وزارة التعليم العالي
المعهد العالي للهندسة والتكنولوجيا
بدمياط الجديدة

قسم الهندسة الكيميائية

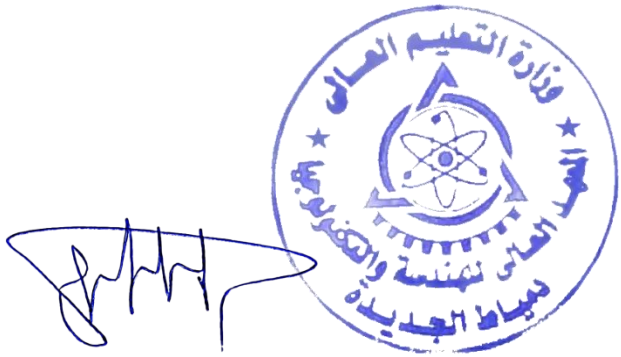
تقارير المقررات قسم الهندسة الكيميائية

إعتماد مجلس القسم لتقارير المقررات قسم الهندسة الكيميائية

بتاريخ 2021/8/23

إعتماد المجلس العلمي لتقارير المقررات قسم الهندسة الكيميائية

بتاريخ 2021/11/9



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2020- 2021

تقارير المقررات لقسم الهندسