
% 75	18	<input type="checkbox"/> مقررات العلوم الأساسية:
% 0	0	<input type="checkbox"/> مقررات العلوم الإجتماعية والإنسانية:
% 25	6	<input type="checkbox"/> مقررات علوم التخصص:
% 0	0	<input type="checkbox"/> مقررات من علوم أخرى (حاسب آل

□ التدريب الميداني: لا يوجد

ج- مستويات البرنامج (في نظام الساعات المعتمدة):

المستوى الاول/ التيرم الاول : يلزم اجتياز 12 وحدة موزعة كالتالي:

إلزامى ٩ إختيار ٣

المستوى الاول/ التيرم الثانى : يلزم اجتياز 12 وحدة موزعة كالتالي:

إلزامى ٩ إختيار ٣

المستوى الثانى: الرسالة البحثية

د. مقررات البرنامج:

أ- إلزامى:

كود أو رقم المقرر	إسم المقرر	عدد الوحدات	عدد الساعات الأسبوعية			الفرقة والمستوى	الفصل الدراسي
			نظري	تمارين	عملي		
143648C	Industrial business administration and Chemical Technology and Unit operations	٢	٢	----	----	تمهيدى ماجستير	الأول
143649C	Advanced techniques in electrochemistry	٢	٢	----	----	تمهيدى ماجستير	الأول
143650C	Surface and colloid chemistry	٢	٢	----	----	تمهيدى ماجستير	الأول
143651C	Advanced Analytical chemistry and Environmental Chemistry	٣	٣	----	----	تمهيدى ماجستير	الأول
143652C	Solid waste management -	٣	٣	----	----	تمهيدى ماجستير	الثانى



	Quality management						
143653C	Linguistics and scientific writing skills	١	١	----	----	تمهيدى ماجستير	الثانى
143654C	Materials and technology of packaging	٣	٣	----	----	تمهيدى ماجستير	الثانى
141671C	Statistical studies and mathematical applications in Chemistry	٢	٢	----	----	تمهيدى ماجستير	الثانى
143699C	Dissertation	١٢	١٢	----	----	تمهيدى ماجستير	الثانى

ب - إختياري:

كود أو رقم المقرر	إسم المقرر	عدد الوحدات	عدد الساعات الأسبوعية			الفرقة والمستوى	الفصل الدراسي
			نظري	تمارين	عملي		
143655E	Chemistry and technology of paints	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى
143656E	Industry and technology of printing inks	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى
143657E	Industry and technology of building materials	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى
143658E	Industry and technology of plastics	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى
143659E	Industry and technology of paper and	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى

	paperboard						
143660E	Industry and technology of textiles and dyes	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى
143661E	Industry and technology of petroleum and petrochemicals	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى
143662E	Industry and technology of iron and steel	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى
143664E	Chemicals Industry	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى
143664E	Industry and technology of fertilizers	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى
143665E	Industry and technology of insecticides	١	١	----	----	تمهيدى ماجستير	الأول أو الثانى

#### 6- محتويات المقررات: ( مرفقة ) انظر ملفات توصيف المقررات

#### 7- متطلبات الإلتحاق بالبرنامج:

للإلتحاق ببرنامج تمهيدى ماجستير الكيمياء التطبيقية يجب أن يكون المتقدم حاصلًا على درجة البكالوريوس فى العلوم بتقدير عام جيد على الأقل من إحدى الجامعة المصرية أو أى درجة مساوية ومعادلة لها ومعترف بها من المجلس الأعلى للجامعات بتقدير عام جيد على الأقل أو الحصول على دبلومة الدراسات العليا فى الكيمياء من إحدى الجامعات المصرية أو الكليات أو المعاهد الأخرى المعترف بها من المجلس الأعلى للجامعات بتقدير عام جيد على الأقل.

#### 8- القواعد المنظمة لإستكمال بالبرنامج:

للحصول على درجة ماجستير فى العلوم تخصص الكيمياء التطبيقية:

- يجب أن يستوفى الدارس ٣٦ ساعة معتمدة بحد ادنى من النقاط المكتسبة مقداره ٢ (C) متضمنة الرسالة البحثية
- يجتاز بنجاح مستوى اللغة والكمبيوتر بما يتفق مع القواعد المقررة فى مجلس الجامعة
- له بحث واحد على الأقل مستخرج من الرسالة مقبول للنشر فى احدى الدوريات العلمية المرجعية
- أن يجتاز الطالب المناقشة العلنية فى موضوع الرسالة بنجاح.

تقديرات النجاح:

Grade	Percentage	Points
A	95 – 100 %	4.00
A <sup>-</sup>	90 - > 95 %	3.67
B <sup>+</sup>	85 - > 90 %	3.33
B	80 - > 85 %	3.00
B <sup>-</sup>	75 -> 80 %	2.67
C <sup>+</sup>	70 – > 75 %	2.33
C	65 - > 70 %	2.00
C <sup>-</sup>	60 - > 65 %	1.67
D <sup>+</sup>	55 - > 60 %	1.33
D	50 - > 55 %	1.00
F	> 50 %	0.00

٩- طرق وقواعد تقييم المتحقيين بالبرنامج:

الطريقة	ماتقيسة من المخرجات التعليمية المستهدفة
١-امتحان بينى	مدى استيعاب الدارس وتقدمه فى التعلم (معرفة ومفاهيم ومهارات ذهنية)
٢- أعمال فصلية	مقدار التحصيل والفهم والتقدم وقدرته على التحليل والاستنتاج ومواكبة التقدم فى المجال(جميع المهارات)
٣-امتحان تحريرى	قدرة الدارس على الفهم والتحليل والاستنتاج وحل المشكلات

١٠- طرق تقويم البرنامج:

العينة	الوسيلة	القائم بالتقويم
١٠/٣	استبيان	١- الطلاب
%١٠	استبيان	٢-الخريجون
عينة تقريبية	مقابلات شخصية-استبيانات	٢ - أصحاب الأعمال
عينة تقريبية	مراجعة البرنامج وكتابة تقارير	٣- مقيم خارجى .
جميع المشاركين فى البرنامج	مقابلات شخصية	٤- المتخصصين الأكاديميين

التاريخ: 2017

التوقيع:

المسئول عن البرنامج:

أ.د/ سامية ابراهيم الشربيني

Chemistry- Applied Chemistry	مسمى البرنامج
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نموذج رقم ( ١١ ) (ب)

جامعة: حلوان

كلية: العلوم

قسم : الكيمياء

(١) مصفوفة المعارف و المهارات المستهدفة فى مقابل رؤية و رسالة و اهداف الكلية

(1) مصفوفة المعارف و المهارات المستهدفة في مقابل رؤية و رسالة و اهداف الكلية

	Knowledge and understanding								Intellectual skills								Professional and practical skills					General and transferable skills.												
	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10			
	Identify the principles fundamentals of the industrial business administration and chemical technology, basics of material and energy	Demonstrate the solid waste systems, the quality managements and various packaging materials beside their properties including the ways	Identify the advanced techniques in electrochemistry, analytical chemistry, the theories of the colloidal and surface chemistry.	Identify ethical and legal principles of professional practice in the academic and industrial area.	Show the effect of industrial chemistry on the society and environmental problems.	Outline the culture and the basics of quality in professional practice in both academic and industry and applying the international standers.	Show the importance of commitment basics and ethics of scientific research in terms of research methodology and scientific integrity.	Explain scientific and mathematics development in the field of applied and industrial chemistry.	Analyze the information and analysis of problems specialist industrial field to order to resolve them.	Solve specialized problem with the lack of some data.	Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.	Conduct a research study and / or writing a scientific methodological study on a research problem.	Plan to improve performance in the applied chemistry and industrial chemistry field.	Take professional decisions in a variety of applied and industrial chemistry contexts.	Assess risk in professional practices in the area of applied and industrial chemistry.	Analyze search results using theories and statistical tests.	Master both the basic and modern professional skills in the field of applied and industrial fields.	Evaluate of professional scientific report.	Rate existing methods and tools in the applied and Industrial fields.	Propose research project that serves the area of the applied and Industrial fields.	Determine the originality of practical problems in order to tackling and solving them.	Communicate effectively in different ways of all kinds as conferences, seminars, publications written and visual (posters).	Use of information technology to serve the professional practice.	Practice self-assessment to identify personal learning needs.	Use different sources to get information and knowledge.	Develop rules and indicators to evaluate the performance of others.	lead professional teams in different contexts.	Manage time efficiently.	Practice self and continuous learning.	Build the ability to think realistic and creative.	Assess available resources effectively			
رؤية Vision تسعى جامعة حلوان أن تكون مؤسسة ذات تصنيف متقدم أقليمياً ومنفردة في الفنون والعلوم وإدارة الأعمال والتكنولوجيا	×			×				×																										
رسالة جامعة : حلوان تعمل جامعة حلوان على تحقيق الريادة والإبتكار على المستوى الإقليمي ومنفردة في الفنون والعلوم وإدارة الأعمال والتكنولوجيا من خلال تقديم خدمات تعليمية أكاديمية عالية الجودة وبحث					×																													×



الى ابحاث علميه نوعيه عاليه																																										
زيادة أنشطة وفعاليات الوحدات ذات الطابع الخاص بالكلية					×												×	×																						×		
تعزيز المشاركة مجتمعية تحقق زيادة المنفعه المجتمعية وتحقق التكامل بين المجتمع والكلية					×	×																																				

Chemistry- Applied Chemistry	مسمى البرنامج
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نموذج رقم ( ١١ ) (ب)

جامعة: حلوان

كلية: العلوم

قسم : الكيمياء

(ب) مصفوفة المعارف و المهارات المستهدفة في مقابل اهداف البرنامج



(ب) مصفوفة المعارف و المهارات المستهدفة في مقابل اهداف البرنامج

	Knowledge and understanding								Intellectual skills								Professional and practical skills					General and transferable skills.											
	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10		
	Identify the principles fundamentals of the industrial business administration and chemical technology, basics	Demonstrate the solid waste systems, the quality managements and various packaging materials beside	Identify the advanced techniques in electrochemistry, analytical chemistry, the theories of the colloidal and	Identify ethical and legal principles of professional practice in the academic and industrial area.	Show the effect of industrial chemistry on the society and environmental problems.	Outline the culture and the basics of quality in professional practice in both academic and industry and	Show the importance of commitment basics and ethics of scientific research in terms of research methodology and	Explain scientific and mathematics development in the field of applied and industrial chemistry.	Analyze the information and analysis of problems specialist industrial field in order to resolve them.	Solve specialized problem with the lack of some data.	Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.	Conduct a research study and / or writing a scientific methodological study on a research problem.	Plan to improve performance in the applied chemistry and industrial chemistry field.	Take professional decisions in a variety of applied and industrial chemistry contexts.	Assess risk in professional practices in the area of applied and industrial chemistry.	Analyze search results using theories and statistical tests.	Master both the basic and modern professional skills in the field of applied and industrial fields.	Evaluate of professional scientific report.	Rate existing methods and tools in the applied and industrial fields.	Propose research project that serves the area of the applied and industrial fields.	Determine the originality of practical problems in order to tackling and solving them.	Communicate effectively in different ways of all kinds as conferences, seminars, publications written	Use of information technology to serve the professional practice.	Practice self-assessment to identify personal learning needs.	Use different sources to get information and knowledge.	Develop rules and indicators to evaluate the performance of others.	lead professional teams in different contexts.	Manage time efficiently.	Practice self and continuous learning.	Build the ability to think realistic and creative.	Assess available resources effectively		
Provide the postgraduate with the advanced applied chemistry knowledge and skills essential for the mastery practice of specialty.	×		×			×										×																	
Enable the graduates to analyze complex issues both systematically and creatively in the applied field.									×						×																	×	
Provide special knowledge and integrate it with the knowledge related to the professional practice.		×		×														×					×		×								
Identify professional problems in applied and								×	×		×									×													





Chemistry- Applied Chemistry	مسمى البرنامج
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نموذج رقم ( ١١ ب )

جامعة: حلوان

كلية: العلوم

قسم : الكيمياء

(ج) مصفوفة المعارف و المهارات المستهدفة في مقابل مقررات البرنامج التعليمي

(ج) مصفوفة المعارف و المهارات المستهدفة في مقابل مقررات البرنامج التعليمي

المقررات	Knowledge and understanding								Intellectual skills								Professional and practical skills					General and transferable skills.											
	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10		
	Identify the principles fundamentals of the industrial business administration and chemical technology, basics	Demonstrate the solid waste systems, the quality managements and various packaging materials beside	Identify the advanced techniques in electrochemistry, analytical chemistry, the theories of the colloidal and	Identify ethical and legal principles of professional practice in the academic and industrial area.	Show the effect of industrial chemistry on the society and environmental problems.	Outline the culture and the basics of quality in professional practice in both academic and industry and	Show the importance of commitment basics and ethics of scientific research in terms of research methodology and	Explain scientific and mathematics development in the field of applied and industrial chemistry.	Analyze the information and analysis of problems specialist industrial field to order to resolve them.	Solve specialized problem with the lack of some data.	Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.	Conduct a research study and / or writing a scientific methodological study on a research problem.	Plan to improve performance in the applied chemistry and industrial chemistry field.	Take professional decisions in a variety of applied and industrial chemistry contexts.	Assess risk in professional practices in the area of applied and industrial chemistry.	Analyze search results using theories and statistical tests.	Master both the basic and modern professional skills in the field of applied and industrial fields.	Evaluate of professional scientific report.	Rate existing methods and tools in the applied and Industrial fields.	Propose research project that serves the area of the applied and Industrial fields.	Determine the originality of practical problems in order to tackling and solving them.	Communicate effectively in different ways of all kinds as conferences, seminars, publications written	Use of information technology to serve the professional practice.	Practice self-assessment to identify personal learning needs.	Use different sources to get information and knowledge.	Develop rules and indicators to evaluate the performance of others.	lead professional teams in different contexts.	Manage time efficiently.	Practice self and continuous learning.	Build the ability to think realistic and creative.	Assess a available resources effectively		
Industrial business administration and Chemical Technology and Unit operations	×								×		×						×		×													×	
Advanced techniques in electrochemistry			×									×						×	×								×						
Surface and colloid chemistry			×								×		×					×	×								×	×					
Advanced Analytical chemistry and Environmental Chemistry			×								×									×										×			
Solid waste management - Quality management		×		×	×			×			×			×	×			×		×					×		×	×		×			
Linguistics and scientific writing skills					×				×	×				×				×			×									×			
Materials and technology of packaging		×			×						×							×		×						×							
Statistical studies and mathematical											×			×				×	×													×	



نموذج رقم (١١) (ب)

Chemistry- Applied Chemistry	مسمى البرنامج
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جامعة: حلوان  
كلية: العلوم  
قسم : الكيمياء

(د) مصفوفة المعارف و المهارات المستهدفة في مقابل مواصفات الخريج

(د) مصفوفة المعارف و المهارات المستهدفة في مقابل مواصفات الخريج

The Attributes of a typical Graduate	Knowledge and understanding								Intellectual skills								Professional and practical skills					General and transferable skills.													
	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10				
	Identify the principles fundamentals of the industrial business administration and chemical technology, basics	Demonstrate the solid waste systems, the quality managements and various packaging materials beside	Identify the advanced techniques in electrochemistry, analytical chemistry, the theories of the colloidal and	Identify ethical and legal principles of professional practice in the academic and industrial area.	Show the effect of industrial chemistry on the society and environmental problems.	Outline the culture and the basics of quality in professional practice in both academic and industry and	Show the importance of commitment basics and ethics of scientific research in terms of research methodology and	Explain scientific and mathematics development in the field of applied and industrial chemistry.	Analyze the information and analysis of problems specialist industrial field to order to resolve them.	Solve specialized problem with the lack of some data.	Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.	Conduct a research study and / or writing a scientific methodological study on a research problem.	Plan to improve performance in the applied chemistry and industrial chemistry field.	Take professional decisions in a variety of applied and industrial chemistry contexts.	Assess risk in professional practices in the area of applied and industrial chemistry.	Analyze search results using theories and statistical tests.	Master both the basic and modern professional skills in the field of applied and industrial fields.	Evaluate of professional scientific report.	Rate existing methods and tools in the applied and industrial fields.	Propose research project that serves the area of the applied and industrial fields.	Determine the originality of practical problems in order to tackling and solving them.	Communicate effectively in different ways of all kinds as conferences, seminars, publications written	Use of information technology to serve the professional practice.	Practice self-assessment to identify personal learning needs.	Use different sources to get information and knowledge.	Develop rules and indicators to evaluate the performance of others.	lead professional teams in different contexts.	Manage time efficiently.	Practice self and continuous learning.	Build the ability to think realistic and creative.	Assess available resources effectively				
Show Proficiency in the application of the fundamentals and methodologies of scientific research and use different tools.	×																																		
Apply the analytical method and its use in the Applied Chemistry field.			×																																
Apply specialized knowledge and integrate it with the		×		×							×				×																				





in the light of global and regional changes.																													
Behave in a manner that reflects integrity, credibility and commitment to the rules of the profession.																													
Self-development academically and professionally and capable of continuous learning.																													

Chemistry- Applied Chemistry	مسمى البرنامج
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نموذج رقم (١١ب)

جامعة: حلوان

كلية: العلوم

قسم : الكيمياء

(هـ) مصفوفة المعارف و المهارات المستهدفة في مقابل المعايير الأكاديمية القياسية

**(هـ) مصفوفة المعارف و المهارات المستهدفة في مقابل المعايير الأكاديمية القياسية**

ARS	Knowledge and understanding								Intellectual skills								Professional and practical skills					General and transferable skills.														
	A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6	B7	B8	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10					
	Identify the principles fundamentals of the industrial business administration and chemical technology, basics	Demonstrate the solid waste systems, the quality managements and various packaging materials beside	Identify the advanced techniques in electrochemistry, analytical chemistry, the theories of the colloidal and	Identify ethical and legal principles of professional practice in the academic and industrial area.	Show the effect of industrial chemistry on the society and environmental problems.	Outline the culture and the basics of quality in professional practice in both academic and industry and	Show the importance of commitment basics and ethics of scientific research in terms of research methodology and	Explain scientific and mathematics development in the field of applied and industrial chemistry.	Analyze the information and analysis of problems specialist industrial field to order to resolve them.	Solve specialized problem with the lack of some data.	Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.	Conduct a research study and / or writing a scientific methodological study on a research problem.	Plan to improve performance in the applied chemistry and industrial chemistry field.	Take professional decisions in a variety of applied and industrial chemistry contexts.	Assess risk in professional practices in the area of applied and industrial chemistry.	Analyze search results using theories and statistical tests.	Master both the basic and modern professional skills in the field of applied and industrial fields.	Evaluate of professional scientific report.	Rate existing methods and tools in the applied and Industrial fields.	Propose research project that serves the area of the applied and Industrial fields.	Determine the originality of practical problems in order to tackling and solving them.	Communicate effectively in different ways of all kinds as conferences, seminars, publications written	Use of information technology to serve the professional practice.	Practice self-assessment to identify personal learning needs.	Use different sources to get information and knowledge.	Develop rules and indicators to evaluate the performance of others.	Lead professional teams in different contexts.	Manage time efficiently.	Practice self and continuous learning.	Build the ability to think realistic and creative.	Assess available resources effectively					
Knowledge and Understanding	Recognize the theories and foundations related to the field of learning, as well as in the related areas	×																																		
	Show the mutual influence and impact of professional practice on the environment and community	×				×																														
	Explain scientific developments in the field of specialization.			×																																
	Identify ethical and legal principles of professional practice in the field of specialization				×																															
	Outline the principles and the basics of quality in					×																														





نموذج رقم ( ١١ ب )

Chemistry- Applied Chemistry	مسمى البرنامج
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جامعة: حلوان  
كلية: العلوم  
قسم : الكيمياء

(و) مصفوفة أهداف البرنامج في مقابل مواصفات الخريج

(و) مصفوفة أهداف البرنامج في مقابل مواصفات الخريج

	Provide the postgraduate with the advanced applied chemistry knowledge and skills essential for the mastery practice of specialty.	Enable the graduates to analyse complex issues both systematically and creatively in the applied field	provide special knowledge and integrate it with the knowledge related to professional practice.	Identify professional problems in applied and industrial chemistry and find logical solutions.	Provide students with the skills, ethics, and methodologies to serve the needs of the environment and society	Enable the graduate's to increase his knowledge in applied chemistry and to be a decision maker in various professional contexts.	Enable graduates ability to use the available resources to bring the greatest benefit and preserve it and to benefit the waste by recycling and reusing.	Develop graduates responsible attitude towards the needs of society and the environment conservation and awareness of the dangers of industrial effluents and the importance of his role in finding developed solutions to deal with, in light of global and regional changes.	Develop the student's integrity, credibility and commitment to the rules of the profession.	Encourage graduates to think creatively and self-reliance in solving complex problems in an orderly fashion. And independence and the ability to develop himself professionally.	Developing presentational skills of the graduate and developing ability to write professional reports	Enable the graduate writing skills of projects in both industrial and academic fields
Show Proficiency in the application of the fundamentals and methodologies of scientific research and use different tools.	x											
Apply the analytical method and its use in the Applied Chemistry field.		x										
Apply specialized knowledge and integrate it with the knowledge related to the professional practice.	x		x									
Show awareness of the ongoing problems and the late visions in the				x								



area of specialization.												
Identify professional problems and find solutions.		x										
develop Proficiency in a suitable range of specialized professional skills and use appropriate technological means to serve the professional practice.											x	
Communicate effectively and the ability to lead teams.										x		
Decision-making in various professional contexts.						x						
Use available resources to bring the greatest benefit and preserve it.							x					
Show awareness of his role in the development of society and preserve the environment in the light of global and regional changes.					x			x				
Behave in a manner that reflects integrity, credibility and commitment to the rules of the profession.									x			
Self-development academically and professionally and capable of continuous learning.						x				x		

نموذج رقم (١١ ب)

Chemistry- Applied Chemistry	مسمى البرنامج
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جامعة: حلوان

كلية: العلوم

قسم : الكيمياء

(و) مصفوفة أهداف البرنامج في مقابل مواصفات الخريج

(و) مصفوفة أهداف البرنامج في مقابل مواصفات الخريج

	Industrial business administration and Chemical Technology and Unit operations	Advanced techniques in electrochemistry	Surface and colloid chemistry	Advanced Analytical chemistry and Environmental Chemistry	Solid waste management - Quality management	Linguistics and scientific writing skills	Materials and technology of packaging	Statistical studies and mathematical applications in Chemistry	Chemistry and technology of paints *	Industry and technology of printing inks *	Industry and technology of building materials *	Industry and technology of plastics	Industry and technology of paper and paperboard *	Industry and technology of textiles and dyes *	Industry and technology of petroleum and petrochemicals *	Industry and technology of iron and steel *	Chemicals Industry *	Industry and technology of fertilizers *	Industry and technology of insecticides *
In-class lecturing	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Web-based search	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Essay writing	x								x	x	x		x						
Presentation	x				x					x			x						x
Problem solving	x	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Discussion	x				x					x				x					x

نموذج رقم (١١) (ب)

Chemistry- Applied Chemistry	مسمى البرنامج
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جامعة: حلوان  
كلية: العلوم  
قسم : الكيمياء

(ز) مصفوفة اساليب التقويم فى مقابل المقررات الدراسية

(ز) مصفوفة اساليب التقويم فى مقابل المقررات الدراسية

		Industrial business administration and Chemical Technology and Unit operations	Advanced techniques in electrochemistry	Surface and colloid chemistry	Advanced Analytical chemistry and Environmental Chemistry	Solid waste management - Quality management	Linguistics and scientific writing skills	Materials and technology of packaging	Statistical studies and mathematical applications in Chemistry	Chemistry and technology of paints *	Industry and technology of printing inks *	Industry and technology of building materials *	Industry and technology of plastics	Industry and technology of paper and paperboard *	Industry and technology of textiles and dyes *	Industry and technology of petroleum and petrochemicals *	Industry and technology of iron and steel *	Chemicals Industry *	Industry and technology of fertilizers *	Industry and technology of insecticides *	
Mid-term		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Semester work	Web-based search	×	X	X		X		X		×	X	X	X	×	X	X	X	X		X	X
	Discussion	×				X		X			×			×							
Final exam		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	X

نموذج رقم ( ١٢ )

جامعة: حلوان  
كلية: العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١ - بيانات المقرر		
الفرقة / المستوي: premaster	اسم المقرر : <b>Industrial Business Administration/Chemical Technology/ Unit operations</b>	الرمز الكودي: ١٤٣٦٤٨ س
عدد الوحدات الدراسية : نظري ( 2 ) عملي ( - )		التخصص: Applied Chemistry

<ul style="list-style-type: none"> <li>• Enable the graduates to analyse complex issues both systematically and creatively in the applied field.</li> <li>• Focuses upon industrial enterprise organization and management, firm conduct, and economic performance of industries.</li> <li>• Of special interest is firms' strategic behavior in competitiveness and particularly the types of behavior, or conduct, towards loss of competitiveness or market share.</li> <li>• Project feasibility, layout, supply chain research and development and project management are key components.</li> <li>• Learning Objective is to understand how price and quality competition among firms (hence factors like procurement, layout, bottlenecks, supply chain management, innovation, intellectual rights, technology transfer, etc) affect industrial business success and economic welfare.</li> <li>• Training in fundamental regulations of dealing with and exportation of Chemicals enables graduates to adapt to exciting technological advances in the chemical industry and in particular the latest environmental advances, i.e the UN regulation for the transportation of hazardous/dangerous goods (chemicals)</li> <li>• study of the most common mass-transfer and energy transfer-based unit operations of chemical engineering and how they inter-relate and the variation they are applied with in various industry sectors, namely chemical, food, mining, etc</li> <li>• Overview of the chemical industry, chemical technology and unit operations to give the student a deep though on potential employers in Industry.</li> </ul>	٢ - هدف المقرر :
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٣ - المستهدف من تدريس المقرر :

<p><b>Knowledge and understanding</b> <i>By the end of the course the student should be able to :</i></p> <p>a1- identify common faults and pitfalls in establishing an industrial chemical plant.</p> <p>a2. Evaluate critically any industrial problem, in a systematic inter-related approach, according to clear and simple methodologies.</p> <p>a3. Demonstrate the ability to generate alternative scenarios for correction.</p> <p>a4. Identify risks and actions need to be done in transporting or exporting Chemicals/Hazardous goods.</p>	أ- المعلومات والمفاهيم :
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<p><b>Intellectual skills</b>  b1-develop Critical thinking in situations to make critical judgement.  b2- solve Problems in an efficient and effective manner.  b3- select a reasoned argument for a particular point of view.  b4- utilize reasoned conclusions.  b5- Develop lines of argument and appropriate judgments in accordance with the scientific theories and concepts.</p>	ب- المهارات الذهنية :
<p><b>Practical skills</b>  C1. Master both the basic and modern professional skills in the field of applied and industrial fields.  C2. Rate existing methods and tools in the applied and Industrial fields.  C3. Propose research project that serves the area of the applied and Industrial fields.</p>	ج - المهارات المهنية الخاصة بالمقرر :
<p><b>Transferable skills</b>  D1 Use of information technology to serve the professional practice.  D2. Use different sources to get information and knowledge.  D3. Manage time efficiently.  D4. Build the ability to think realistic and creative</p>	د - المهارات العامة :
<p><b>Topics</b>  1- Introduction to Industrial management, feasibility studies, SWOT analysis, Gap analysis, Gap closure and Competitiveness. 2- Market research, Product and Process Innovation.  3- Plant design principles. Conditions for location selection. Plant Layout principles. Flow sheets. Equipment sketch drawing.  4-Reading layout drawings. Bottle necks. Planning and setting up of modern factories.  5-The UN regulation for the transportation of hazardous goods. UN classification. UN labeling requirements.  6- Requirements for the manufacture of hazardous goods packaging. Quality in industry. Egypt's industry modernization.  7- Unit Operations definition and classification. Energy transfer. Mass transfer. Heat exchangers.  8- Applications of selected unit operations in food industry and chemical industry. For a selected number of Unit Operations study: theory, underlying physic-chemical principles, equipment features and their outline drawings, mechanisms of operation, applications and interrelation with other unit operations.</p>	٤- محتوى المقرر :

<p><b>Teaching and learning methods</b>  1-Sessions of exposition of concepts and seminars, which include sessions of problems.  2- Seminars and solving problems.  3- Power point presentations with images from real life plants.  4- Industry visits and field discussions with industry managers on site.</p>	٥- أساليب التعليم والتعلم
<p>- مقابلة الطلاب من خلال الساعات المكتبية  - نفس الأساليب مع الطلاب الاخرين بالاضافة الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى</p>	٦- أساليب التعليم والتعلم للطلاب بذوى القدرات المحدودة
	٧- تقويم الطلاب :

<p><b>Student assessment methods</b></p> <p><b>A. Exams</b> Mid-Term exam of one hour duration with questions resembling the final exam.</p> <p><b>B. Controls</b> More often, there will a control, consisting of one oral short question. Each control will get a grade.</p> <p><b>C. Assignments/Homework</b> It consists in solving the cases worked at the sessions and seminars. All homework should be delivered in one week of assigning it.</p> <p><b>D. Exposition of cases and problems.</b></p> <p><b>E. Participation</b> At least 50% of homework will be exposed and discussed by the students.</p> <p><b>F. final exam</b></p>	<p>أ- الأساليب المستخدمة</p>															
<table border="0"> <tr> <td>Assessment 1</td> <td>Week: 3</td> </tr> <tr> <td>Assessment 2</td> <td>Week: 6</td> </tr> <tr> <td>Assessment 3</td> <td>Week: 9</td> </tr> <tr> <td>Assessment 4</td> <td>Week: 12</td> </tr> </table>	Assessment 1	Week: 3	Assessment 2	Week: 6	Assessment 3	Week: 9	Assessment 4	Week: 12	<p>ب- التوقيت</p>							
Assessment 1	Week: 3															
Assessment 2	Week: 6															
Assessment 3	Week: 9															
Assessment 4	Week: 12															
<table border="0"> <tr> <td>•</td> <td><b>Semester Work</b></td> <td><b>40 %</b></td> </tr> <tr> <td></td> <td colspan="2">Mid-term examination and Controls/Oral exams (50%).</td> </tr> <tr> <td></td> <td colspan="2">Conduct, Assignments/Homework &amp; Exposition of cases&amp; problems (50%)</td> </tr> <tr> <td></td> <td><b>Final-Term exam</b></td> <td><b>60 %</b></td> </tr> <tr> <td></td> <td>Total</td> <td>100%</td> </tr> </table>	•	<b>Semester Work</b>	<b>40 %</b>		Mid-term examination and Controls/Oral exams (50%).			Conduct, Assignments/Homework & Exposition of cases& problems (50%)			<b>Final-Term exam</b>	<b>60 %</b>		Total	100%	<p>ج- توزيع الدرجات</p>
•	<b>Semester Work</b>	<b>40 %</b>														
	Mid-term examination and Controls/Oral exams (50%).															
	Conduct, Assignments/Homework & Exposition of cases& problems (50%)															
	<b>Final-Term exam</b>	<b>60 %</b>														
	Total	100%														
<p>8- قائمة الكتب الدراسية والمراجع</p> <p><b>List of references</b></p>																
<p><b>Course notes</b> Handouts will be disseminated, weekly.</p>	<p>أ- مذكرات</p>															
<p>-----</p>	<p>ب- كتب ملزمة</p>															
<p><b>Essential books</b> Perry's Chemical Engineers Handbook , 8<sup>th</sup> edition, 2008 Unit Operations of Chemical Engineering, 7<sup>th</sup> ed. UN Regulation for the transportation of Hazardous Goods, (the Orange book)</p>	<p>ج- كتب مقترحة</p>															
<p><b>Periodicals, Web sites, ... etc</b> UNEP Website The chemical engineering associations websites The Industrial Organisation and management associations websites</p>	<p>د- دوريات علمية أو نشرات ... الخ</p>															

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

أستاذ المادة : / أ.د سمير الصياد



نموذج رقم (١١)

جامعة: حلوان  
كلية: العلوم  
قسم: الكيمياء

<b>Industrial Business Administration/Chemical Technology/ Unit operations</b>	مسمى المقرر
١٤٣٦٤٨ س	كود المقرر

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
D1-D4	C1-C3	B1-B5		1-4	Introduction to Industrial management. Feasibility studies. SWOT analysis , Gap analysis. Gap closure. Competitiveness. Market share. Market research. Product and Process Innovation. Technology transfer. Intellectual property. Patents. Trade marks. Positioning in international markets, Supply chain management, Physical distribution. Cash flow. Pay back period. Return on investment. Break even point. Warehouse management. Import planning and management at the enterprise level. Procurement principles. Tendering and evaluation of offers. Contracting. Ethics in industrial management.
D1-D4	C1-C3	B1-B5	A1,A2,A3	5-9	Plant design principles. Conditions for location selection. Plant Layout principles. Flow sheets. Equipment sketch drawing. Reading layout drawings. Bottle necks. Planning and setting up of modern factories. The UN regulation for the transportation of hazardous goods. UN classification. UN labeling requirements. Requirements for the manufacture of hazardous goods packaging. Quality in industry. Egypt's industry modernization.
D1-D4	C1-C3	B1-B5	A2	10-13	Unit Operations definition and classification. Energy transfer. Mass transfer. Heat exchangers. Applications of selected unit operations in food industry and chemical industry. For a selected number of Unit Operations study: theory, underlying physico-chemical principles, equipment features and their outline drawings, mechanisms of operation, applications and interrelation with other unit operations.

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

أستاذ المقرر : أ.د سمير الصبياد

نموذج رقم ( ١١ )

Industrial Business Administration/Chemical Technology/ Unit operations	مسمى المقرر
١٤٣٦٤٨ س	كود المقرر

جامعة : حلوان.  
كلية : العلوم.  
قسم : الكيمياء.

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Presentat ion (data show	Report using library and internet resour ces.	discussion	lectur e	مخرجات التعلم ILOS	
x		x	x	a1- identify common faults and pitfalls in establishing an industrial chemical plant	المعلومات و المفاهيم
x		x	x	a2. Evaluate critically any industrial problem, in a systematic inter-related approach, according to clear and simple methodologies.	
x		x	x	a3- a3. Demonstrate the ability to generate alternative scenarios for correction	
x	X	x	x	a4. a4-Identify risks and actions need to be done in transporting or exporting Chemicals/Hazardous goods.	
x		x	x	b1-developpe Critical thinking in situations to make critical judgement	المهارات الذهنية
x		x	x	b2- solve Problems in an efficient and effective manner.	
x		x	x	b3- select a reasoned argument for a particular point of view .	
x		x	x	b4- utilize reasoned conclusions.	
x	X	x	x	b5- Develop lines of argument and appropriate judgments in accordance with the scientific theories and concepts.	
x		x	x	C1. Master both the basic and modern professional skills in the field of applied and industrial fields.	المهارات المهنية
x		x	x	C2. Rate existing methods and tools in the applied and Industrial	

				fields	
x		x	x	C3. Propose research project that serves the area of the applied and Industrial fields .	
x		x	x	D1 Use of information technology to serve the professional practice.	المهارات لعمامة
x		x	x	D2. Use different sources to get information and knowledge	
x		x	x	D3. Manage time efficiently	
x		x	x	D4. Build the ability to think realistic and creative	

أستاذ المقرر: / أ.د. سمير الصياد

رئيس مجلس القسم العلمي : أ.د. / وفاء غنيم

نموذج رقم (١١١)

جامعة: حلوان.  
كلية: العلوم.  
قسم: الكيمياء.

Industrial Business Administration/Chemical Technology/ Unit operations	مسمى المقرر
١٤٣٦٤٨ س	كود المقرر

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60 %	مخرجات التعلم ILOS
activities and attendance 20%	Mid- term exam 20%		
		x	a1- identify common faults and pitfalls in establishing an industrial chemical plant.
	x	x	a2.Evaluate critically any industrial problem, in a systematic inter-related approach, according to clear and simple methodologies
x		x	a3.Demonstrate the ability to generate alternative scenarios for correction
	x	x	a4. a4-Identify risks and actions need to be done in transporting or exporting Chemicals/Hazardous goods.
		x	b1-developpe Critical thinking in situations to make critical judgement
x	x	x	b2- solve Problems in an efficient and effective manner.
	x	x	b3- select a reasoned argument for a particular point of view.
		x	b4- utilize reasoned conclusions. of environmental chemistry.
		x	b5- Develop lines of argument and appropriate judgments in accordance with the scientific theories and concepts.
		x	C1. Master both the basic and modern professional skills in the field of applied and industrial fields.

	x	x	C2. Rate existing methods and tools in the applied and Industrial fields	
x		x	C3. Propose research project that serves the area of the applied and Industrial fields.	
		x	D1 Use of information technology to serve the professional practice	المهارات العامة
		x	D2. Use different sources to get information and knowledge	
		x	D3. Manage time efficiently.	
		x	D4. Build the ability to think realistic and creative	

أستاذ المقرر/ أ.د. سمير الصياد

رئيس مجلس القسم العلمي : أ.د. / وفاء غنيم

نموذج رقم ( ١٢ )

جامعة: حلوان  
كلية: العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١ - بيانات المقرر		
الفرقة / المستوى : Premaster	اسم المقرر : Advanced Techniques in electrochemistry	الرمز الكودي: س ١٤٣٦٤٩
عدد الوحدات الدراسية : نظري ( 2 ) عملي ( )		التخصص: Applied: Chemistry

<p>a- Introduce the concept of EIS technique. b- define the Application of EIS technique in electrochemistry. c- Determine the corrosion rate using EIS technique. d- explain the advanced methods for determination the corrosion rate. e- Identify professional problems in applied and industrial chemistry and find logical solutions.</p>	٢- هدف المقرر :
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٣- المستهدف من تدريس المقرر :	
<p>the master's program graduates must be able to grasp: a1- Outline Theories and fundamentals related to concept of EIS technique. a2- identify The different advanced methods for determination the corrosion rate. a3- demonstrate the ongoing problems of different methods of determination of the corrosion rate and Corrosion inhibition.</p>	أ- المعلومات والمفاهيم :

<p>By the end of studying Master's program graduates should be able to: b1 Analyze and evaluate information in the field of improvement of material for outdoor exposure. And analogies to solve problems. b2- Conduct a research study and / or writing a scientific methodological study on a research problem. As Suggesting new materials with high resistance for corrosion. b3- Improve performance of new methods for determination the corrosion rate.</p>	ب- المهارات الذهنية :
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<p>By the end of studying master's program graduates must be able to: c1- Evaluate methods and tools existing in the area of EIS technique and its applications in Electrochemistry. c2- Write professional reports.</p>	ج - المهارات المهنية الخاصة بالمقرر :
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<p>By the end of studying Master's program graduates should be able to: d1- Working in team and groups d2- Use different sources to obtain information and knowledge.</p>	د - المهارات العامة :
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<ul style="list-style-type: none"> <li>• Concept of EIS</li> <li>• Application of EIS technique in determination of Atmospheric corrosion rate</li> <li>• Determination of the corrosion rate under thin electrolyte layers</li> <li>• Application Of EIS in determination of the rate of oxide film dissolution</li> <li>• Application Of EIS in Monitoring degradation of metals and coated steel</li> <li>• Determination of Corrosion inhibition efficiency of inhibitor using EIS</li> </ul>	٤- محتوى المقرر :
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1- Handouts 2- Board 3- Data show 4- Websites 5- Text books	٥- أساليب التعليم والتعلم
- مقابلة الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة
٧- تقويم الطلاب :	
1- Oral Examinations test to check the ability of student to respond appropriately. 2- Report to check the ability of student for using the library and the internet 3- Mid-Term exam to assess proceeding in learning 4- Final-Term exam to check the ability of understanding the concepts of materials and their applications. It will give information about the student's ability to interpret data and analyze problems.	أ- الأساليب المستخدمة
Assessment 1                      Week: 3 Assessment 2                      Week: 6 Assessment 3                      Week: 9 Assessment 4                      Week:12	ب- التوقيت
<ul style="list-style-type: none"> <li><b>Semester Work                      40 %</b> Mid-term examination and Controls/Oral exams (50%). Conduct, Assignments/Homework &amp; Exposition of cases&amp; problems (50%)</li> <li><b>Final-Term exam                      60 %</b></li> <li>Total    100%</li> </ul>	ج- توزيع الدرجات
٨- قائمة الكتب الدراسية والمراجع :	
Handout are given to the students for each lecture	أ- مذكرات
	ب- كتب ملزمة
Impedance Spectroscopy Theory, Experiment and applications Second Edition, Edited by E. Barsouk and J Ross macdonald A John Wiley & Sons, Inc., Publication 2005. Electrochemical Impedance Spectroscopy, M. E. Orazem and B. tribollet , A John Wiley & Sons, Inc., Publication.	ج- كتب مقترحة
www.Sciencedirect.com	د- دوريات علمية أو نشرات ... الخ

أستاذ المادة : / أ.د جمال المهدي

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١)

جامعة: حلوان  
كلية: العلوم  
قسم: الكيمياء

Advance Techniques in Electrochemistry	مسمى المقرر
143649 C	كود المقرر

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر  
الدراسي

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
D1			a1	1	Concept of EIS
	C1		a2	2,3	Application of EIS technique in determination of Atmospheric corrosion rate
D2			a2	4-6	Determination of the corrosion rate under thin electrolyte layers
	C2	B3	a3	7-8	Application of EIS in determination of the rate of oxide film dissolution
		b1		9-10	Application of EIS in Monitoring degradation of metals and coated steel
		b2,b3	a3	11-12	Determination of Corrosion inhibition efficiency of inhibitor using EIS

أستاذ المقرر: أ.د جمال المهدي

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم



نموذج رقم (١١)

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

Advanced Techniques in electrochemistry	مسمى المقرر
١٤٣٦٤٩ س	كود المقرر

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Report using library and internet resources.	discussion	lecture	مخرجات التعلم ILOS	
	x	x	a1- Outline Theories and fundamentals related to concept of EIS technique.	المعلومات والمفاهيم
	x	x	a2- identify The different advanced methods for determination the corrosion rate.	
x	x	x	a3-demonstrate the ongoing problems of different methods of determination of the corrosion rate and Corrosion inhibition	
	x	x	b1 Analyze and evaluate information in the field of improvement of material for outdoor exposure. And analogies to solve problems.	المهارات الذهنية
x	x	x	b2- Conduct a research study and / or writing a scientific methodological study on a research problem. As Suggesting new materials with high resistance for corrosion.	
	x	x	b3- Improve performance of new methods for determination the corrosion rate.	
	x	x	c1- Evaluate methods and tools existing in the area of EIS technique and its applications in Electrochemistry.	المهارات المهنية
x	x	x	c2- Write professional reports.	

	x	x	d1- Working in team and groups	المهارات العامة
	x	x	d2- Use different sources to obtain information and knowledge.	

أستاذ المقرر: / أ.د جمال المهدي

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١١١ )

Advanced Techniques in electrochemistry	مسمى المقرر
١٤٣٦٤٩ س	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60 %	مخرجات التعلم ILOS	
activities and attendance 20%	Mid- term exam 20%			
		X	a1- Outline Theories and fundamentals related to concept of EIS technique.	المعلومات والمفاهيم
	X	X	a2- identify The different advanced methods for determination the corrosion rate	
X		X	a3- demonstrate the ongoing problems of different methods of determinationof the corrosion rate and Corrosion inhibition.	
	X	X	b1 Analyze and evaluate information in the field of improvement of material for outdoor exposure. And analogies to solve problems	المهارات الذهنية
X		X	b2- Conduct a research study and / or writing a scientific methodological study on a research problem. As Suggesting new materials with high resistance for corrosion.	
	X	X	b3- Improve performance of new methods for determination the corrosion rate.	
		X	c1- Evaluate methods and tools existing in the area of EIS technique and its applications in Electrochemistry.	المهارات المهنية
X		X	c2- Write professional reports.	
		X	d1- Working in team and groups	المهارات العامة
		X	d2- Use different sources to obtain information and knowledge.	

أستاذ المقرر/ أ.د جمال المهدي

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١٢ )

توصيف مقرر دراسي

١ - بيانات المقرر		
الفرقة / المستوى: pre-master	اسم المقرر : surface and colloid Chemistry	الرمز الكودي: c 143650
عدد الوحدات الدراسية : نظري ( ٢ ) عملي ( -- )		التخصص:كيمياء تطبيقية

<p>٢- هدف المقرر :</p> <ol style="list-style-type: none"> <li>1.Enable the graduate's to increase his knowledge in applied chemistry and to be a decision maker in various professional contexts.</li> <li>2. provide an introduction to adsorption of molecules on surfaces and adsorption isotherms.</li> <li>3. Introduce and develop those aspects of surfaces forces: double layer forces, Van der Waals forces and steric forces.</li> <li>4. define Colloidal systems and colloidal properties: optical electrical and kinetic properties.</li> <li>5. evaluate Stability of colloids, Surface and interfacial tension and contact angle measurements.</li> <li>6. identify surface active agents: surface activity, critical micelle concentration. Importance of surfactants in industry: ink and paint manufacture, petroleum refining, detergents, paper industry ...etc. .</li> <li>7. introduction to Emulsions: liquid- liquid interface, stability (emulsifier, amphiphathic particles), emulsion rheology.</li> <li>8. evaluate the systems of bubbles and foams: gas – liquid interface, foam stability, frothing agents, foam breaking.</li> </ol>	
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٣- المستهدف من تدريس المقرر :

<p>By the end of studying master's program graduates must be able to grasp:</p> <ol style="list-style-type: none"> <li>a1. Define Theories and fundamentals related to surface and colloid chemistry.</li> <li>a2. Identify Scientific developments in the field of colloidal systems , emulsions and foams, their properties, preparation and classifications.</li> <li>a3. Demonstrate specialized problems on the stability of colloid systems and the use of surface active agents in industry.</li> </ol>	أ- المعلومات والمفاهيم :
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<p>By the end of studying Master's program graduates should be able to:</p> <ol style="list-style-type: none"> <li>b1. Analyze and evaluate information in the different properties of colloids. and analogy to solve problems.</li> <li>b2. solve various professional problems and summarize the interfacial tension and contact angle measurements.</li> <li>b3. Plan to improve performance of surfactants in industry: ink and paint manufacture, petroleum refining, detergents, paper industry ...etc.</li> </ol>	ب- المهارات الذهنية :
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<p>By the end of studying master's program graduates must be able to:</p> <ol style="list-style-type: none"> <li>c1. Evaluate methods and tools existing in the area of specialization.</li> <li>c2. Write and evaluate professional reports.</li> </ol>	ج- المهارات المهنية الخاصة بالمقرر :
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<p>By the end of studying Master's program graduates should be able to:</p> <ol style="list-style-type: none"> <li>d1. communicate Effectively</li> <li>d2. Work in teams and lead teams</li> <li>d3. Time management efficiency</li> </ol>	د – المهارات العامة :
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<ul style="list-style-type: none"> <li>• Introduction of colloid chemistry, classification &amp;preparation</li> <li>• Optical properties of colloids</li> <li>• Stability of colloids</li> <li>• Kinetic properties of colloids</li> </ul>	٤- محتوى المقرر :
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<ul style="list-style-type: none"> <li>• Electrical properties colloids</li> <li>• Adsorption of gas-solid interface</li> <li>• Adsorption of gas-liquid interface</li> <li>• Adsorption of liquid-solid interface</li> <li>• Surfactants</li> <li>• Applications of colloids</li> </ul>	
1- Lecture, Board, virtual presentations. 2- book recommendations. 3-discussions	٥- أساليب التعليم والتعلم
- مقابلة الطلاب من خلال الساعات المكتبية - نفس الأساليب مع الطلاب الاخرين بالاضافة الى اعطاءهم تعليقات، الحاقهم في مجموعات عمل مع زملائهم، تكليفهم بعمل اضافي	٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة
	٧- تقويم الطلاب :
1- Oral exam to assess personal capabilities & their understanding. 2- Mid-Term exam to assess proceeding in learning 3- Final-Term exam to assess knowledge and understanding, problem solving.	أ- الأساليب المستخدمة
Assessment 1 Oral exam every week Assessment 2 Mid-Term exam Week: 7 Assessment 3 Final exam Week: to be decided by general exam schedule	ب- التوقيت
<ul style="list-style-type: none"> <li>• <b>Semester Work 40 %</b> Mid-term examination and Controls/Oral exams (50%). Conduct, Assignments/Homework &amp; Exposition of cases&amp; problems (50%)</li> <li>• <b>Final-Term exam 60 %</b></li> </ul> <p style="text-align: center;">Total 100%</p>	ج- توزيع الدرجات
	٨- قائمة الكتب الدراسية والمراجع :
Handouts are given to the students at every lecture	أ- مذكرات
	ب- كتب ملزمة
Textbook: 1- Applied surfactants by Tharwat F. Tadros, Verlag GmbH & Co. KGaA,2005. 2- Introduction to Colloid and Surface Chemistry, Fourth Edition, by Duncan J. Shaw, Elsevier Science Ltd., 2000	ج- كتب مقترحة
	د- دوريات علمية أو نشرات ... الخ

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

أستاذ المادة : / أ.م.د نيفين عبد العاطى خليفة

نموذج رقم (١١)

Surface and Colloid Chemistry	مسمى المقرر
143650 C	كود المقرر

حلوان: جامعة  
كلية: العلوم  
قسم: الكيمياء

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	المهارات الذهنية	مهارات مهنية	مهارات عامة
Introduction of colloid chemistry, classification & preparation	1	A1			D3
Optical properties of colloids	2	A2		C1	
Stability of colloids	3	A3	B1	C1	D2
Kinetic properties of colloids	4	A2	B1		
Electrical properties colloids	5	A2	B1		
Adsorption of gas-solid interface	6,7		B2		
Adsorption of gas-liquid interface	8,9				
Adsorption of liquid-solid interface	10		B2		
Surfactants	11	A3			
Applications of colliods	12		B3	C2	D3

أستاذ المقرر: أ.م.د نيفين عبد العاطى خليفة

رئيس مجلس القسم العلمي: أ.د / وفاء غنيم

نموذج رقم (١١١)

surface and colloid Chemistry	مسمى المقرر
143650 c	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

report using library and internet resources	discussion	lecture	مخرجات التعلم ILOS	
	x	x	a1. Define Theories and fundamentals related to surface and colloid chemistry.	المعلومات والمفاهيم
	x	x	a2. Identify Scientific developments in the field of colloidal systems , emulsions and foams, their properties, preparation and classifications.	
	x	x	a3-demonstrate specialized problems on the stability of colloid systems and the use of surface active agents in industry	
x	x	x	b1. Analyze and evaluate information in the different properties of colloids. and analogy to solve problems.	المهارات الذهنية
x	x	x	b2. solve various professional problems and summarize the interfacial tension and contact angle measurements	
	x	x	b3. Plan to improve performance of surfactants in industry: ink and paint manufacture, petroleum refining, detergents, paper industry ...etc.	
	x	x	c1. Evaluate methods and tools existing in the area of specialization.	المهارات المهنية
x	x	x	c2. Write and evaluate professional reports	
			d1. Communicate Effectively	المهارات العامة

			d2. Work in teams and lead teams	
			d3. Time management efficiency	

أستاذ المقرر: أ.م.د. نيفين عبد العاطى خليفة

رئيس مجلس القسم العلمي : أ.د. / وفاء غنيم



نموذج رقم (١١١)

surface and colloid Chemistry	مسمى المقرر
143650 c	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60%	مخرجات التعلم ILOS
activities and attendance 20%	Mid- term exam 20%		
	x	x	المعلومات والمفاهيم
		x	
		x	
x	x	x	المهارات الذهنية
x		x	
		x	
		x	المهارات المهنية
x	x		
			المهارات العامة

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

أستاذ المقرر: أ.م.د نيفين عبد العاطي خليفة

نموذج رقم ( ١٢ )

جامعة: حلوان

كلية: العلوم

قسم : الكيمياء

توصيف مقرر دراسي first term

١- بيانات المقرر		
الفرقة / المستوى : تمهيدى ماجستير	اسم المقرر : Advanced Environmental and Analytical Chemistry	الرمز الكودى ١٤٣٦٥١ س
عدد الوحدات الدراسية : نظري ( ٣ )		التخصص : كيمياء تطبيقية

<ul style="list-style-type: none"> <li>• Basic Principles of environmental sampling, statistics and analysis of ecological parameters.</li> <li>• The course introduces the students to the variety of techniques for microanalysis of pollutant components and range of instrumental analysis applicable.</li> <li>• Special emphasis on methods of detecting origin, reactions, distribution, effects and fates of chemicals in the atmosphere, water and soil as well as the concept of setting standards for each media.</li> <li>• During the lab period the student is introduced to the fundamentals of analytical chemistry with the stress on environmental applications.</li> <li>• Enable the graduate's to increase his knowledge in applied chemistry and to be a decision maker in various professional contexts.</li> <li>• Encourage graduates to think creatively and self-reliance in solving complex problems in an orderly fashion. And independence and the ability to develop himself professionally.</li> </ul>	٢- هدف المقرر :
٣- المستهدف من تدريس المقرر :	
<p><b>a- Knowledge and Understanding:</b></p> <p>a1- Show Fundamentals of the application of analytical Chemistry to Environmental Chemistry.</p> <p>a2- Outline Main Chemical reactions involved in each ecosystem and techniques to monitor them.</p> <p>a3- identify Analytical techniques applicable for environmental samples and various sampling techniques.</p>	أ- المعلومات و المفاهيم :
<p><b>b- Intellectual Skills</b></p> <p>b1- Discuss environmental research and experimental work.</p> <p>b2- Interpret and reasonably explain environmental data logically and within the appropriate context.</p> <p>b3-Illustrate the essential facts, concepts, principles and theories relating to the subject areas identified above.</p> <p>b4- Discuss The application of such knowledge and understanding to the solution of qualitative and quantitative problems within the area of environmental chemistry.</p>	ب - المهارات الذهنية :
<p><b>Professional and Practical Skills</b></p> <p>1-Analyze the information and analysis of problems specialist industrial field to order to resolve them</p> <p>2-. Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.</p>	ج - المهارات المهنية الخاصة بالمقرر :
1- Master both the basic and modern professional skills in the field of	د - المهارات العامة :

applied and industrial fields. 2- Determine the originality of practical problems in order to tackling and solving them.	
1) Introduction to Environmental Data Acquisition: Environmental Sampling and Environmental Analysis 2) Basics of Environmental Sampling and Analysis and Environmental Sampling Design 3) The Role and Importance of Environmental Analysis Classical Methods 4) Fundamentals of Sample Preparation for Environmental Analysis 5) UV-Visible and Infrared Spectroscopic Methods in Environmental Analysis 6) Atomic Spectroscopy for Metal Analysis 7) Chromatographic Methods for Environmental Analysis 8) Electrochemical Methods for Environmental Analysis 9) Other Instrumental Methods in Environmental Analysis	٤ - محتوى المقرر :
- Lectures with or without Data show - Assignments and reports - Discussion sessions and oral presentations	٥ - اساليب التعليم و التعلم
- مقابله الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرين بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦ - أساليب التعليم و التعلم للطلاب ذوى القدرات المحدودة
٧ - تقويم الطلاب :	
<ul style="list-style-type: none"> <li>• Oral discussions to assess individual personal capabilities during lecture</li> <li>• Mid-Term exam to assess the extent of subject grasping</li> <li>• Final-Term exam to assess the overall knowledge and subject matter comprehension</li> </ul>	أ- الأساليب المستخدمة
Assessment 1 Mid-Term exam Week: 6 Assessment 2 Oral exam During the entire period of the course Assessment 3 Final exam During the regular exam period (December and January) Assessment 4...Final exam Week : to be decided by general exam	ب - التوقيت
Final-Term exam 60 % Overall course activity evaluation + attendance 20 % Midterm exam 20 % Total 100%	ج - توزيع الدرجات
٨ - قائمة الكتب الدراسية و المراجع :	
	أ- مذكرات لا يوجد
Essential books (text books)	ب- كتب ملزمة
Fundamentals of Environmental Sampling and Analysis By: Chunlong Zhang (2007) (e-book) Other related books <ul style="list-style-type: none"> <li>• APHA: Standard Methods for the Analysis of Water and Wastewater</li> <li>• APHA: Standard Methods for Air Sampling and Analysis.</li> <li>• APHA: Standard Methods for Soil Analysis.</li> <li>• Course materials retrieved from the Internet websites for other universities' (pending the availability)</li> </ul>	ج- كتب مقترحة
Chemistry and environmental science as well as university websites	د- دوريات علمية أو نشرات ... إلخ

رئيس مجلس القسم العلمى : أ.د / وفاء غنيم      أستاذ المادة : أ.د سعيد انور

نموذج رقم (١١١)

جامعة / أكاديمية : ..حلوان.....  
كلية / معهد : ..العلوم.....  
قسم : ..الكيمياء.....

Advanced Environmental and Analytical Chemistry	مسمى المقرر
كيمياء تطبيقية تمهيدى ماجستير ١٤٣٦٥١ س	كود المقرر

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	المهارات الذهنية	مهارات مهنية	مهارات عامة
1) Introduction to Environmental Data Acquisition: Environmental Sampling and Environmental Analysis	1-2	A1			D1
2) Basics of Environmental Sampling and Analysis and Environmental Sampling Design	3-5	A2			
3) The Role and Importance of Environmental Analysis Classical Methods	6	A3	B1	C1	D1
4) Fundamentals of Sample Preparation for Environmental Analysis	7	A3	B2	C2	D2
5) UV-Visible and Infrared Spectroscopic Methods in Environmental Analysis	8		b2,b3	c2,c3	D2
6) Atomic Spectroscopy for Metal Analysis	9		b2,b3	c2	D2
7) Chromatographic Methods for Environmental Analysis	10		b2,b3	c2	D2
8) Electrochemical Methods for Environmental Analysis	11		b2,b3	c2	D2
9) Other Instrumental Methods in Environmental Analysis	12		b2,b3	c2	D2

أستاذ المادة : أ.د سعيد انور

رئيس مجلس القسم العلمى : أ.د / وفاء غنيم

نموذج رقم (أ١١)

Advanced Environmental and Analytical Chemistry	مسمى المقرر
١٤٣٦٥١ س	كود المقرر

جامعة: حلوان.  
كلية: العلوم.  
قسم: الكيمياء.

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

report using library and internet resources	discussion	lecture	مخرجات التعلم ILOS	
	x	x	a1- Show Fundamentals of the application of analytical Chemistry to Environmental Chemistry.	المعلومات والمفاهيم
	x	x	a2- Outline Main Chemical reactions involved in each ecosystem and techniques to monitor them.	
x	x	x	a3-Recognize Analytical techniques applicable for environmental samples and various sampling techniques	
x	x	x	b1-Discuss environmental research and experimental work.	المهارات الذهنية
	x	x	b2-Interpret and reasonably explain environmental data logically and within the appropriate context.	
	x	x	b3-Illustrate the essential facts, concepts, principles and theories relating to the subject areas identified above.	
x	x	x	b4-Discuss The application of such knowledge and understanding to the solution of qualitative and quantitative problems within the area of environmental chemistry.	
	x	x ٢٤	1-Analyze the information and analysis of problems specialist industrial field to order to resolve them	المهارات المهنية

	x	x	2-. Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.	
	x	x	1-Master both the basic and modern professional skills in the field of applied and industrial filed.	المهارات العامة
x	x	x	2-Determine the originality of practical problems in order to tackling and solving them.	

أستاذ المقرر: أ.د سعيد انور

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١)

Advanced Environmental and Analytical Chemistry	مسمى المقرر
١٤٣٦٥١ س	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination %٦٠		مخرجات التعلم ILOS
activities and attendance 20%	Mid- term exam 20%			
	x	x	a1- Show Fundamentals of the application of analytical Chemistry to Environmental Chemistry.	المعلومات والمفاهيم
	x	x	a2- a2- Outline Main Chemical reactions involved in each ecosystem and techniques to monitor them	
x		x	a3 -Recognize Analytical techniques applicable for environmental samples and various sampling techniques.	
x	x	x	b1- Discuss environmental research and experimental work.	المهارات الذهنية
		x	b2-Interpret and reasonably explain environmental data logically and within the appropriate context.	
	x	x	b3-Illustrate the essential facts, concepts, principles and theories relating to the subject areas identified above	
x		x	b4- Discuss The application of such knowledge and understanding to the solution of qualitative and quantitative problems within the area of environmental chemistry.	
		x	c1-Analyze the information and analysis of problems specialist industrial field to order to resolve them	المهارات المهنية
		x	c2-. Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.	
		x	d1-Master both the basic and modern professional skills in the field of applied and industrial fields.	المهارات العامة
x		x	d2-Determine the originalityof practical problems in order to tackling and solving them.	

أستاذ المقرر أ.د سعيد انور

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١٢ )

جامعة / أكاديمية حلوان  
كلية / معهد :العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١- بيانات المقرر	
الرمز الكودي:	اسم المقرر : <b>Quality Management</b>
التخصص:	الفرقة / المستوى: <b>premaster</b>
	عدد الوحدات الدراسية : نظري ( 1 ) عملي ( - )
	١٤٣٦٥٢س
	Applied Chemistry

<p><b>Overall aims of course</b></p> <ul style="list-style-type: none"> <li>- Developing presentational skills of the graduate and developing ability to write professional reports</li> <li>- <b>The first part</b> of the course focuses upon industrial enterprise organization and management, firm conduct, and economic performance of industries. Of special interest is firms' strategic behavior in competitiveness and particularly the types of behavior, or conduct, towards loss of competitiveness or market share. Project performance, profit margins, operations efficiency, improving supply chain, productivity, market share, research and development. and customer relations are key components.</li> <li>- The knowledge is also useful in further study of the internal operation of firms. Topics covered in this field are useful not only for academic consideration, but also in successful running of private enterprises, and international trade.</li> <li>- Student Learning Objective is to understand product development cycle, in achieving quality, Companies should direct efforts towards: Innovation of products, Innovation of processes, Improvement of existing products, Improvement of existing processes.</li> <li>- Important also to understand how the Principles of Management: Setting objectives, Organizing, Motivating and communicating, Establishing measures of performance, Developing people; affect industrial business success and economic welfare.</li> <li>- <b>The second part</b> cares about definitions and terminology and provides students with the knowledge needed to work alongside professional environmental and quality chemists and engineers in a wide range of industrial and research settings, in addition to certification and accreditation bodies. The program's training in fundamentals enables graduates to adapt to exciting technological advances in the chemical industry and in particular the latest environmental advances</li> <li>- It is important to mention here that Graduates find work as chemical technologists, laboratory technologists, research technologists, Quality officers, ISO auditors, technical sales and service specialists and technical assistants. Opportunities exist in the chemical industry petroleum and natural gas processing, petrochemicals, metallurgical refining, food and beverage processing, agriculture, environmental consulting and government departments and education.</li> <li>- <b>The third part</b> on Quality Principles and Philosophies offers to the student the opportunity of having an integrated contact with total quality management. Specifically, the student will receive knowledge of the most common Deming's 14-point Management Philosophy and others like Juran, Crosby, Shingo, Ishikawa, Drucker and Peters and how they inter-relate and the variations between them when they are applied in an industry environment. This is then comprehended with the quality process model and the 8 QM Principles of ISO 9000:2000.</li> <li>- The parts of quality infrastructure in Egypt and introduction to various organizations in place give to the student, a good overview of quality set up in Egyptian industry.</li> <li>-</li> </ul>	٢- هدف المقرر :
- المستهدف من تدريس المقرر : The course aims to meet the requirements of potential employers in Industry.	



<p><b>Knowledge and understanding</b></p> <p>- <i>By the end of the course the student should be able to :</i></p> <p>A1. identify common faults and pitfalls in non-quality conformance in an industrial chemical plant.</p> <p>A2. demonstrate any industrial problem, in a systematic inter-related approach, according to clear and simple methodologies, and demonstrate the ability to generate alternative scenarios for correction.</p> <p>A3. Identify risks and actions need to be done in processes and services</p>	<p>أ- المعلومات والمفاهيم :</p>
<p><b>Intellectual skills</b></p> <p>B1- analyse situations and make critical judgement.</p> <p>B2- solve problems in an efficient and effective manner.</p> <p>B3 -Expression – able to make a reasoned argument for a particular point of view.</p> <p>B4- take professional Decision and reasoned conclusions</p> <p>B5-Develop lines of argument and appropriate judgments in accordance with the scientific theories and concepts.</p>	<p>ب- المهارات الذهنية :</p>
<p><b>Practical skills</b></p> <p>C1- . Master both the basic and modern professional skills to establish a QM system.</p> <p>C2- evaluate scientific report</p>	<p>ج- المهارات المهنية الخاصة بالمقرر :</p>
<p><b>Transferable skills</b></p> <p>D1-Think independently, set tasks and solve problems on ethical scientific basis.</p> <p>D2- use different sources to get Information</p> <p>D3-work inTeam – recognising and identifying views of others and working constructively with them, communicate both oral and written, listen, and convey complex information, present scientific material and arguments clearly and correctly.</p>	<p>د – المهارات العامية :</p>
<p><b>Topics</b></p> <p>Brief Introduction to Industrial management and linking it to quality management: --</p> <p>- SWOT analysis , Gap analysis. Gap closure. Competitiveness. Market share. Market research. Product and Process Innovation. Technology transfer. Intellectual property. Patents. Trade marks. Positioning in international markets, Supply chain management, Physical distribution. Cash flow. Pay back period. Return on investment. Break even point. customer relations. Ethics in industrial management.</p> <p>-Terminology such as: quality Definitions, Quality control vs. quality assurance, Quality Management, Quality Improvement, Accuracy, Sample, Specification, Reliability, RepeatabilityReproducibility,</p> <p>Six <a href="http://www.isixsigma.com/index.php?option=com_glossary&amp;id=77">http://www.isixsigma.com/index.php?option=com_glossary&amp;id=77</a> Sigma , Strategic Planning, System Audit, Control, Corrective Action, Cost Of Conformance, Cost Of Quality, Customer Relationship Management,</p> <p>- Quality Principles and Philosophies covers Deming’s 14-point Management Philosophy and the principles set by others like Juran, Crosby, Shingo, Ishikawa, Drucker and Peters. In addition to the quality process model and the 8 QM Principles of ISO 9000:2000.</p> <p>-The application part on Egypt covers standardization bodies, certification bodies, accreditation bodies and metrology bodies, and cooperation with international bodies.A special cover of the Egyptian Accreditation Council EGAC.</p>	<p>٤- محتوى المقرر :</p>
<p><b>Teaching and learning methods</b></p> <p>METODOLOGY: The course is developed mainly through sessions of exposition of concepts and seminars, which include sessions of problems. It recognizes the contribution of students to the seminars and solving problems. The delivery uses power point presentations with images from real life plants. The Practical appreciation is fortified by industry visits and field discussions with industry managers on site in addition to an added value of lectures by senior officials in such organizations.</p>	<p>- أساليب التعليم والتعلم</p>

<p>- مقابلة الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى</p>	<p>٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة</p>
<p>٧- تقويم الطلاب :</p>	
<p><b>Student assessment methods</b> <b>A. Exams</b> Periodically, noting that each exam contains a part including a number of short conceptual questions, and a part of problems/cases, consisting on solving exercises. In addition, there will be a Mid-Term exam of one hour duration with questions resembling the final exam. <b>B. Controls</b> More often, there will a control, consisting of one oral short question. Each control will get a grade. <b>C. Assignments/Homework</b> It consists in solving the cases worked at the sessions and seminars. All homework should be delivered in one week of assigning it. <b>D. Exposition of cases and problems.</b> <b>E. Participation</b> At least 50% of homework will be exposed and discussed by the students.</p>	<p>أ- الأساليب المستخدمة</p>
<p>Assessment 1                      W eek: 3 Assessment 2                      Week: 6 Assessment 3                      W eek:9 Assessment 4                      W eek: 12</p>	<p>ب- التوقيت</p>
<p><b>Semester work:                      40%</b> Mid-term examination and Controls/Oral exams, ( 20%) Conduct, Assignments/Homework &amp; Exposition of cases&amp; problems, (20%) <b>Final-term examination: 60%</b> <b>Total    100%</b></p>	<p>ج- توزيع الدرجات</p>
<p><b>List of references</b> قائمة الكتب الدراسية والمراجع</p>	
<p><b>Course notes</b> Handouts/emailed information will be disseminated as appropriate.</p>	<p>أ- مذكرات</p>
	<p>ب- كتب ملزمة</p>
<p><b>Essential books</b> Perry’s Chemical Engineers Handbook ,2008 The Quality Business: Quality Issues and Smaller Firms by Robert A. Blackburn, James Curran, Julian North. 234 pgs The Quality Management Sourcebook: An International Guide to Materials and Resources by Christine Avery, Diane Zabel. 328 pgs. {ISO 9001 2000 for small businesses}</p>	<p>ج- كتب مقترحة</p>
<p>As appropriate</p>	<p>د- دوريات علمية أو نشرات ... الخ</p>

أستاذ المادة : / أ.د سمير الصياد

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١)

Quality Management	مسمى المقرر
١٤٣٦٥٢س	كود المقرر

جامعة / أكاديمية : ..حلوان  
 كلية / معهد : ..العلوم  
 قسم : ..الكيمياء

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
D1-D3	C1-C2	B1-B5	A1-A3	1-4	Brief Introduction to Industrial management and linking it to quality management: SWOT analysis , Gap analysis. Gap closure. Competitiveness. Market share. Market research. Product and Process Innovation. Technology transfer. Intellectual property. Patents. Trade marks. Positioning in international markets, Supply chain management, Physical distribution. Cash flow. Pay back period. Return on investment. Break even point. customer relations. Ethics in industrial management.
D1-D3	C1-C2	B1-B5	A1-A3	5-8	Terminology such as: quality Definitions, Quality control vs. quality assurance. Quality Management, Quality Improvement, Accuracy, Sample, Specification, Reliability, RepeatabilityReproducibility, Six Sigma <a href="http://www.isixsigma.com/index.php?option=com_glossary&amp;id=77">http://www.isixsigma.com/index.php?option=com_glossary&amp;id=77</a> Sigma , Strategic Planning, System Audit, Control, Corrective Action, Cost Of Conformance, Cost Of Quality, Customer Relationship Management,
D1-D3	C1-C2	B1-B5	A1-A3	9-11	Quality Principles and Philosophies covers Deming's 14-point Management Philosophy and the principles set by others like Juran, Crosby, Shingo, Ishikawa, Drucker and Peters. In addition to the quality process model and the 8 QM Principles of ISO 9000:2000.
D1-D3	C1-C2	B1-B5	A1-A3	12-13	The application part on Egypt covers standardization bodies, certification bodies, accreditation bodies and metrology bodies, and cooperation with international bodies.A special cover of the Egyptian Accreditation Council EGAC.

أستاذ المقرر : / أ.د سمير الصياد

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (أ١١)

Quality Management	مسمى المقرر
١٤٣٦٥٢س	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Report using library and internet resources.	discussion	lecture	مخرجات التعلم ILOS	
	x	x	A1. identify common faults and pitfalls in non-quality conformance in an industrial chemical plant..	المعلومات والمفاهيم
	x	x	A2. A2. demonstrate any industrial problem, in a systematic inter-related approach, according to clear and simple methodologies, and demonstrate the ability to generate alternative scenarios for correction.	
X	x	x	a3 A3. Identify risks and actions need to be done in processes and services	
	x	x	B1- analyse situations and make critical judgement.	المهارات الذهنية
	x	x	B2- solve problems in an efficient and effective manner.	
	x	x	B3 -Expression – able to make a reasoned argument for a particular point of view	
X	x	x	B4- take professional Decision and reasoned conclusions	
	x	x	B5-Develop lines of argument and appropriate judgments in accordance with the scientific theories and concepts.	
	x	x	C1- . Master both the basic and modern professional skills to establish a QM system	المهارات المهنية

X	x	x	C2- evaluate scientific report.	
	x	x	D1-Think independently, set tasks and solve problems on ethical scientific basis.	المهارات العامة
	x	x	D2- use different sources to get Information	
	x	x	D3-work inTeam – recognising and identifying views of others and working constructively with them, communicate both oral and written, listen, and convey complex information, present scientific material and arguments clearly and correctly.	

أستاذ المادة : / أ.د سمير الصياد

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١)

Quality Management	مسمى المقرر
١٤٣٦٥٢س	كود المقرر

جامعة : حلوان.  
كلية : العلوم.  
قسم : الكيمياء.

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60%	مخرجات التعلم ILOS	
activities and attendance 20%	Mid- term exam 20%			
	x	x	a1. identify common faults and pitfalls in non-quality conformance in an industrial chemical plant.	المعلومات والمفاهيم
x		x	a2.demonstrate any industrial problem, in a systematic inter-related approach, according to clear and simple methodologies, and demonstrate the ability to generate alternative scinarios for correction.	
x		x	a3. Identify risks and actions need to be done in processes and services	
	x	x	b1- analyse situations and make critical judgement.	المهارات الذهنية
	x	x	b2- solve problems in an efficient and effective manner.	
		x	b3 -Expression – able to make a reasoned argument for a particular point of view.	
x		x	b4- take professional Decision and reasoned conclusions	
			b5-Develop lines of argument and appropriate judgments in accordance with the scientific theories and concepts.	
			C1- . Master both the basic and modern professional skills to establish a QM syst.	المهارات المهنية
x			C2- evaluate scientific report	
			D1-Think independently, set tasks and solve problems on ethical scientific basis.	المهارات العامة
x			D2- use different sources to get Information	

			D3-work inTeam – recognising and identifying views of others and working constructively with them, communicate both oral and written, listen, and convey complex information, present scientific material and arguments clearly and correctly.	
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أستاذ المادة : / أ.د سمير الصياد

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

توصيف مقرر دراسي

١- بيانات المقرر		
الفرقة / المستوى: Premaster	اسم المقرر : solid waste management	الرمز الكودي: ١٤٣٦٥٢ س
عدد الوحدات الدراسية : نظري ( ٢ ) عملي ( -- )		التخصص: applied chemistry

<ul style="list-style-type: none"> <li>• develop knowledge of Waste characterization</li> <li>• discuss the methods of Collection and separation.</li> <li>• Evaluate Thermal conversion, Biological treatment, Land filling.</li> <li>• develop knowledge of waste stabilization</li> <li>• compare and recognize Recycling of solid waste Paper Recycling, plastics and Glass recycling, Metal recycling</li> <li>• Enable graduates ability to use the available resources to bring the greatest benefit and preserve it and to benefit the waste by recycling and reusing.</li> <li>• Develop graduates responsible attitude towards the needs of society and the environment conservation and awareness of the dangers of industrial effluents and the importance of his role in finding developed solutions to deal with, in light of global and regional changes.</li> </ul>	٢- هدف المقرر :
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٣- المستهدف من تدريس المقرر :

<p>By the end of studying master's program graduates must be able to grasp:</p> <p>a<sub>1</sub>. identify Theories and fundamentals related to the field of solid waste generation sources, solid waste characterization</p> <p>a<sub>2</sub>. Recognize Legal and ethical principles of professional practice in the area of the methods and technology used in treating or disposal of the waste.</p> <p>a<sub>3</sub>. Outline The principles and basics of quality in professional practice in the field of recycling The different types of solid waste (paper, plastic , metal, and glass)</p> <p>a<sub>4</sub>. Present Scientific developments in the field of treating of the waste like: Thermal conversion, Biological treatment, Land filling,..etc.</p> <p>a<sub>5</sub>. Recognize Reciprocal influence between solid wastes and their impacts on the environment.</p>	أ- المعلومات والمفاهيم :
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<p>By the end of studying Master's program graduates should be able to: b<sub>1</sub>. Analyze and evaluate information in the field of solid waste and the functional elements of a solid waste management system</p> <p>And analogy to solve problems.</p> <p>b<sub>2</sub>. Discuss Link knowledge to solve various professional problems related to collection, transfer, transport, separation and processing of solid waste.</p> <p>b<sub>3</sub>. Risk assessment in professional practices in the field of waste management methods.</p> <p>b<sub>4</sub>. Link knowledge to solve various waste treatment problems.</p>	ب- المهارات الذهنية :
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<p>By the end of studying master's program graduates must be able to:</p> <p>c<sub>1</sub>. Master the basic and modern professional skills in the area of waste management methods.</p> <p>C<sub>2</sub>. Write professional reports.</p> <p>C<sub>3</sub>. Determine the originality of practical problems in order to tackling and solving them.</p>	ج- المهارات المهنية الخاصة بالمقرر :
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By the end of studying Master's program graduates should be able to:	د - المهارات
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d1. communicate Effectively d2. Use different sources to obtain information and knowledge. d3. manage Time efficiency,	العامية :
<ul style="list-style-type: none"> <li>• Waste characterization</li> <li>• Collection and separation</li> <li>• Thermal conversion</li> <li>• Biological treatment</li> <li>• Land filling</li> <li>• waste stabilization <ul style="list-style-type: none"> <li>• Recycling of paper, Recycling of plastic, Recycling of metal <b>and</b> Recycling of glass</li> </ul> </li> <li>• Environmental issue</li> </ul>	٤ - محتوى المقرر :

1- Lecture, Board, virtual presentations. 2- Handouts/data show 3- book recommendations 4- discussions	٥ - أساليب التعليم والتعلم
- مقابلة الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦ - أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة
	٧- تقويم الطلاب :
1- Oral exam to assess personal capabilities & their understanding. 2- Mid-Term exam to assess proceeding in learning 3- Final-Term exam to assess knowledge and understanding ,problem solving.	أ- الأساليب المستخدمة
Assessment 1 Oral exam                      W eek: through the lectures Assessment 2 Mid-Term exam                W eek: 10 Assessment 3 Practical exam                W eek: ---- Assessment 4 Final exam                    W eek: to be decided by general exam schedule	ب- التوقيت
Mid-Term exam                      20% Final-Term exam                      60% Semester Work                      20% Total                                      100%	ج - توزيع الدرجات
	٨ - قائمة الكتب الدراسية والمراجع :
<b>a course note compiled by the lecturer</b> Handouts are given to the students at every lecture	أ- مذكرات
	ب- كتب ملزمة
'Tchobanoglous, G, et al. <b>Integrated Solid Waste Management: Engineering Principles and Management Issues</b> , McGraw Hill Inc., 1993 Ramesha Chandrappa, Solid Waste Management Principles and Practice, Springer Heidelberg New York Dordrecht London, 2012	ج - كتب مقترحة
	د- دوريات علمية أو نشرات ... الخ

أستاذ المادة : / أ.د. سامية الشربيني

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١١ )

جامعة / أكاديمية : .. حلوان  
كلية / معهد : .. العلوم  
قسم .. الكيمياء

solid waste management	مسمى المقرر
143652 C	كود المقرر

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
d1		b1	A 1	1	Waste characterization
	C1	b2	A 2	2	Collection and separation
		b2	A 3	3	Thermal conversion
		b4	A 4	4	Biological treatment
			A 4	5	Land filling
d2	C2	b1		6	waste stabilization
	C2	b3	A3	7	Recycling of paper
	C2	b3	A3	8.	Recycling of plastic
	C2	b3	A3	9.	Recycling of metal
	C2			10	Mid term exam
	C2	b3	A3	11	Recycling of glass
d3	C3		a5	12	Environmental issue

أستاذ المقرر: أ.د. سامية الشرييني

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١)

solid waste management	مسمى المقرر
١٤٣٦٥٢ س	كود المقرر

جامعة: حلوان.  
كلية: العلوم.  
قسم: الكيمياء.

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Report using library and internet resources	discussion	lecture	مخرجات التعلم ILOS	
x	x	x	a <sub>1</sub> . identify Theories and fundamentals related to the field of solid waste generation sources, solid waste characterization	المعلومات والمفاهيم
	x	x	a <sub>2</sub> Recognize Legal and ethical principles of professional practice in the area of the methods and technology used in treating or disposal of the waste.	
x	x	x	a <sub>3</sub> . Outline The principles and basics of quality in professional practice in the field of recycling The different types of solid waste (paper, plastic , metal, and glass)	
	x	x	a <sub>4</sub> .Present Scientific developments in the field of treating of the waste like: Thermal conversion, Biological treatment, Land filling,..etc	
	x	x	a <sub>5</sub> .Recognize Reciprocal influence between solid wastes and their impacts on the environment.	
x	x	x	b <sub>1</sub> .Analyze and evaluate information in the field of solid waste and the functional elements of a solid waste management system And analogy to solve problems.	المهارات الذهنية
	x	x	b <sub>2</sub> .Discuss Link knowledge to solve various professional problems	

			separation and processing of solid waste.	
x	x	x	b <sub>3</sub> .Risk assessment in professional practices in the field of waste management methods.	
	x	x	b <sub>4</sub> . Link knowledge to solve various waste treatment problems.	
	x	x	c <sub>1</sub> . Master the basic and modern professional skills in the area of waste management methods.	المهارات المهنية
	x	x	C2. Write professional reports.	
	x	x	C <sub>3</sub> .Determine the originalityof practical problems in order to tackling and solving them.	
	x	x	d1. communicate Effectively .	المهارات العامة
x	x	x	d <sub>2</sub> . Use different sources to obtain information and knowledge.	
	x	x	d3. manage Time efficiency, information, present scientific material and arguments clearly and correctly.	

أستاذ المادة : / أ.د. سامية الشربيني

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١)

solid waste management	مسمى المقرر
143652 C	كود المقرر

جامعة : حلوان.  
كلية : العلوم.  
قسم : الكيمياء.

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60%	مخرجات التعلم ILOS	
activities and attendance 20%	Mid- term exam 20%			
x	x	x	a <sub>1</sub> . identify Theories and fundamentals related to the field of solid waste generation sources, solid waste characterization.	المعلومات والمفاهيم
		x	a <sub>2</sub> . Recognize Legal and ethical principles of professional practice in the area of the methods and technology used in treating or disposal of the waste.	
x	x	x	a <sub>3</sub> . Outline The principles and basics of quality in professional practice in the field of recycling The different types of solid waste (paper, plastic , metal, and glass)	
		x	a <sub>4</sub> . Present Scientific developments in the field of treating of the waste like: Thermal conversion, Biological treatment, Land filling,..etc.	
	x	x	a <sub>5</sub> . Recognize Reciprocal influence between solid wastes and their impacts on the environment.	
x		x	b <sub>1</sub> . Analyze and evaluate information in the field of solid waste and the functional elements of a solid waste management system And analogy to solve problems..	المهارات الذهنية
	x	x	b <sub>2</sub> . Discuss Link knowledge to solve various professional problems related to collection, transfer, transport, separation and processing of solid waste..	
x		x	b <sub>3</sub> . Risk assessment in professional practices in the field of waste management methods.	
		x	b <sub>4</sub> . Link knowledge to solve various waste treatment problems.	

			c <sub>1</sub> . Master the basic and modern professional skills in the area of waste management methods..	المهارات المهنية
			C <sub>2</sub> . Write professional reports.	
			C <sub>3</sub> . Determine the originality of practical problems in order to tackling and solving them.	
			d <sub>1</sub> . communicate Effectively	المهارات العامة
x			d <sub>2</sub> . Use different sources to obtain information and knowledge.	
			d <sub>3</sub> . manage Time efficiency	

أستاذ المادة : / أ.د. سامية الشربيني

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

توصيف مقرر دراسي

١- بيانات المقرر		
Introductory : الفرقة / المستوى: Master(Chestry) 2 <sup>nd</sup> Semester 2016/2017	اسم المقرر: Statistical studies and mathematical applications in chemistry	الرمز الكودي: ١٤١٦٧١ اساسي
عدد الوحدات الدراسية: نظري ١	عدد الوحدات الدراسية: نظري	التخصص :- MSC (Applied Chemistry Program)

<ol style="list-style-type: none"> <li>1- Identify basic concepts of statistics.</li> <li>2- Compute basic measures of central tendency.</li> <li>3- Distinguish between discrete and continuous random variables.</li> <li>4- Apply the basic topics from statistical inference to chemical problems.</li> <li>5- Analyze experimental data using some statistical methods.</li> <li>6- Encourage graduates to think creatively and self-reliance in solving complex problems in an orderly fashion.</li> </ol>	٢- أهداف المقرر:
٣- المستهدف من تدريس المقرر:	
<p>A1. Define basic concepts of statistics. A2. Clarify the important of statistical measures. A3. Construct confidence intervals and perform statistical tests for a specific data. A4. Interpret the obtained results and draw conclusions. A5. Explain scientific and mathematics development in the field of applied and industrial chemistry.</p>	أ- المعلومات والمفاهيم
<p>B1. Justify the use of statistical tools to solve some problems. B2. Solve problems that require analyzing data. B3. Discuss suitable probability model for experimental data. B4. Analyze search results using theories and statistical tests</p>	ب- المهارات الذهنية
<p>C1. Apply statistical tools to evaluate of professional scientific report. C2. Rate existing methods and tools in the applied and Industrial fields.</p>	ج- المهارات المهنية الخاصة بالمقرر
<p>D1. Use of information technology to serve the professional practice. D2. Practice self-assessment to identify personal learning needs . D3 Assess available resources effectively .</p>	د- المهارات العامة
<p>Measures of central tendency Some important discrete and continuous random variables. Sampling distribution of the sample mean. Confidence intervals for the population mean.</p>	٤- محتوى المقرر

Tests of statistical hypotheses. 1. Statistical studies and mathematical applications in Chemistry 2. Standard deviation, Correlation coefficient, and statistical analysis.	
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Lectures Web-sites recommendations Seminars Solving problems in practical hours.	٥- أساليب التعليم والتعلم
- مقابلة الطلاب من خلال الساعات المكتتية - نفس الأساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦- أساليب التعليم والتعلم للطلاب ذوي القدرات المحدودة
٧- تقويم الطلاب	
<ul style="list-style-type: none"> <li>Discussions in the lectures to assess the student ability to gain new information.</li> <li>Mid-Term exam to assess student understanding and effectiveness of teaching</li> <li>Written final-term exam to assess the student skills to express thoughtful of the major concepts covered by the studied course</li> <li>Student semester-work and team work skills</li> <li>Attendance percent of each student in lectures.</li> </ul>	أ- الأساليب المستخدمة
Semester activities All weeks Mid-term exam 9 <sup>th</sup> week Final term exam 14 <sup>th</sup> week <sup>٣</sup>	ب- التوقيت
Mid-term exam 40 % Final term exam 60 % Total 100%	ج- توزيع الدرجات
٨- قائمة الكتب الدراسية	
Not applicable.	أ- مذكرات

Introductory Statistics. Prem S. Mann. John Wiley & Sons, 8th Edition (2013).	ب- كتب ملزمة
• Elementary Statistics: A Step-by-Step Approach. Allan G. Bluman. McGraw-Hill, 9th Edition 2016.	ج- كتب مقترحة
- WWW. Statistics and probability	د- دوريات علمية أو نشرات ... الخ

أستاذ المادة: أ.م.د/ مجدي السيد محمد العدل رئيس القسم العلمي : أ.م.د/أشرف عبد الفتاح درويش



نموذج رقم ( ١١ )

Statistical studies and mathematical applications in chemistry	مسمى المقرر
141671 اساسى	كود المقرر

جامعة / أكاديمية: حلوان  
كلية / معهد: العلوم  
قسم: الرياضيات

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسى

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
D1, D2, D3	C2	B1	A1, A5	1-2	Measures of central tendency
D1, D2, D3	C1, C2	B1	A1, A5	3-5	Some important discrete and continuous random variables
D1, D2, D3	C1, C2	B2	A2, A5	6-8	Sampling distribution of the sample mean
D1, D2, D3	C2	B3	A3, A5	9-11	Confidence intervals for the population mean
D1, D2, D3	C2	B2, B4	A2, A5	12-14	Tests of statistical hypotheses.
D1, D2, D3	C2	B3	A4	15-16	Final written test

أستاذ المادة: أ.م.د/ مجدي السيد محمد العدل

رئيس مجلس القسم العلمى : أ.م.د/أشرف عبد الفتاح درويش

نموذج رقم ( ١١ )

<b>Statistical Studies and Mathematical Applications in Chemistry</b>	مسمى المقرر
141671 اساسى	كود المقرر

جامعة : حلوان.  
كلية : العلوم.  
قسم : الكيمياء.

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Report using library and internet resources.	discussion	lecture	مخرجات التعلم ILOS	
x	x	x	A1. Define basic concepts of statistics.	المعلومات والمفاهيم
x	x	x	A2. Clarify the important of statistical measures.	
		x	A3. Construct confidence intervals and perform statistical tests for a specific data.	
	x	x	A4. Interpret the obtained results and draw conclusions.	
		x	A5. Explain scientific and mathematics development in the field of applied and industrial chemistry	
x	x	x	B1. Justify the use of statistical tools to solve some problems.	المهارات الذهنية
x	x	x	B2. Solve problems that require analyzing data.	
	x	x	B3. Discuss suitable probability model for experimental data.	
	x	x	B4. Analyze research results using theories and statistical tests.	
x		x	C1. Evaluate of professional scientific report.	المهارات المهنية
	x	x	C2. Rate existing methods and tools in the applied and Industrial fields.	
x	x	x	D1. Use of information technology to serve the professional practice.	المهارات العامة
X		x	D2. Practice self-assessment to identify personal learning needs .	

X		x	D3 Assess available resources effectively .	
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أستاذ المادة: أ.م.د/ مجدي السيد محمد العدل  
رئيس مجلس القسم العلمي : أ.م.د/أشرف عبد الفتاح درويش

Semester work	Final written	مخرجات التعلم
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Statistical Studies and Mathematical Applications in Chemistry	مسمى المقرر
141671 اساسى	كود المقرر

نموذج رقم ( ١١ )

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

activities , problem solving and attendance 20%	Mid- term exam 20%			
x	x	x	A1. Define basic concepts of statistics.	المعلومات والمفاهيم
x	x	x	A2. Clarify the important of statistical measures.	
x	x	x	A3. Construct confidence intervals and perform statistical tests for a specific data.	
x	x	x	A4. Interpret the obtained results and draw conclusions.	
x	x	x	A5. Explain scientific and mathematics development in the field of applied and industrial chemistry	
x	x	x	B1. Justify the use of statistical tools to solve some problems.	المهارات الذهنية
x	x	x	B2. Solve problems that require analyzing data.	
x	x	x	B3. Discuss suitable probability model for experimental data.	
x	x	x	B4. Analyze search results using theories and statistical tests.	
x			C1. Evaluate of professional scientific report.	المهارات المهنية
x			C2. Rate existing methods and tools in the applied and Industrial fields.	
x			D1. Use of information technology to serve the professional practice.	المهارات العامة
x			D2. Practice self-assessment to identify personal learning needs .	
x			D3 Assess available resources effectively .	

أستاذ المادة: أ.م.د/ مجدي السيد محمد العدل

رئيس مجلس القسم العلمى : أ.م.د/أشرف عبد الفتاح درويش

نموذج رقم ( ١٢ )

جامعة / أكاديمية حلوان  
كلية / معهد : العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١- بيانات المقرر		
الفرقة / المستوى: premaster	اسم المقرر : Linguistics and scientific writing skills	الرمز الكودي: ١٤٣٦٥٣ س
عدد الوحدات الدراسية : نظري ( ١ ) عملي ( -- )		التخصص: Applied Chemistry

٢- هدف المقرر :	- Developing presentational skills of the graduate and developing
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<ul style="list-style-type: none"> <li>- ability to write professional reports.</li> <li>- Provide information about writing a scientific research paper.</li> <li>- Provide information about methodoliges in scientific research.</li> <li>- learn the academic standards of a master graduate student</li> </ul>	
٣- المستهدف من تدريس المقرر :	
A1. recognize The fundamentals of linguistics. A2.Outline The fundamentals of scientific writing skills. A3. Present The ethical and legal principles of professional practice in the field of scientific writing. A4. Show The impact of professional practice on the quality of graduates.	أ- المعلومات والمفاهيم :
B1. Analyze problems in the area of scientific research writing. B2. Utilize the critical reading of research in related subjects. B3. Solve problems in the area of scientific research writing. B4. Take career decisions based on available information.	ب- المهارات الذهنية :
C1. Master the application of professional skills in the area of writing research articles. c2. Write professional reports	ج- المهارات المهنية الخاصة بالمقرر :
D1. Communicate Effectively. D2. Use information technology. D3. self learning D4. work in a team and leads a team.	د - المهارات العامّة :
<ul style="list-style-type: none"> <li>- The title and abstract of a scientific research paper,</li> <li>- The introduction of a scientific research paper</li> <li>- The methodology</li> <li>- The results of a scientific rearch paper</li> <li>- The discussion of a scientific research paper</li> <li>- Rederences and acknowledgment</li> <li>- Fields of scientific research</li> <li>- National academic standards for master students</li> </ul>	٤- محتوى المقرر :

1- Lecture, Board. 2- Handouts/data show 3- book recommendations	٥- أساليب التعليم والتعلم
- مقابله الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم في مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة
٧- تقويم الطلاب :	
.1- Oral presentation of an assigned project. .2- Mid-term Exam .3-Final exam	أ- الأساليب المستخدمة
Assessment 1                      W eek: 6 Assessment 2                      W eek: 10 Assessment 3                      W eek: 15	ب- التوقيت
Mid-Term exam      20      % Final-Term exam    60      % Semester Work        20      % Total                                      100%	ج- توزيع الدرجات

٨- قائمة الكتب الدراسية والمراجع :	
	أ- مذكرات
	ب- كتب ملزمة
Michael Alley, The Craft of Scientific Writing, Third Ed, 1996 Springer	ج- كتب مقترحة
Main source of information is the internet	د- دوريات علمية أو نشرات ... الخ

أستاذ المادة : / أ.د. عبد الحكيم طه قنديل

رئيس مجلس القسم العلمي : أ.د. / وفاء غنيم

نموذج رقم (١١)

Linguistics and scientific writing skills	مسمى المقرر
143653 C	كود المقرر

جامعة / أكاديمية : ... حلوان...  
كلية / معهد : ... العلوم...  
قسم : ... الكيمياء...

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي



المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	المهارات الذهنية	مهارات مهنية	مهارات عامة
The title and abstract of a scientific research paper,	1,2	a1		c1	d1
The introduction of a scientific research paper	3,4	a2		c2	d2
The methodology	5	a3		c2	

مخرجات التعلم	Report using library and	discussion	lecture		
The results of a scientific research paper		b4	a3	6	d3
The discussion of a scientific research paper			a4	7,8	
References and acknowledgment		b2		9	
Fields of scientific research		b1, b3		10,11	d4
National academic standards for master students			a4	12	

أستاذ المقرر: أ.د. عبد الحكيم طه قنديل

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

Linguistics and scientific writing skills	مسمى المقرر
١٤٣٦٥٣ س	كود المقرر

نموذج رقم (١١١)

جامعة حلوان  
كلية : العلوم  
قسم : الكيمياء

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

x	x	x	A1. Recognize The fundamentals of linguistics.	المعلومات والمفاهيم
	x	x	A2. Outline The fundamentalsof scientific writing skills.	
x	x	x	A3. Present The ethical and legal principles of professional practice in the field of scientific writing.	
	x	x	A4. Show The impact of professional practice on the quality of graduates.	
	x	x	B1. Analyze problems in the area of scientific research writing.	المهارات الذهنية
	x	x	B2. Utilize the critical reading of research in related subjects.	
x	x	x	B3. Solve problems in the area of scientific research writing.	
	x	x	B4. Take career decisions based on available information.	
	x	x	C1. Master the application of professional skills in the area of writing research articles.	المهارات المهنية
x	x	x	c2. Write professional reports	
	x	x	D1. Communicate Effectively.	المهارات العامة
	x	x	D2. Use information technology.	
	x	x	D3. self learning	
	x	x	D4. work in a team and leads a team	

أستاذ المقرر: أ.د. عبد الحكيم طه قنديل

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (أ١١)

Linguistics and scientific writing skills	مسمى المقرر
١٤٣٦٥٣ س	كود المقرر

جامعة : حلوان.  
كلية : العلوم.  
قسم : الكيمياء.

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60% n	مخرجات التعلم ILOS	
activities and attendance 20%	Mid- term exam 20%			
x		x	A1. recognize The fundamentals of linguistics.	المعلومات والمفاهيم
	x	x	A2.Outline The fundamentals of scientific writing skills.	
x		x	A A3. Present The ethical and legal principles of professional practice in the field of scientific writing.	
		x	A4A4.Show The impact of professional practice on the quality of graduates.	
	x	x	B1. Analyze problems in the area of scientific research writing.	المهارات الذهنية
x		x	B2. Utilize the critical reading of research in related subjects.	
	x	x	B3. Solve problems in the area of scientific research writing.	
		x	B4. Take career decisions based on available information.	
		x	C1. Master the application of professional skills in the area of writing research articles.	المهارات المهنية
x		x	c2. Write professional reports.	
		x	D1. Communicate Effectively.	المهارات العامة
		x	D2. Use information technology	
		x	D3. self learning	
		x	D4. work in a team and leads a team.	

أستاذ المقرر: أ.د. عبد الحكيم طه قنديل

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١٢ )

جامعة : حلوان  
كلية / معهد : العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١ - بيانات المقرر		
الفرقة / المستوى: Premaster	اسم المقرر : <b>Materials and technology of packaging</b>	الرمز الكودي: ١٤ ٣٦٥٤ خ

عدد الوحدات الدراسية : نظري ( ٣ ) عملي ( -- )	التخصص: Applied chemistry
<ol style="list-style-type: none"> <li>1. Tprovide Definition and functions of packaging materials (glass, metals and foils, paper and paperboard,... etc)</li> <li>2. identify Coating and laminating processes</li> <li>3. build knowledge about Introduction to graphic design</li> <li>4. analyze product/package material interrelationship</li> <li>5. define shelf life-oxygen and water vapor permeability</li> <li>6. identify an Introduction to printing of packages</li> <li>7. recognize Related environmental issue</li> <li>8. discuss World trade agreements.</li> <li>9. Develop the student's integrity, credibility and commitment to the rules of the profession.</li> <li>10. Provide students with the skills, ethics, and methodologies to serve the needs of the environment and society.</li> </ol>	٢- هدف المقرر :
٣- المستهدف من تدريس المقرر :	
<p>By the end of studying master's program graduates must be able to grasp:</p> <ol style="list-style-type: none"> <li>a<sub>1</sub>. identify Theories and fundamentals related to the field of Packaging materials and function of package</li> <li>a<sub>2</sub>. show Scientific developments in the field of package design (market studies)- graphic design and understand the structure in relation to the product and product/package material interrelationship</li> <li>a<sub>3</sub>. Describe Reciprocal influence between packaging materials and thier impacts on the environment.</li> </ol>	أ- المعلومات والمفاهيم :
<p>By the end of studying Master's program graduates should be able to:</p> <ol style="list-style-type: none"> <li>b<sub>1</sub>. Analyze and evaluate information in the field of product/package material interrelationship.</li> <li>b<sub>2</sub>. solve various professional problems of package design and the structure in relation to the product</li> <li>b<sub>3</sub>. discuss the items of packaging materials</li> </ol>	ب- المهارات الذهنية :
<p>By the end of studying master's program graduates must be able to:</p> <ol style="list-style-type: none"> <li>c<sub>1</sub>. evaluate scientific professional report</li> <li>c<sub>2</sub>. Evaluate methods and tools existing in the area of packaging materials.</li> </ol>	ج- المهارات المهنية الخاصة بالمقرر :
<p>By the end of studying Master's program graduates should be able to:</p> <ol style="list-style-type: none"> <li>d<sub>1</sub>. Work in teams and lead teams in various professional contexts.</li> <li>d<sub>2</sub>. Assess available resources effectively.</li> </ol>	د - المهارات العامة :
<ol style="list-style-type: none"> <li>1. Packaging materials (paper, board-plastics, metal and steel) - laminates - glass - textile).</li> <li>2. Coating and laminating processes.</li> <li>3. Package design (market studies) and graphic design, structure in relation to the product.</li> <li>4. Product/package material interrelationship.</li> <li>5. Introduction to printing of packages.</li> <li>7. Performance testing package: printing study cases.</li> <li>8. Related environmental issue and World trade agreements</li> </ol>	٤- محتوى المقرر :
<ol style="list-style-type: none"> <li>1- Lecture, Board, virtual presentations.</li> <li>2- Handouts/ data show presentatio</li> <li>3- book recommendations</li> </ol>	٥- أساليب التعليم والتعلم

٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة	- مقابلة الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى
٧- تقويم الطلاب :	
١- Oral discussions to assess personal capabilities & their understanding. ٢- Mid-Term exam to assess proceeding in learning ٣- Final-Term exam to assess knowledge and understanding ,problem solving	أ- الأساليب المستخدمة
Assessment 1 Oral exam Assessment 2 Mid-Term exam Assessment 3 Final exam exam schedule	ب- التوقيت Week through the lecture. Week: 7 <sup>th</sup> Week: to be decided by general
Mid-Term exam 20 % Final-Term exam 60 % Semester Work 20% Total 100%	ج - توزيع الدرجات
٨- قائمة الكتب الدراسية والمراجع :	
a course notes compiled by the lecturer Handouts are given to the students	أ- مذكرات
	ب- كتب ملزمة
- <b>FOOD PACKAGING TECHNOLOGY</b> , Edited by: Richard Coles, Derek Mcdowell, Mark J. Kirwan, BlackwellPublishing, 2003 - <b>Paper and Paperboard Packaging Technology</b> , Edited by Mark J. Kirwan, BlackwellPublishing, 2005 - <b>Smart Packaging Technologies for Fast Moving Consumer Goods</b> , Joseph Kerry And Paul Butler, John Wiley & Sons Ltd, 2008, ISBN 978-0-470-02802-5	ج - كتب مقترحة
www. Sciencedirect	د- دوريات علمية أو نشرات ... الخ

أستاذ المادة : / أ.د. فاطمة أحمد مرسى

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١١)

Chemistry and technology of paints	مسمى المقرر
١٤٣٦٥٤ خ	كود المقرر

جامعة / أكاديمية : ... حلوان.....  
كلية / معهد : ... العلوم.....  
قسم : ... الكيمياء.....

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسى

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
D1	C1		A1	1-3	Packaging materials (paper, board-plastics, metal and steel) - laminates - glass - textile).
			A1	5	Coating and laminating processes.

Report using library and			lecture		مخرجات التعلم
	C1	B2	A2	5	Package design (market studies) and graphic design, structure in relation to the product.
		B1	A2	6	Product/package material interrelationship.
				7	Mid term exam
D2				8,9	Introduction to printing of packages.
	C2	B3		10	Performance testing – package: printing study cases.
			A3	11,12	Related environmental issue and World trade agreements

أستاذ المقرر: / أ.د. فاطمة أحمد مرسى  
رئيس مجلس القسم العلمي: أ.د. / وفاء غنيم

Materials and technology of packaging	مسمى المقرر
١٤٣٦٥٤خ	كود المقرر

نموذج رقم (١١أ)

جامعة : حلوان  
كلية : العلوم.  
قسم : الكيمياء.

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

	x	x	a <sub>1</sub> . identify Theories and fundamentals related to the field of Packaging materials and function of package	المعلومات والمفاهيم
x	x	x	a <sub>2</sub> . recognize Scientific developments in the field of package design (market studies)- graphic design and understand the structure in relation to the product and product/packaging material interrelationship.	
	x	x	a <sub>3</sub> .Describe Reciprocal influence between packaging materials and their impacts on the environment.	
x	x	x	b <sub>1</sub> . Analyze and evaluate information in the field of product/packaging material interrelationship.	المهارات الذهنية
x	x	x	b <sub>2</sub> . solve various professional problems of package design and the structure in relation to the product.	
	x	x	b <sub>3</sub> . Discuss the items of packaging materials	
	x	x	c <sub>1</sub> . evaluate scientific professional report .	المهارات المهنية
	x	x	c <sub>2</sub> Evaluate methods and tools existing in the area of packaging materials	
			d <sub>1</sub> . Work in teams and lead teams in various professional contexts.	المهارات العامة
			d <sub>2</sub> . Assess available resources effectively.	

أستاذ المقرر: / أ.د. فاطمة أحمد مرسى

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

### نموذج رقم (١١)

Materials and technology of packaging	مسمى المقرر
١٤٣٦٥٤ خ	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي



Semester work		Final written examination 60%	مخرجات التعلم ILOS	
activities and attendance 20%	Mid- term exam 20%			
		x	a <sub>1</sub> .identify Theories and fundamentals related to the field of Packagingmaterials and function of package	المعلومات والمفاهيم
x	x	x	a <sub>2</sub> . recognize Scientific developments in the field of package design (market studies)-graphic design and understand the structure in relation to the product and product/packaging material interrelationship.	
	x	x	a <sub>3</sub> . Describe Reciprocal influence between packaging materials and their impacts on the environment.	
x		x	b <sub>1</sub> . Analyze and evaluate information in the field of product/packaging material interrelationship.	المهارات الذهنية
x	x	x	b <sub>2</sub> . solve various professional problems of package design and the structure in relation to the product	
		x	b <sub>3</sub> . discuss the items of packaging materials	
x		x	c <sub>1</sub> . evaluate scientific professional report	المهارات المهنية
		x	c <sub>2</sub> Evaluate methods and tools existing in the area of packaging materials	
		x	d <sub>1</sub> . Work in teams and lead teams in various professional contexts.	المهارات العامة
		x	d <sub>2</sub> . Assess available resources effectively.	

أستاذ المقرر: / أ.د. فاطمة أحمد مرسى

رئيس مجلس القسم العلمي: أ.د. / وفاء غنيم

نموذج رقم ( ١٢ )

جامعة / حلوان  
كلية / العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١- بيانات المقرر		
الفرقة / المستوي: Premaster	اسم المقرر : <b>Industry and technology of paints</b>	الرمز الكودي: ١٤ ٣٦٥٥ خ

عدد الوحدات الدراسية : نظري ( ٣ ) عملي ( -- )	التخصص: Applied chemistry
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<ol style="list-style-type: none"> <li>1. provide Introduction to Paint composition</li> <li>2. identify The physical chemistry of dispersion Particle size and size measurement</li> <li>3. build knowledge about Industrial paint making process and The rheology of paints</li> <li>4. analyze Types of coatings, Appliance finishes, Automotive finishe, Coil coatings, Can coatings, Marine coating, Building coatings,Air craft coatings, Paper coatings.</li> <li>5. discuss New technology in paints</li> <li>6. identify Mechanical properties of paints and coatings Paint testing and durability testing</li> <li>7. define Health and safety in the paint industry.</li> <li>8. Provide students with the skills, ethics, and methodologies to serve the needs of the environment and society</li> </ol>	٢- هدف المقرر :
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٣- المستهدف من تدريس المقرر :	
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By the end of studying master's program graduates must be able to grasp:	أ- المعلومات والمفاهيم :
<ol style="list-style-type: none"> <li>a<sub>1</sub>. present Theories and fundamentals related to the Paint composition, The physical chemistry of dispersion, Particle size and size measurement</li> <li>a<sub>2</sub>. show Scientific developments in the field of Industrial paint making process and The rheology of paints</li> <li>a<sub>3</sub>. identify Basics of scientific researchon Types of coatings.</li> <li>a<sub>4</sub>. recognize Reciprocal influence between professional practice and its impacts on the environment, health and safety in the paint industry.</li> </ol>	

By the end of studying Master's program graduates should be able to:	ب- المهارات الذهنية :
<ol style="list-style-type: none"> <li>b<sub>1</sub>. Analyze information and differentiate between the Types of coatings</li> <li>b<sub>2</sub>. solve various professional problems on mechanical properties of paints and coatings, Paint testing and durability testing.</li> <li>b<sub>3</sub>. improve performance in the field of technology in paints</li> </ol>	

By the end of studying master's program graduates must be able to:	ج- المهارات المهنية الخاصة بالمقرر :
<ol style="list-style-type: none"> <li>c<sub>1</sub>. write scientific professional report</li> <li>c<sub>2</sub> Rate existing methods and tools in the applied and Industrial fields</li> </ol>	

<ol style="list-style-type: none"> <li>d<sub>1</sub>. manage resources Efficiently</li> <li>d<sub>2</sub>. Self-learning and continuous and the desire for professional advancement.</li> </ol>	د - المهارات العامة :
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<p>Introduction Paint composition, The physical chemistry of dispersion, Particle size and size measurement</p> <p>Industrial paint making process The rheology of paints</p> <p>Types of coatings Appliance finishes Automotive finishe Coil coatings Can coatings Marine coating Building coatings Air craft coatings Paper coatings</p> <p>New technology in paints</p> <p>Mechanical properties of paints and coatings Paint testing and durability testing</p> <p>Health and safety in the paint industry</p>	٤- محتوى المقرر :
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١- Lecture, Board, virtual presentations.	٥- أساليب التعليم والتعلم
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2- Handouts/ data show presentatio 3- book recommendations	
- مقابله الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة
	٧- تقويم الطلاب :
1- Oral exam to assess personal capabilities & their understanding. 2- Mid-Term exam to assess proceeding in learning 3-Practical exam ----- 4- Final-Term exam to assess knowledge and understanding ,problem solving	أ- الأساليب المستخدمة
Assessment 1 Oral exam Week through the lecture. Assessment 2 Mid-Term exam W eek: 7 <sup>th</sup> Assessment 3 Practical exam ----- Assessment 4 Final exam W eek: to be decided by general exam schedule	ب- التوقيت
Mid-Term exam 20 % Final-Term exam 60 % Oral exam --- % Semester Work 20% Total 100%	ج - توزيع الدرجات
	٨- قائمة الكتب الدراسية والمراجع :
<b>a course notes compiled by the lecturer</b> Handouts are given to the students	أ- مذكرات
	ب- كتب ملزمة
- R Lambourne And T A Strivens (Editors), Paint And Surface Coating, Theory and Practice, Second edition,1999 Woodhead Publishing Ltd. - Rodger Talbert, Paint Technology Handbook, 1st Edition, 2007, Tailor &Francis gp.	ج - كتب مقترحة
	د- دوريات علمية أو نشرات ... الخ

أستاذ المادة : / أ.د. أحمد رمضان

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١)

Industryand technology of paints	مسمى المقرر
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كود المقرر	١٤٣٦٥٥ خ
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جامعة / أكاديمية : ..... حلوان  
 كلية / معهد : ..... العلوم  
 قسم : ..... الكيمياء

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
D1	C1		A1	1	Introduction Paint composition The physical chemistry of dispersion Particle size and size measurement
D2			A2	2	Industrial paint making process The rheology of paints
	C1	B1,B2	A3	3	Types of coatings: Appliance finishes, Automotive finishes, Coil coatings, Can coatings, Marine coatings, Building coatings, Air craft coatings Paper coatings
				4	New technology in paints
				5	Mid term exam
	C2	B3		6	Mechanical properties of paints and coatings Paint testing and durability testing
			A4	7	Health and safety in the paint industry

أستاذ المقرر: / أ.د. أحمد رمضان

رئيس مجلس القسم العلمي: أ.د. / وفاء غنيم

نموذج رقم (١١)

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

Industry and technology of paints	مسمى المقرر
١٤٣٦٥٥ خ	كود المقرر

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Self learning		Report using library and internet resources	discussion	lecture	مخرجات التعلم ILOS
Report using library and internet resources	presentation				
			x	x	a <sub>1</sub> . Present Theories and fundamentals related to the Paint composition, The physical chemistry of dispersion, Particle size and size measurement.
			x	x	a <sub>2</sub> . Show Scientific developments in the field of Industrial paint making process and The rheology of paints.
x		x	x	x	a <sub>3</sub> . Identify Basics of scientific research on Types of coatings .
x		x	x	x	a <sub>4</sub> . Recognize Reciprocal influence between professional practice and its impacts on the environment, health and safety in the paint industry
x		x	x	x	b <sub>1</sub> . Analyze information and differentiate between the Types of coatings
	x		x	x	b <sub>2</sub> . solve various professional problems on mechanical properties of paints and coatings, Paint testing and durability testing.
			x	x	b <sub>3</sub> . Improve performance in the field of technology in paints.
x		x	x	x	c <sub>1</sub> . write scientific professional report .
			x	x	c <sub>2</sub> . Rate existing methods and tools in the applied and Industrial fields
			x	x	d <sub>1</sub> . manage resources Efficiently

المهارات العامة

					d <sub>2</sub> . Self-learning and continuous and the desire for professional advancement.	
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أستاذ المقرر: / أ.د. أحمد رمضان

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١١ )

Industry and technology of paints	مسمى المقرر
	كود المقرر

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60%	مخرجات التعلم ILOS	
activities and attendance 20%	Mid- term exam 20%			
		x	a <sub>1</sub> . present Theories and fundamentals related to the Paint composition, The physical chemistry of dispersion, Particle size and size measurement	المعلومات والمفاهيم
	x	x	a <sub>2</sub> . Show Scientific developments in the field of Industrial paint making process and The rheology of paints.	
x		x	a <sub>3</sub> . identify Basics of scientific research on Types of coatings.	
x		x	a <sub>4</sub> . recognize Reciprocal influence between professional practice and its impacts on the environment, health and safety in the paint industry	
x	x	x	b <sub>1</sub> . Analyze information and differentiate between the Types of coatings.	المهارات الذهنية
	x	x	b <sub>2</sub> . solve various professional problems on mechanical properties of paints and coatings, Paint testing and durability testing.	
		x	b <sub>3</sub> . improve performance in the field of technology in paints	
x		x	c <sub>1</sub> . write scientific professional report	المهارات المهنية
		x	c <sub>2</sub> Rate existing methods and tools in the applied and Industrial fields	
		x	d <sub>1</sub> . manage resources Efficiently	المهارات العامة
		x	d <sub>2</sub> . Self-learning and continuous and the desire for professional advancement..	

أستاذ المقرر: / أ.د. أحمد رمضان

رئيس مجلس القسم العلمي: أ.د. / وفاء غنيم

توصيف مقرر دراسي

١- بيانات المقرر	
اسم المقرر : <b>Industry and technology of printing inks</b>	الرمز الكودي: ١٤٣٦٥٦
الفرقة / المستوى: <b>Premaster</b>	التخصص: applied Chemistry
عدد الوحدات الدراسية : نظري ( ١ ) عملي ( -- )	

<ul style="list-style-type: none"> <li>• build knowledge about The main printing processes</li> <li>• define the raw materials (pigments, resins, fillers, solvent, additives...)and principles of ink formulation</li> <li>• discuss ink manufacture and unit operations in the ink industry</li> <li>• define colloidal nature and rheology of printing inks Testing, control and quality assurance</li> <li>• evaluate drying mechanisms of inks for surfaces other than paper, ink in relation to paper and ink transfer equations</li> <li>• Analyze printing inks. Health, safety, and environment</li> <li>• Provide the postgraduate with the advanced applied chemistry knowledge and skills essential for the mastery practice of specialty.</li> <li>• build skills, ethics, and methodologies to serve the needs of the environment and society</li> </ul>	٢- هدف المقرر :
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٣- المستهدف من تدريس المقرر :

<p>By the end of studying master's program graduates must be able to grasp:</p> <p>a<sub>1</sub>. identify Theories and fundamentals related to the nature of surface coating and their importance and the raw materials of inks as well as choose the correct and suitable inks' additives</p> <p>a<sub>2</sub>. recognize Scientific developments in the field of the functions and main aims of ink machinery</p> <p>a<sub>3</sub>. Outline The principles and basics of quality in professional practice in the field printing inks quality assurance.</p> <p>a<sub>4</sub> Identify professional problems and find solutions in the field of drying mechanism of ink for surfaces other than paper</p> <p>a<sub>5</sub>.describe Reciprocal influence between professional practice and its impacts on the environment.</p>	أ- المعلومات والمفاهيم :
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<p>By the end of studying Master's program graduates should be able to:</p> <p>b<sub>1</sub>.Discussand Formulate the suitable inks depending on substrate and Evaluate the information and analysis of problems in the field of ink manufacture and resolve problems</p> <p>b<sub>2</sub>. Illustrate specialized problems related to surface treatment and ink application method base on the type of substrate and printing process.</p> <p>b<sub>3</sub>. Analyze problems in printing ink industry with the unavailability of some data through the formulation and testing of assumptions using the appropriate experimental design and statistical analysis of the data to solve problems.</p> <p>b<sub>4</sub> Risk assessment in professional practices in the field of the inks quality and properties\</p> <p>b<sub>5</sub>. Take professional Decision ink manufacture industrial areas based on the collection of adequate information and assess the situation</p>	ب- المهارات الذهنية :
By the end of studying master's program graduates must be able to:	ج- المهارات



C1. Criticize and evaluate existing methods and tools in the field of ink technology C2. evaluate professional reports C3. Propose research project that serves the area of the applied and Industrial fields.	المهنية الخاصة بالمقرر :
By the end of studying Master's program graduates should be able to: d1- Use of information technology to serve the professional practice. D2. work in a team	د – المهارات العامة :
<ul style="list-style-type: none"> <li>The main printing processes</li> <li>The raw materials and principles of ink formulations</li> <li>printing ink manufacture and unit operations in the ink industry</li> <li>Colloidal nature and rheology of printing inks</li> <li>Testing, control and quality assurance</li> <li>Drying mechanism , inks for surfaces other than paper Ink in relation to paper and ink transfer equations</li> <li>Analysis of printing inks</li> <li>Health, safety, and environment</li> </ul>	٤- محتوى المقرر :

1- Lecture, Board, assay. 2- Media (data show), Handouts 3- book recommendations 4- Discussions	٥- أساليب التعليم والتعلم
- مقابلة الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة
	٧- تقويم الطلاب :
1- class activities to assess personal capabilities & their understanding. 2- Mid-Term exam to assess proceeding in learning 3- Final-Term exam to assess knowledge and understanding ,problem solving.	أ- الأساليب المستخدمة
Assessment 1 class activities Week: through the lectures Assessment 2 Mid-Term exam Week: 10 Assessment 3 Final exam Week: to be decided by general exam schedule	ب- التوقيت
Mid-Term, 20% Class activities 20 % Final-Term exam 60% Total 100%	ج- توزيع الدرجات
	٨- قائمة الكتب الدراسية والمراجع :
Handouts are given to the students at every lecture	أ- مذكرات
	ب- كتب ملزمة

<p><b>The Printing Ink Manual</b>, R. H. Leach, C. Armstrong, J. F. Brown, M. J. Mackenzie, L. Randall, H. G. Smith, 4<sup>th</sup> edition, Ch. 1982  <b>Printing Ink Technology</b>, E. A. App, 1961  <b>Printing Ink Manufacture</b>, A. K. Rastag, india</p>	<p>ج - كتب مقترحة</p>
<p>Wwwsciencedirect.com</p>	<p>د- دوريات علمية أو نشرات ... الخ</p>

أستاذ المادة : / أ.م.د. فاطمة أحمد مرسى

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١١ )

جامعة / أكاديمية : ... حلوان.....  
كلية / معهد : ... العلوم.....  
قسم : ... الكيمياء.....

Industry and technology of printing inks	مسمى المقرر
١٤ ٣٦٥٦ خ	كود المقرر

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	المهارات الذهنية	مهارات مهنية	مهارات عامة
The main printing processes	1,2,3	A1			
The raw materials and principles of ink formulations	4,5	A1	B1		
printing ink manufacture and unit operations in the ink industry	6,7	A2	B3	C1	D1
Colloidal nature and rheology of printing inks	8	A2			
Testing, control and quality assurance	9	A3	B3	C1	
Drying mechanism , inks for surfaces other than paper Ink in relation to paper and ink transfer equations	10	A4	B4	C2	D2
Analysis of printing inks	11	A4	B5	C3	
Health, safety, and environment	12	A5			

أستاذ المقرر: أ.م.د. فاطمة أحمد مرسى

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١١)

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء.

Industry and technology of printing inks	مسمى المقرر
٣٦٥٦ ١٤س	كود المقرر

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Report using library and internet resources.	discussion	lecture	مخرجات التعلم ILOS	
	x	x	a <sub>1</sub> . identify Theories and fundamentals related to the nature of surface coating and their importance and the raw materials of inks as well as choose the correct and suitable inks' additives.	المعلومات والمفاهيم
x	x	x	a <sub>2</sub> . recognize Scientific developments in the field of the functions and main aims of ink machinery.	
	x	x	a <sub>3</sub> . Outline The principles and basics of quality in professional practice in the field printing inks quality assurance.	
	x	x	a <sub>4</sub> . Identify professional problems and find solutions in the field of drying mechanism of ink for surfaces other than paper.	
	x	x	a <sub>5</sub> .describe Reciprocal influence between professional practice and its impacts on the environment.	
x	x	x	b <sub>1</sub> .Discuss and Formulate the suitable inks depending on substrate and Evaluate the information and analysis of problems in the field of ink manufacture and resolve problems.	المهارات الذهنية
	x	x	b <sub>2</sub> . Illustrate specialized problems related to surface treatment and ink application method base on the type of substrate and printing process.	
x	x	x	b <sub>3</sub> . analyze problems in printing ink industry with the unavailability of some data	

			the appropriate experimental design and statistical analysis of the data to solve problems.	
	x	x	b <sub>4</sub> Risk assessment in professional practices in the field of the inks quality and properties\	
	x	x	b <sub>5</sub> . Take professional Decision ink manufacture industrial areas based on the collection of adequate information and assess the situation	
	x	x	C1. Criticize and evaluate existing methods and tools in the field of ink technology.	المهارات المهنية
	x	x	C2. evaluate professional reports.	
	x	x	C3. Propose research project that serves the area of the applied and Industrial fields.	
x	x	x	d <sub>1</sub> . Use of information technology to serve the professional practice.	المهارات العامة
	x	x	d <sub>2</sub> . work in a team	

أستاذ المادة : / أ.م.د. فاطمة أحمد مرسى

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١١ )

Industry and technology of printing inks	مسمى المقرر
١٤٣٦٥٦س	كود المقرر

جامعة : حلوان.  
كلية : العلوم.  
قسم : الكيمياء.

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60%	مخرجات التعلم ILOS	المعلومات والمفاهيم
activities and attendance 20%	Mid- term exam 20%			
x		x	a <sub>1</sub> . identify Theories and fundamentals related to the nature of surface coating and their importance and the raw materials of inks as well as choose the correct and suitable inks' additives	
x	x	x	a <sub>2</sub> . recognize Scientific developments in the field of the functions and main aims of ink machinery	
		x	a <sub>3</sub> . Outline The principles and basics of quality in professional practice in the field printing inks quality assurance.	
x	x	x	a <sub>4</sub> Identify professional problems and find solutions in the field of drying mechanism of ink for surfaces other than paper	
		x	a <sub>5</sub> . describe Reciprocal influence between professional practice and its impacts on the environment	
x	x	x	b <sub>1</sub> . Discuss and Formulate the suitable inks depending on substrate and Evaluate the information and analysis of problems in the field of ink manufacture and resolve problems.	
		x	b <sub>2</sub> . Illustrate specialized problems related to surface treatment and ink application method base on the type of substrate and printing process.	
x	x	x	b <sub>3</sub> . analyze problems in printing ink industry with the unavailability of some data through the formulation and testing of assumptions using the appropriate experimental design and statistical analysis of the data to solve problems	

		x	b <sub>4</sub> Risk assessment in professional practices in the field of the inks quality and properties\	
		x	b <sub>5</sub> . Take professional Decision ink manufacture industrial areas based on the collection of adequate information and assess the situation	
			C1. Criticize and evaluate existing methods and tools in the field of ink technology	المهارات المهنية
			C2. evaluate professional reports.	
			C3. Propose research project that serves the area of the applied and Industrial fields.	
x			d <sub>1</sub> . Use of information technology to serve the professional practice.	المهارات العامة
			d <sub>2</sub> . Work in a team.	

أستاذ المادة : / أ.م.د. فاطمة أحمد مرسى

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١٢ )

جامعة / أكاديمية حلوان  
كلية / معهد :العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١- بيانات المقرر	
الرمز الكودي: خ ٣٦٥٧ ١٤	اسم المقرر : Building materials and cement
التخصص: Applied chemistry	الفرقة / المستوى: Premaster
	عدد الوحدات الدراسية : نظري ( ١ ) عملي ( -- )

٢- هدف المقرر :	<ul style="list-style-type: none"> <li>• provide basics and advance aspects of cement chemistry</li> <li>• explain full steps for the manufacture of Portland cement</li> <li>• explain the standard specifications of the cement</li> <li>• build knowledge on the pozzolana, Introduction to concrete chemistry, Stones, ceramics and glass.</li> <li>• provide special knowledge and integrate it with the knowledge related to the professional practice.</li> <li>• Enable the graduate's to increase his knowledge in applied chemistry and to be a decision maker in various professional contexts.</li> </ul>
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٣- المستهدف من تدريس المقرر :	
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أ- المعلومات والمفاهيم :	<p>a1. Find Theories and fundamentals and specialized knowledge in the field of learning as well as the sciences related to the professional practice.</p> <p>a2. Identify The principles and basics of quality of professional practice in the field of specialization</p> <p>a3. Outline The impact of professional practice on the environment and to work on preserving the environment and its maintenance.</p>
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ب- المهارات الذهنية :	<p>b1. analyze problems in the area of specialization and rank them according to their priorities.</p> <p>b2. Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.</p>
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ج- المهارات المهنية الخاصة بالمقرر :	<p>C1. Master both the basic and modern professional skills in the field of applied and industrial files.</p> <p>C2. Determine the originality of practical problems in order to tackling and solving them.</p>
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د- المهارات العامة :	<p>d1 . Self-assessment and identify personal learning needs.</p> <p>d2. Use different sources for information and knowledge.</p> <p>d3. Work in teams.</p> <p>d4. Self-learning and ongoing.</p>
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٤- محتوى المقرر :	<p>Advanced in the chemistry of cement</p> <p>Standard specification of cement</p> <p>Cement manufacture process</p> <p>Inorganic admixtures.</p>
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٥- أساليب التعليم والتعلم	<ul style="list-style-type: none"> <li>• Lecture, Board, virtual presentations, models.</li> <li>• Power point</li> <li>• Books</li> </ul>
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<p>- مقابلة الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى</p>	<p>٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة</p>										
<p>٧- تقويم الطلاب :</p>											
<ul style="list-style-type: none"> <li>• Oral exam</li> <li>• Mid-Term exam</li> <li>• Final-Term exam</li> <li>• Quizes</li> <li>• Formation of models</li> <li>• Reports</li> <li>• Essays on subjects related to the course</li> <li>• Attendance</li> </ul>	<p>أ- الأساليب المستخدمة</p>										
<p>Assessment 1 weeks: Quizes every 3 weeks Assessment 2 week: ~7<sup>th</sup> Midterm Assessment 3 Report ~ 3 per term: Assessment 4 Oral all along the term: Assessment 5 Essay ~ 2per term</p>	<p>ب- التوقيت</p>										
<table border="0"> <tr> <td>Mid-Term exam</td> <td>20 %</td> </tr> <tr> <td>Final-Term exam</td> <td>60 %</td> </tr> <tr> <td>Oral exam</td> <td></td> </tr> <tr> <td>Semester Work</td> <td>20 %</td> </tr> <tr> <td>Total</td> <td>100%</td> </tr> </table>	Mid-Term exam	20 %	Final-Term exam	60 %	Oral exam		Semester Work	20 %	Total	100%	<p>ج - توزيع الدرجات</p>
Mid-Term exam	20 %										
Final-Term exam	60 %										
Oral exam											
Semester Work	20 %										
Total	100%										
<p>٨- قائمة الكتب الدراسية والمراجع :</p>											
	<p>أ- مذكرات</p>										
<p>Chemistry of cement and concrete (F.M. Lea) Locher H. F. W. Taylor, Cement Chemistry, 2ed Edition, Thomas Telford Services Ltd, 1 Heron Quay, London E144JD, 1990.</p>	<p>ب- كتب ملزمة</p>										
<p>crystallography ----- Material science ----- F. M. Lea, Kt, C.B., C.B.E., D.SC., F.R.I.C., The Chemistry of Cement and Concrete, 3ed Edition, Edward Arnold (Publishers) Ltd, 1970.</p>	<p>ج - كتب مقترحة</p>										
<p>Cement and concrete research Cement international Cement wapnobeton Cement (spain ) ----- مجلة الأسمنت العالمية</p>	<p>د- دوريات علمية أو نشرات ... الخ</p>										

أستاذ المادة : / أ.د. هناء يوسف غراب

رئيس مجلس القسم العلمي أ.د / وفاء غنيم

نموذج رقم (١١١)

Building materials and cement	مسمى المقرر
١٤٣٦٥٧ خ	كود المقرر

جامعة / أكاديمية : ... حلوان ..  
كلية / معهد : ... العلوم ...  
قسم : ... الكيمياء .....

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	المهارات الذهنية	مهارات مهنية	مهارات عامة
Advanced in the chemistry of cement	1	a1		c1	
cement manufacture process	2,3	a2	b1		d1
inorganic admixtures	4	a2			
standard specification	5,6	a2	b2		d2
Exam	7				
mechanism of pozzolanic materials	8	a1	B2		d3
concrete manufacture and chemistry,	9, 10	a1			d4
Stones	11	a1			
ceramics glass	12	a1			
Exam	13				

أستاذ المقرر: أ.د هناء غراب

رئيس مجلس القسم العلمي أ.د / وفاء غنيم

نموذج رقم (١١١)

جامعة : حلوان

كلية : العلوم  
قسم : الكيمياء

Building materials and cement	مسمى المقرر
خ ٣٦٥٧ ١٤	كود المقرر

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Presentation (data show)	Report using library and internet resources	discussion	lecture	مخرجات التعلم ILOS	
				المعلومات والمفاهيم	المهارات المهنية
x		x	x	a1. Find Theories and fundamentals and specialized knowledge in the field of learning as well as the sciences related to the professional practice.	المعلومات والمفاهيم
x	X	x	x	a2. Identify The principles and basics of quality of professional practice in the field of specialization.	
x		x	x	a3 .Outline The impact of professional practice on the environment and to work on preserving the environment and its maintenance.	
x		x	x	b1. Analyze problems in the area of specialization and rank them according to their priorities.	المهارات المهنية
x	X	x	x	b2. Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.	
x		x	x	C1. Master both the basic and modern professional skills in the field of applied and industrial fields.	المهارات المهنية
x	X	x	x	C2.Determine the originality of practical problems in order to tackling and solving them.	
x		x	x	d1.Self-assessment and identify personal learning needs	المهارات العامة
x	X	x	x	d2. Use different sources for information and knowledge.	

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

أستاذ المقرر: أ.د هناء غراب

نموذج رقم (١١ أ)

Building materials and cement	مسمى المقرر
خ ٣٦٥٧ ١٤	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60%	مخرجات التعلم ILOS	
activities and attendance 20%	Mid- term exam 20%			
	x	x	a1. Find Theories and fundamentals and specialized knowledge in the field of learning as well as the sciences related to the professional practice	المعلومات والمفاهيم
x		x	a2. Identify The principles and basics of quality of professional practice in the field of specialization.	
x	x	x	a3. Outline The impact of professional practice on the environment and to work on preserving the environment and its maintenance.	
x	x	x	b1. analyze problems in the area of specialization and rank them according to their priorities.	المهارات الذهنية
x		x	b2. Link between various professional knowledge to solve problems in the field of applied and industrial chemistry.	
		x	C1. Master both the basic and modern professional skills in the field of applied and industrial fields	المهارات المهنية
x		x	C2. Determine the originality of practical problems in order to tackling and solving them	
		x	d1. Self-assessment and identify personal learning needs.	المهارات العامة
x		x	d2. Use different sources for information and knowledge.	

أستاذ المقرر: أ.د هناء غراب

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١٢ )

جامعة / أكاديمية حلوان  
كلية / معهد :العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١- بيانات المقرر		
اسم المقرر :	Premaster الفرقة / المستوي :	الرمز الكودي: ١٤٣٦٥٩ خ
اسم المقرر : paper and paperboard		التخصص Applied Chem.
عدد الوحدات الدراسية : نظري ( ١ ) عملي ( --- )		

٢- هدف المقرر :	<ol style="list-style-type: none"> <li>1. find the structure of wood and cellulosic fiber .</li> <li>2. build knowledge about Pulping of wood and non-wood raw materials.</li> <li>3. discuss paper making, paper chemistry and wet end and paper physics.</li> <li>4. Identify Paper and paper board converting (surface sizing, paper coating, calendaring and supercalendering), Corrugated board manufacturing, Carton board package manufacture and application , Tissue paper manufacture , and Lamination.</li> <li>5. show Paper testing and General requirements of printing paper.</li> <li>6. describe chemicals recovery and environmental aspects of paper industry.</li> <li>7. Identify professional problems in applied and industrial field of paper making and find logical solutions.</li> <li>8. Develop the student's integrity, credibility and commitment to the rules of the profession.</li> </ol>
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٣- المستهدف من تدريس المقرر :

أ- المعلومات والمفاهيم :	<p>By the end of studying master's program graduates must be able to grasp:</p> <p>A1. Identify Theories and fundamentals related to the wood and cellulosic fiber.</p> <p>A2. Show Scientific developments in the field of Pulping of wood and non-wood raw materials and paper manufacture, Paper and paper board converting, ways of development and the major standards used in national and international paper industry.</p> <p>A3. Recognize Reciprocal influence between paper industry, chemicals recovery and thier impact and effect on the society and environmental problems.</p> <p>A4. Outline The principles and basics of quality in professional practice in the field of academia and industry and realize the importance of applying standards.</p> <p>A5. Examine Scientific developments in the field of paper industry in terms of critical evaluation of the results and conclusions, and</p> <p>A6. Develop the skills to use computers to analyze and present data for comprehensive quality.</p> <p>A7. Show The principles and basics of quality in professional practice in the field of Paper testing and general requirements of printing paper.</p>
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ب- المهارات الذهنية :	<p>By the end of studying Master's program graduates should be able to:</p> <p>b1. Evaluate the information and analysis of problems in paper making industry and work to resolve them.</p> <p>b2. Plan to improve performance in the field of paper manufacture.</p> <p>b3. Link knowledge to solve various professional problems in the field of paper and paper board converting (surface sizing, paper coating, calendaring and supercalendering), Corrugated board manufacturing, Carton board</p>
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package manufacture and application , Tissue paper manufacture , and Lamination b4. Risk assessment, which may be exposed during professional practice b5. Conduct a research study and / or writing a scientific methodological study on a research problem and the development of computer programs skills in the work of statistics and graphs and skills of results presentations.	
By the end of studying master's program graduates must be able to: c1. Master of the basic professional skills for the practice of scientific research in the field of paper manufacture. c2. Criticize existing methods and tools in the field of paper manufacture. c3. Propose research project that serves the area of the applied and Industrial fields.	ج - المهارات المهنية الخاصة بالمقرر :
By the end of studying Master's program graduates should be able to: d1. Use of information technology to serve the professional practice. d2. Use different sources to obtain information and knowledge. d3. Manage Time efficiently.	د - المهارات العامة :
1. Structure of wood and cellulosic fiber. 2. Pulping of wood and non-wood raw materials. 3. Stock preparation for paper making. 4. Paper chemistry and wet end. 5. Paper physics. 6. Paper and paper board converting(surface sizing, paper. coating, calendering and supercalendering. 7. Corrugated board manufacturing. 8. Tissue paper manufacture. 9. Carton board package manufacture and application. 10. Lamination. 11. Paper testing. 12. General requirements of printing paper. 13. Chemicals recovery and environmental aspects of paper industry .	٤- محتوى المقرر :

1- Lecture, Board, hand outs. 2- presentation by data show 3- book recommendations 4- discussion	٥- أساليب التعليم والتعلم
- مقابلة الطلاب من خلال الساعات المكتبية - نفس الأساليب مع الطلاب الاخرين بالاضافة الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة ٧- تقويم الطلاب :
1- Oral exam to assess personal capabilities & their understanding. 2- Mid-Term exam to assess proceeding in learning 3- Final-Term exam to assess knowledge and understanding ,problem solving.	أ- الأساليب المستخدمة
Assessment 1 Oral exam Week: every lecture Assessment 2 Mid-Term exam Week: 6 Assessment 3 Final exam Week: to be decided by general exam schedule	ب- التوقيت
Mid-Term exam 20 % Final-Term exam 60 % Semester Work 20 % Total 100%	ج- توزيع الدرجات

٨- قائمة الكتب الدراسية والمراجع :	
Handouts are given to the students at every lecture	أ- مذكرات
	ب- كتب ملزمة
1- Smook G A — Handbook for Pulp and Paper Technology, (Atlantic Books, 1996). 2- J.P. Casey, (ed.), Pulp and Paper Chemistry and Chemical Technology, 3 <sup>rd</sup> edition, Vol. II , John Wiley and Sons, New York, 1980, 3- The Chemistry Of Paper, J.C. Roberts, The Royal Society of Chemistry 1996 , ISBN 0-85404-5 18-X,	ج - كتب مقترحة
www.Siencedirect.com	د- دوريات علمية أو نشرات ... الخ

أستاذ المادة : / أ.د . سامية الشرييني

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١)

جامعة / أكاديمية : ... حلوان.....  
كلية / معهد : ... العلوم.....  
قسم : ... الكيمياء.....

Industry and technology of paper and paperboard	مسمى المقرر
١٤٣٦٥٩ خ	كود المقرر

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

المحتويات للمقرر	أسبوع الدراسة	المعارف الرئيسية	المهارات الذهنية	مهارات مهنية	مهارات عامة
Structure of wood and cellulosic fiber	1	A 1		C1	d1
Pulping of wood and non-wood raw materials	2	A2	B1	C1	d1
Stock preparation for paper making	3		B2		d2
Paper chemistry and wet end	4	A3			
Paper physics	5	A 1			d3
Paper and paper board converting(surface sizing, paper coating, calendering and supercalendering)	6	A3, A4	B3	C3	
Corrugated board manufacturing	7	A 3		C2	
Tissue paper manufacture	8	A3			
Carton board package manufacture and application	9	A3			
Lamination	10	A3			
Paper testing	11	A6	B4	C2	
General requirements of printing paper	12	A4			
Chemicals recovery and environmental aspects of paper industry	13	A5	B5		

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

أستاذ المقرر: أ.د / سامية الشرييني



نموذج رقم (١١١)

Industry and technology of paper and paperboard	مسمى المقرر
١٤٣٦٥٩ خ	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Presentation (data show)	Report using library and internet resources.	discussion	lecture	مخرجات التعلم ILOS	المعلومات والمفاهيم
x		x	x	a1. Identify Theories and fundamentals related to the wood and cellulosic fiber.	
x		x	x	a2.Show Scientific developments in the field of Pulping of wood and non-wood raw materials and paper manufacture, Paper and paper board converting, ways of development and the major standards used in national and international paper industry.	
x		x	x	a3. Recognize Reciprocal influence between paper industry, chemicals recovery and thier impact and effect on the society and environmental problems.	
x	X	x	x	a4. Outline The principles and basics of quality in professional practice in the field of academia and industry and realize the importance of applying standards.	
x		x	x	a5.Examine Scientific developments in the field of paper industry in terms of critical evaluation of the results and conclusions	
x		x	x	a6. Develop the skills to use computers to analyze and present data for comprehensive quality.	

x	X	x	x	A7.Show The principles and basics of quality in professional practice in the field of Paper testing and general requirements of printing paper.		
x		x	x	b1. Evaluate the information and analysis of problems in paper making industry and work to resolve them.	المهارات الذهنية	
x		x	x	b2. Plan to improve performance in the field of paper manufacture.		
x		x	x	b3. Link knowledge to solve various professional problems in the field of paper and paper board converting (surface sizing, paper coating, calendaring and supercalendaring, Corrugated board manufacturing, Carton board package manufacture and application , Tissue paper manufacture , and Lamination.		
x		x	x	b4. Risk assessment, which may be exposed during professional practice.		
x		x	x	b5. Conduct a research study and / or writing a scientific methodological study on a research problem and the development of computer programs skills in the work of statistics and graphs and skills of results presentations		
x		x	x	C1, Master of the basic professional skills for the practice of scientific research in the field of paper manufacture		المهارات المهنية
x		x	x	C2. Criticize existing methods and tools in the field of paper manufacture.		
x		x	x	C3. Propose research project that serves the area of the applied and Industrial fields.		

x		x	x	d1. Use of information technology to serve the professional practice	المهارات العامة
x		x	x	d2. Use different sources to obtain information and knowledge.	
				d3. Manage Time efficiently.	

أستاذ المقرر: أ.د. سامية الشربيني

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١)

Industry and technology of paper and paperboard	مسمى المقرر
١٤٣٦٥٩ خ	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60%	مخرجات التعلم ILOS	المعلومات والمفاهيم
activities and attendance 20%	Mid- term exam 20%			
x		x	A1. Identify Theories and fundamentals related to the wood and cellulosic fiber.	
		x	A2. Show Scientific developments in the field of Pulping of wood and non-wood raw materials and paper manufacture, Paper and paper board converting, ways of development and the major standards used in national and international paper industry.	
	x	x	A3. Recognize Reciprocal influence between paper industry, chemicals recovery and thier impact and effect on the society and environmental problems.	
x		x	A4. Outline The principles and basics of quality in professional practice in the field of academia and industry and realize the importance of applying standards	
	x	x	A5. Examine Scientific developments in the field of paper industry in terms of critical evaluation of the results and conclusions	
		x	A6. Develop the skills to use computers to analyze and present data for comprehensive quality.	
x	x	x	A7. Show The principles and basics of quality in professional practice in the field of Paper testing and general requirements of printing paper	
x	x	x	b1. Evaluate the information and analysis of problems in paper making industry and work to resolve them.	
		x	b2. Plan to improve performance in the field of paper manufacture.	

x	x	x	b3. Link knowledge to solve various professional problems in the field of paper and paper board converting (surface sizing, paper coating, calendaring and supercalendaring, Corrugated board manufacturing, Carton board package manufacture and application , Tissue paper manufacture , and Lamination.	
		x	b4. Risk assessment, which may be exposed during professional practice.	
x		x	b5. Conduct a research study and / or writing a scientific methodological study on a research problem and the development of computer programs skills in the work of statistics and graphs and skills of results presentations	
		x	C1, Master of the basic professional skills for the practice of scientific research in the field of paper manufacture	المهارات المهنية
	x	x	C2. Criticize existing methods and tools in the field of paper manufacture.	
		x	C3. Propose research project that serves the area of the applied and Industrial fields.	
		x	d1. Use of information technology to serve the professional practice.	المهارات العامة
		x	d2. Use different sources to obtain information and knowledge.	
		x	d3. Manage Time efficiently.	

أستاذ المقرر: أ.د. سامية الشربيني

رئيس مجلس القسم العلمي : أ.د. / وفاء غنيم

نموذج رقم ( ١٢ )

جامعة / أكاديمية حلوان  
كلية / معهد :العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١- بيانات المقرر		
الفرقة / المستوى : premaster	اسم المقرر : Industry and technology of petroleum and petrochemicals	الرمز الكودي : ١٤٣٦٦١ خ
عدد الوحدات الدراسية : نظري ( ١ ) عملي ( -- )		التخصص : Applied Chemistry

<ol style="list-style-type: none"> <li>1. identify Chemical properties of petroleum.</li> <li>2. Outline the Methods of refining.</li> <li>3. Identify Raw materials of petrochemicals (Gaseous raw materials, Liquid raw materials and Solid hydrocarbons - Long chain alp olefins).</li> <li>4. Recognize the types and size of equipment used in the chemical process industry of petroleum.</li> <li>5. Develop the student's integrity, credibility and commitment to the rules of the profession.</li> <li>6. Identify professional problems in petroleum.industry and find logical solutions.</li> </ol>	٢- هدف المقرر :
٣- المستهدف من تدريس المقرر :	
<p>By the end of studying the master's program graduates must be able to grasp:</p> <ol style="list-style-type: none"> <li>a1. identify Theories and fundamentals and specialized knowledge in origin of petroleum (aromatic hydrocarbon- alicyclic (saturated paraffins)</li> <li>a2. Outline The principles and basics of Chemical properties of petroleum</li> <li>a3. relate Theories and fundamentals and specialized knowledge to the Methods of refining, Petroleum technology and petrochemistry.</li> </ol>	أ- المعلومات والمفاهيم :

<p>By the end of studying Master's program graduates should be able to:</p> <ol style="list-style-type: none"> <li>b1. Analyze and evaluate information in the field of Raw materials of petrochemicals (Gaseous raw materials, Liquid raw materials and Solid hydrocarbons - Long chain alp olefins)and analogies to solve problems.</li> <li>b2. Link knowledge to solve various professional problems in the Processing of raw materials (nitration - oxidation – halogenation,...)</li> <li>b3. Risk assessment in professional practices in the field of Petroleum technology and petrochemistry</li> </ol>	ب- المهارات الذهنية :
<p>By the end of studying master's program graduates must be able to:</p> <ol style="list-style-type: none"> <li>c1. Master the basic and modern professional skills in the area of petroleum technology and petrochemistry.</li> <li>C2. Write professional reports</li> </ol>	ج- المهارات المهنية الخاصة بالمقرر :
<p>By the end of studying Master's program graduates should be able to:</p> <ol style="list-style-type: none"> <li>d1. Use different sources to obtain information and knowledge.</li> <li>d2. Self-learning and ongoing.</li> </ol>	د - المهارات العامة :
<ul style="list-style-type: none"> <li>- Origin of petroleum</li> <li>- chemical properties of petroleum</li> <li>- chemical evaluation of crude oil</li> <li>- method of refining</li> <li>- petroleum technology and petrochemistry</li> <li>- Raw materials of petrochemicals</li> </ul>	٤- محتوى المقرر :

<ul style="list-style-type: none"> <li>- Gaseous raw materials (gases-refinery gases -synthetic gases (mixture of gases)</li> <li>- Liquid raw materials (aromatic hydrocarbon-alicyclic (saturated paraffins),</li> <li>- Solid hydrocarbons- Long chain alipholefins</li> <li>- Processing of raw materials (nitration - oxidation - halogenation - sulphonation - sulphchlornation and sulpho-oxidation)</li> </ul>	
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	٥- أساليب التعليم والتعلم																		
- مقابله الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة																		
	٧- تقويم الطلاب :																		
1- weekly report 2- mid exam 3- class activities 4 – final exam	أ- الأساليب المستخدمة																		
Assessment 1 report Week: every week Assessment 2 mid exam Week: 4 Assessment 3 oral Week: 8 Assessment 4 Week:15	ب- التوقيت																		
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Mid-Term exam</td> <td style="width: 20%;">20</td> <td style="width: 20%;">%</td> </tr> <tr> <td>Final-Term exam</td> <td>60</td> <td>%</td> </tr> <tr> <td>Oral exam</td> <td>---</td> <td>%</td> </tr> <tr> <td>Practical exam</td> <td>-</td> <td>%</td> </tr> <tr> <td>Semester Work</td> <td>20</td> <td>%</td> </tr> <tr> <td><b>Total</b></td> <td><b>100%</b></td> <td></td> </tr> </table>	Mid-Term exam	20	%	Final-Term exam	60	%	Oral exam	---	%	Practical exam	-	%	Semester Work	20	%	<b>Total</b>	<b>100%</b>		ج- توزيع الدرجات
Mid-Term exam	20	%																	
Final-Term exam	60	%																	
Oral exam	---	%																	
Practical exam	-	%																	
Semester Work	20	%																	
<b>Total</b>	<b>100%</b>																		
	٨- قائمة الكتب الدراسية والمراجع :																		
	أ- مذكرات																		
	ب- كتب ملزمة																		
<ul style="list-style-type: none"> <li>• Handbook of petrochemicals production process, R. A. Meyers, McGraw Hill (2005).</li> <li>• Petroleum processing handbook, W..Bland and K.L.Davidson, McGraw-Hill (1967).</li> <li>• Advanced Petrochemicals, G.N. Sarkar, Khanna Publisher (2008).</li> <li>• Chemistry and technology of Petroleum, J.G. Speight, CRC Press, Taylor Francis group (2007).</li> <li>• Petrochemical technology, A.M. Brownstein, Petroleum Publish</li> </ul>	ج- كتب مقترحة																		
	د- دوريات علمية أو نشرات ... الخ																		

رئيس مجلس القسم العلمي : أ.د. وفاء غنيم

أستاذ المادة : أ.د / نيرمين حنفى

نموذج رقم (أ١١)

جامعة / أكاديمية : .. حلوان ..  
كلية / معهد : .. العلوم ..  
قسم : .. الكيمياء ..

Industry and technology of petroleum and petrochemicals	مسمى المقرر
١٤٣٦٦١ خ	كود المقرر

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
d1			a1	1	Origin of petroleum
	c1		a2	2	chemical properties of petroleum
			a2	3	chemical evaluation of crude oil
			a3	4	method of refining
	C1	b3	a3	5	petroleum technology and petrochemistry
d2	c2	b1		6	Raw materials of petrochemicals
		b1		7-8	Gaseous raw materials (gases-refinery gases -synthetic gases (mixture of gases)
		b1		9	Liquid raw materials (aromatic hydrocarbon-alicyclic (saturated paraffins),
		b1		10	Solid hydrocarbons- Long chain alipholefins
		b2		11-12	Processing of raw materials (nitration - oxidation - halogenation - sulphonation - sulphchlorination and sulpho-oxidation)

رئيس مجلس القسم العلمي : أ.د. وفاء غنيم

أستاذ المقرر : / أ.د. نيرمين حفنى



نموذج رقم (١١١)

Industry and technology of petroleum and petrochemicals	مسمى المقرر
١٤٣٦٦١ خ	كود المقرر

جامعة : حلوان

كلية : العلوم  
قسم : الكيمياء

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Presentation (data show)	report using library and internet resources	discussion	lecture	مخرجات التعلم ILOS	
				المعلومات والمفاهيم	المهارات الذهنية
x		x	x	a1. identify Theories and fundamentals and specialized knowledge in origin of petroleum (aromatic hydrocarbon-alicyclic (saturated paraffin's).	المعلومات والمفاهيم
x		x	x	a2. Outline The principles and basics of Chemical properties of petroleum.	
x		x	x	a3. a3. Relate Theories and fundamentals and specialized knowledge to the Methods of refining, Petroleum technology and petrochemistry. identify Methods of dyeing .	
x	X	x	x	b1. Analyze and evaluate information in the field of Raw materials of petrochemicals (Gaseous raw materials, Liquid raw materials and Solid hydrocarbons – Long chain alp olefins)and analogies to solve problems	المهارات الذهنية
x		x	x	b2. Link knowledge to solve various professional problems in the Processing of raw materials (nitration - oxidation – halogenation,...)	
x		x	x	b3. Risk assessment in professional practices in the field of Petroleum technology and petrochemistry	
x		x	x	c1. Master the basic and modern professional skills	المهارات المهنية

				petrochemistry .	
x	X	x	x	C <sub>2</sub> . Write professional reports	
x	X	x	x	d <sub>1</sub> .Use different sources to obtain information and knowledge.	المهارات العامة
x		x	x	d <sub>2</sub> . Self-learning and ongoing.	

أستاذ المادة: أ.د. / نيرمين حنفى

رئيس مجلس القسم العلمي : أ.د. / وفاء غنيم

نموذج رقم (١١)

Industry and technology of petroleum and petrochemicals	مسمى المقرر
١٤٣٦٦١ خ	كود المقرر

جامعة: حلوان.  
كلية: العلوم.  
قسم: الكيمياء.

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60%	مخرجات التعلم ILOS
activities and attendance 20%	Mid- term exam 20%		
		x	a1. identify Theories and fundamentals and specialized knowledge in origin of petroleum (aromatic hydrocarbon- alicyclic (saturated paraffin's)
x	x	x	a2. Outline The principles and basics of Chemical properties of petroleum
		x	a3. relate Theories and fundamentals and specialized knowledge to the Methods of refining, Petroleum technology and petrochemistry.
x	x	x	b1. Analyze and evaluate information in the field of Raw materials of petrochemicals (Gaseous raw materials, Liquid raw materials and Solid hydrocarbons - Long chain al olefins)and analogies to solve problems.
	x	x	b2. Link knowledge to solve various professional problems in the Processing of raw materials (nitration - oxidation - halogenation,...)
		x	b3. Risk assessment in professional practices in the field of Petroleum technology and petrochemistry
		x	c1. Master the basic and modern professional skills in the area of petroleum technology and petrochemistry.
			C2. Write professional reports
			d1. Use different sources to obtain information and knowledge.
			d2. Self-learning and ongoing.

أستاذ المادة: أ.د. / نيرمين حنفى

رئيس مجلس القسم العلمي: أ.د. / وفاء غنيم

نموذج رقم ( ١٢ )

جامعة / أكاديمية حلوان  
كلية / معهد :العلوم  
قسم : الكيمياء

توصيف المقرر دراسي

١ - بيانات المقرر	
الفرقة / المستوي: Premaster	اسم المقرر : <b>Industry and technology of iron and steel</b>
	الرمز الكودي: ١٤٣٦٦٢ خ
	التخصص: Applied chemistry
عدد الوحدات الدراسية : نظري ( ١ ) عملي ( -- )	

<ol style="list-style-type: none"> <li>1. provide an introduction to the Raw materials used in production of iron such as iron ore , fluxes materials such as limestone- dolomite .....etc. fuel such as coke , natural gas .</li> <li>2. provide the students with the preparation methods of raw materials(crushing, grinding, and screening).</li> <li>3. build knowledge with Upgrading of iron ore.</li> <li>4. understand the Theory of sintering and pelletization process and new technology of agglomeration)</li> <li>5.Discuss The meaning of pig iron and steel Pig iron production (blast furnace profile, refractory of blast furnace , reaction thermodynamics in blast furnace, blast furnace products( Pig iron , slag)</li> <li>6. show the External desulphurization, and dephosphorization, Steel making process (oxygen converter) , raw material and the reaction in oxygen converter , type of steel ( killed steel and semi-killed steel , rimered steel.</li> <li>7. provide an understanding of Disadvantage of sulphur and phosphor in steel.</li> <li>8. Enable the graduates to analyze complex issues both systematically and creatively in the field of iron industry..</li> </ol>	٢- هدف المقرر :
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٣- المستهدف من تدريس المقرر :

<p>Graduate master's program in any specialty should be able to:</p> <p>a1- define Theories and fundamentals related to the Raw materials used in production of iron.</p> <p>a2- Master the basics and methodologies of use different tools and recognize the advanced techniques upgrading of iron ore and iron production</p> <p>a 3- summarize The importance of quality performance in professional practice</p>	أ- المعلومات والمفاهيم :
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<p>By the end of studying Master's program graduates should be able to:</p> <p>b1- Analyze and evaluate the information and analysis of problems in the field of iron and steel production</p> <p>b2- Risk assessment, which may be exposed during professional practice in the industry of iron and steel</p> <p>b3- plan to improve Permanent scientific for the development of professional performance which can access to the highest quality</p>	ب- المهارات الذهنية :
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<p>By the end of studying master's program graduates must be able to:</p> <p>c1- write professional reports.</p>	ج- المهارات المهنية الخاصة بالمقرر :
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c2- Criticize existing methods and tools in the iron and steel production.	
d1- Use of information technology to serve the professional practice d2- assess available resources Effectively d3. Develop rules and indicators to evaluate the performance of others	د – المهارات العامة :
<ul style="list-style-type: none"> <li>Raw materials (iron ore - fluxing material – fuel -any other waste) used in the production of iron</li> <li>Preparation of raw material ( crushing and grinding )Type of crushers, Type of grindersTheory of crushing in Jaw crusher and Ball mill.</li> <li>Upgrading of iron ore (by washing- gravity separation-floatation -magnetic separation-magnetizing roasting-electrostatic separation)</li> <li>Agglomeration of raw materials (sintering and pelletization-chemical reaction of both processes, Types of binding used in pelletization )</li> <li>Theory of sintering and pelletization process and new technology of agglomeration) . energy Balance and mass balance in sintering process).</li> <li>The meaning of pig iron and steelPig iron production (blast furnace profile, refractory of blast furnace , reaction thermodynamics in blast furnace, blast furnace products( Pig iron , slag) and their uses).</li> <li>External desulphurization, and de- phosphorization.Steel making process (oxygen converter) , raw material and the reaction in oxygen converter , type of steel ( killed steel and semi-killed steel , rimed steel.</li> </ul> <p>Disadvantage of sulphur and phosphor in steel</p>	٤- محتوى المقرر :

1- Lecture, Board, virtual presentations. 2- Slide projector, Handouts/data show 3- Living specimens, book recommendations	٥- أساليب التعليم والتعلم
- مقابله الطلاب من خلال الساعات المكتبية - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة
	٧- تقويم الطلاب :
1- Mid-Term exam 2- Final-Term exam 3- Semester Work	أ- الأساليب المستخدمة
Assessment 1                      W eek: 8 Assessment 2                      W eek: 15 Assessment 3                      W eek: through the semester	ب- التوقيت
Mid-Term exam    20 % Final-Term exam    60 % Semester Work    20 %  Total                      100%	ج- توزيع الدرجات
	٨- قائمة الكتب الدراسية والمراجع :
Handouts are given to the students at every lecture	أ- مذكرات

	ب- كتب ملزمة
-D.F.Ball, agglomeration of iron ore , 1973 -Mc Cabe W , Smith J and Harriatt . P, Unit operation of Chemical Engineering , 2004 -Chatterjee, Amit, Spong iron production by direct reduction of iron oxide , 2010 -Jhosh Ahindra , iron making and steel making , 2008 Jaeoslav Srb , Zdenka Ruzickova , Pelletization of fines , 1988	ج - كتب مقترحة
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أستاذ المادة : / أ.د. عمر عبد العال

رئيس مجلس القسم العلمي : أ.د. وفاء غنيم

نموذج رقم (١١)

جامعة / أكاديمية : ... حلوان.....  
كلية / معهد : ... العلوم...  
قسم : ... الكيمياء.....

Industry and technology of iron and steel	مسمى المقرر
143662 E	كود المقرر

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
			a1	1	Raw materials (iron ore - fluxing material – fuel - any other waste) used in the production of iron.
	c1		a1	2	Preparation of raw material ( crushing and grinding )Type of crushers, Type of grindersTheory of crushing in Jaw crusher and Ball mill.
	c2		A2	3	Upgrading of iron ore (by washing- gravity separation-floatation -magnetic separation-magnetizing roasting-electrostatic separation) –
d1			a2	4	Agglomeration of raw materials (sintering and pelletization-chemical reaction of both processes, Types of binding used in pelletization )
d2			a3	5	Theory of sintering and pelletization process and new technology of agglomeration) . energy Balance and mass balance in sintering process).
		b1		6,7	The meaning of pig iron and steelPig iron production (blast furnace profile, refractory of blast furnace , reaction thermodynamics in blast furnace, blast furnace products( Pig iron , slag) and their uses).
		b2		9,10	External desulphurization, and de-phosphorization.Steel making process (oxygen converter) , raw material and the reaction in oxygen converter , type of steel ( killed steel and semi-killed steel , rimed steel.
D3		b3		11,12	Disadvantage of sulphur and phosphor in steel

أستاذ المقرر: أ.د. عمر عبد العال

رئيس مجلس القسم العلمي أ.د. وفاء غنيم

نموذج رقم (١١)

Industry and technology of iron and steel	مسمى المقرر
١٤٣٦٦٢ خ	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Report using library and internet resources.	discussion	lecture	مخرجات التعلم ILOS	
	x	x	a1- define Theories and fundamentals related to the Raw materials used in production of iron	المعلومات والمفاهيم
x	x	x	a2- Master the basics and methodologies of use different tools and recognize the advanced techniques upgrading of iron ore and iron production.	
	x	x	a3.a3- summarize The importance of quality performance in professional practice.	
	x	x	b1- Analyze and evaluate the information and analysis of problems in the field of iron and steel production	المهارات الذهنية
	x	x	b2- Risk assessment, which may be exposed during professional practice in the industry of iron and steel.	
x	x	x	b3- plan to improve Permanent scientific for the development of professional performance which can access to the highest quality .	
	x	x	c1- write professional reports.	المهارات المهنية
	x	x	c2- Criticize existing methods and tools in the iron and steel production.	
	x	x	d1- Use of information technology to serve the professional practice.	المهارات العامة



	x	x	d2- assess available resources Effectively.	
	x	x	d3. Develop rules and indicators to evaluate the performance of others	

أستاذ المادة : / أ.د. عمر عبد العال

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١١ )

Industry and technology of iron and steel	مسمى المقرر
١٤٣٦٦٢ خ	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60%	مخرجات التعلم ILOS	
activities and attendance 20%	Mid- term exam 20%			
		x	a1- define Theories and fundamentals related to the Raw materials used in production of iron.	المعلومات والمفاهيم
x	x	x	a2- Master the basics and methodologies of use different tools and recognize the advanced techniques upgrading of iron ore and iron production	
		x	a 3- summarize The importance of quality performance in professional practice.	
x	x	x	b1- Analyze and evaluate the information and analysis of problems in the field of iron and steel production.	المهارات الذهنية
		x	b2- Risk assessment, which may be exposed during professional practice in the industry of iron and steel	
x		x	b3- plan to improve Permanent scientific for the development of professional performance which can access to the highest quality .	
			c1- write professional reports.	المهارات المهنية
	x		c2- Criticize existing methods and tools in the iron and steel production.	
			d1- Use of information technology to serve the professional practice.	المهارات العامة
			d2- assess available resources Effectively.	
			d3. Develop rules and indicators to evaluate the performance of others	

أستاذ المادة : / أ.د. عمر عبد العال

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١٢ )

جامعة / أكاديمية حلوان  
كلية / معهد :العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١ - بيانات المقرر		
الفرقة / المستوى : Premaster	اسم المقرر : <b>Industry and technology of Fertilizers</b>	الرمز الكودي : ١٤٣٦٦٤E
عدد الوحدات الدراسية : نظري ( ١ ) عملي ( -- )		التخصص : Applied chemistry

<ol style="list-style-type: none"> <li>1. develop knowledge about types of fertilizers</li> <li>2. introduce the manufacture and use of fertilizers</li> <li>3. be aware of fertilizers toxicity</li> <li>4. Provide students with the skills, ethics, and methodologies to serve the needs of the environment and society.</li> <li>5. Develop graduates responsible attitude towards the needs of society and the environment conservation and awareness of the dangers of industrial effluents and the importance of his role in finding developed solutions to deal with.</li> </ol>	٢- هدف المقرر :
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٣- المستهدف من تدريس المقرر :	
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Graduate master's program in any specialty should be able to: A1. Outline types of fertilizers A2. Describe the manufacture processes of fertilizers A3. Recognize the use of fertilizers	أ- المعلومات والمفاهيم :
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By the end of studying Master's program graduates should be able to: b1. assessRisk, which may be exposed during professional practice B2. Conduct a research study and / or writing a scientific methodological study on a research problem	ب- المهارات الذهنية :
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By the end of studying master's program graduates must be able to: C1. Propose research project that serves the area of the applied and Industrial fields. C2. Determine the originality of practical problems in order to tackling and solving them	ج - المهارات المهنية الخاصة بالمقرر :
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D1.Practice self-assessment and identify personal learning needs. D2. Develop rules and indicators for evaluate the performance of others	د - المهارات العامة :
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<ul style="list-style-type: none"> <li>- Types of fertilizers</li> <li>- Manufacture of fertilizers</li> <li>- The Use of fertilizers</li> <li>- Mixing of fertilizers</li> <li>- Toxicity of fertilizers</li> </ul>	٤- محتوى المقرر :
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.1- Lecture, Board, .2- Handouts .3- book recommendations	٥- أساليب التعليم والتعلم
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<p>- مقابلة الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى</p>	<p>٦- أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة</p>
<p>٧- تقويم الطلاب :</p>	
<p>1- Mid-Term exam 2- Final-Term exam 3- Semester Work</p>	<p>أ- الأساليب المستخدمة</p>
<p>Assessment 1                      Week: 8 Assessment 2                      Week: 15 Assessment 3                      Week: through the semester</p>	<p>ب- التوقيت</p>
<p>Mid-Term exam    20% Final-Term exam    60% Semester Work    20% Total                    100%</p>	<p>ج- توزيع الدرجات</p>
<p>٨- قائمة الكتب الدراسية والمراجع :</p>	
<p>Handouts are given to the students at every lecture</p>	<p>أ- مذكرات</p>
<p></p>	<p>ب- كتب ملزمة</p>
<ul style="list-style-type: none"> <li>• Handbook of Fertilizers - Their Sources, Make-Up, Effects, and Use. By <u>A. F. Gustafson</u>. Saerchinger Press, - <u>Technology &amp; Engineering</u> - 170 pages(2010).</li> <li>• Soil Fertility and Fertilizers: An Introduction to Nutrient Management. By <u>John L. Havlin</u> and <u>Samuel L. Tisdale</u>, Prentice Hall, <u>Technology &amp; Engineering</u>, 515 pages (2005).</li> </ul>	<p>ج- كتب مقترحة</p>
<p></p>	<p>د- دوريات علمية أو نشرات ... الخ</p>

أستاذ المادة : / أ.د. حسن عبد الجواد حسن

رئيس مجلس القسم العلمي : أ.د. وفاء غنيم

نموذج رقم (١١١)

Industry and technology of Fertilizers	مسمى المقرر
143664 E	كود المقرر

جامعة / أكاديمية : ... حلوان.....  
كلية / معهد : ... العلوم...  
قسم : ... الكيمياء.....

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
d1,d2	C1,c2	b1	A 1	1	Definition and Types of fertilizers
d1,d2	C1,c2	b1	A 1	2	Definition and Types of fertilizers
d1,d2	C1,c2	b2	A ٢	3	Manufacture of fertilizers
d1,d2	C1,c2	b2	A ٢	4	Manufacture of fertilizers
d1,d2	C1,c2	b3	A ٣	5	The Use of fertilizers
d1,d2	C1,c2	b3	A ٣	6	The Use of fertilizers
d1,d2	C1,c2	b2	A ٣	7	Mixing of fertilizers
d1,d2	C1,c2			8	Toxicity of fertilizers

أستاذ المقرر: أ.د. حسن عبد الجواد حسن

رئيس مجلس القسم العلمي أ.د. وفاء غنيم

نموذج رقم (١١١)

Industry and technology of Fertilizers	مسمى المقرر
E ١٤٣٦٦٤	كود المقرر

جامعة : حلوان

كلية : العلوم  
قسم : الكيمياء

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

Report using library and internet resources	discussion	lecture	مخرجات التعلم ILOS	
	x	x	A1. Outline types of fertilizers.	المعلومات والمفاهيم
x	x	x	A2. Describe the manufacture processes of fertilizers.	
	x	x	a3. A3. Recognize the use of fertilizers .	
	x	x	b1. Assess Risk, which may be exposed during professional practice	المهارات الذهنية
x	x	x	B2. Conduct a research study and / or writing a scientific methodological study on a research problem	
	x	x	C1. Propose research project that serves the area of the applied and Industrial fields.	المهارات المهنية
	x	x	C2. Determine the originality of practical problems in order to tackling and solving them	
	x	x	D1.Practice self-assessment and identify personal learning needs.	المهارات العامة
	x	x	D2. Develop rules and indicators for evaluate the performance of others	

أستاذ المقرر: أ.د. حسن عبد الجواد حسن

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١١)

Industry and technology of Fertilizers	مسمى المقرر
E ١٤٣٦٦٤	كود المقرر

جامعة : حلوان.  
كلية : العلوم.  
قسم : الكيمياء.

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination 60%	مخرجات التعلم ILOS	
activities and attendance 20%	Mid- term exam 20%			
		x	A1. Outline types of fertilizers.	المعلومات والمفاهيم
x	x	x	A2. Describe the manufacture processes of fertilizers.	
		x	A3. Recognize the use of fertilizers.	
		x	b1. Assess Risk, which may be exposed during professional practice	المهارات الذهنية
x	x	x	B2. Conduct a research study and / or writing a scientific methodological study on a research problem.	
x			C1. Propose research project that serves the area of the applied and Industrial fields.	المهارات المهنية
x	x		C2. Determine the originality of practical problems in order to tackling and solving them.	
			D1.Practice self-assessment and identify personal learning needs.	المهارات العامة
			D2. Develop rules and indicators for evaluate the performance of others.	

أستاذ المقرر: أ.د. حسن عبد الجواد حسن

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم ( ١٢ )

جامعة / أكاديمية حلوان  
كلية / معهد : العلوم  
قسم : الكيمياء

توصيف مقرر دراسي

١ - بيانات المقرر		
الفرقة / المستوى : Premaster	اسم المقرر : <b>Industry and technology of Insecticides</b>	الرمز الكودي : ١٤٣٦٦٥E
عدد الوحدات الدراسية : نظري ( ١ ) عملي ( -- )		التخصص : Applied chemistry

<ol style="list-style-type: none"> <li>1. develop knowledge about type of insecticides</li> <li>2. introduce the manufacture and used of insecticides</li> <li>3. introduce the manufacture and used of herbicides</li> <li>4. Toxicology of pesticides.</li> <li>5. Develop graduates responsible attitude towards the needs of society and the environment conservation and awareness of the dangers of industrial effluents and the importance of his role in finding developed solutions to deal with, in light of global and regional changes.</li> </ol>	٢ - هدف المقرر :
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٣ - المستهدف من تدريس المقرر :	
Graduate master's program in any specialty should be able to: A1. Define insecticides and herbicides A2. State the manufacture of insecticides and herbicides A3. Outline the use of insecticides and herbicides	أ - المعلومات والمفاهيم :

By the end of studying Master's program graduates should be able to: b1. assessRisk, which may be exposed during professional practice B2. Conduct a research study and / or writing a scientific methodological study on a research problem	ب - المهارات الذهنية :
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By the end of studying master's program graduates must be able to: C1. Propose research project that serves the area of the applied and Industrial fields. C2. Determine the originality of practical problems in order to tackling and solving them.	ج - المهارات المهنية الخاصة بالمقرر :
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D1.Practice self-assessment and identify personal learning needs. D2. Develop rules and indicators for evaluate the performance of others	د - المهارات العامة :
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<ul style="list-style-type: none"> <li>• Insecticides and herbicides.</li> <li>• Types of insecticides and herbicide.</li> <li>• Manufacture of insecticide and herbicide</li> <li>• Uses and disadvantages of insecticides and herbicides</li> <li>• Toxicology of pesticides</li> </ul>	٤ - محتوى المقرر :
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.1- Lecture, Board, .2- Handouts .3- book recommendations	٥ - أساليب التعليم والتعلم
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- مقابلة الطلاب من خلال الساعات المكتبيه - نفس الاساليب مع الطلاب الاخرون بالاضافه الى اعطاءهم تعليقات ،الحاقهم فى مجموعات عمل مع زملائهم ،تكليفهم بعمل اضافى	٦ - أساليب التعليم والتعلم للطلاب ذوى القدرات المحدودة
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٧- تقويم الطلاب :	
1- Mid-Term exam 2- Final-Term exam 3- Semester Work	أ- الأساليب المستخدمة
Assessment 1                      Week: 8 Assessment 2                      Week: 15 Assessment 3                      Week: through the semester	ب- التوقيت
Mid-Term exam      20 % Final-Term exam    60 % Semester Work      20 %  Total                      100%	ج- توزيع الدرجات
٨- قائمة الكتب الدراسية والمراجع :	
Handouts are given to the students at every lecture	أ- مذكرات
	ب- كتب ملزمة
<ul style="list-style-type: none"> <li>• Pesticide Chemistry and Toxicology. By Dileep K. Singh, 150 pages (2012).</li> <li>• Hayes' Handbook of Pesticide Toxicology(Third Edition). By Robert Krieger (2010).</li> </ul>	ج- كتب مقترحة
	د- دوريات علمية أو نشرات ... الخ

أستاذ المادة : / أ.د. حسن عبد الجواد حسن

رئيس مجلس القسم العلمي : أ.د. وفاء غنيم

نموذج رقم (١١١)

جامعة / أكاديمية : ... حلوان.....  
كلية / معهد : ... العلوم...  
قسم : ... الكيمياء.....

Industry and technology of Insecticides	مسمى المقرر
143665 E	كود المقرر

(أ) مصفوفة المعارف و المهارات المستهدفة من المقرر الدراسي

مهارات عامة	مهارات مهنية	المهارات الذهنية	المعارف الرئيسية	أسبوع الدراسة	المحتويات للمقرر
d1,c2	C1,c2	b1	A 1	1	Insecticides and herbicides.
d1,c2	C1,c2	b1	A 1	2	Insecticides and herbicides
d1,c2	C1,c2	b3	A 3	3	Types of insecticides and herbicide.
d1,c2	C1,c2	b3	A 3	4	Types of insecticides and herbicide.
d1,c2	C1,c2	b2	A 2	5	Manufacture of insecticide and herbicide
d1,c2	C1,c2	b2	A 2	6	Manufacture of insecticide and herbicide
d1,c2	C1,c2	b3	A ٣	7	Uses and disadvantages of insecticides and herbicides
d1,c2	C1,c2	b3	A 3	8	Toxicology of pesticides

رئيس مجلس القسم العلمي : أ.د. وفاء غنيم

أستاذ المادة : / أ.د. حسن عبد الجواد حسن

نموذج رقم (١١١)

Industry and technology of Insecticides	مسمى المقرر
E ١٤٣٦٦٥	كود المقرر

جامعة : حلوان

كلية : العلوم  
قسم : الكيمياء

(ب) مصفوفة ملائمة أساليب التعليم و التعلم للمعارف و المهارات المستهدفة من المقرر

أستاذ

report using library and internet resources	discussion	lecture	مخرجات التعلم ILOS	
	x	x	A1. Define insecticides and herbicides.	المعلومات والمفاهيم
x	x	x	A2. State the manufacture of insecticides and herbicides.	
x	x	x	A3. Outline the use of insecticides and herbicides	
	x	x	b1. assessRisk, which may be exposed during professional practice	المهارات الذهنية
x	x	x	B2. Conduct a research study and / or writing a scientific methodological study on a research problem.	
	x	x	C1. Propose research project that serves the area of the applied and Industrial fields.	المهارات المهنية
	x	x	C2. Determine the originality of practical problems in order to tackling and solving them	
	x	x	D1.Practice self-assessment and identify personal learning needs.	المهارات العامة
	x	x	D2. Develop rules and indicators for evaluate the performance of others	

المقرر: أ.د. حسن عبد الجواد حسن

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم

نموذج رقم (١١١)

Industry and technology of Insecticides	مسمى المقرر
E ١٤٣٦٦٥	كود المقرر

جامعة : حلوان  
كلية : العلوم  
قسم : الكيمياء

(ج) مصفوفة ملائمة أساليب التقويم للمعارف و المهارات المستهدفة من المقرر الدراسي

Semester work		Final written examination	مخرجات التعلم ILOS	
activities and attendance 20%	Mid- term exam 20%			
		x	A1. Define insecticides and herbicides	المعلومات والمفاهيم
x	x	x	A2. State the manufacture of insecticides and herbicides.	
x	x	x	A3. Outline the use of insecticides and herbicides.	
	x	x	b1. Assess Risk, which may be exposed during professional practice	المهارات الذهنية
x		x	B2. Conduct a research study and / or writing a scientific methodological study on a research problem	
			C1. Propose research project that serves the area of the applied and Industrial fields.	المهارات المهنية
x			C2. Determine the originality of practical problems in order to tackling and solving them.	
x			D1.Practice self-assessment and identify personal learning needs..	المهارات العامة
x			D2. Develop rules and indicators for evaluate the performance of others	

أستاذ المقرر: أ.د. حسن عبد الجواد حسن

رئيس مجلس القسم العلمي : أ.د / وفاء غنيم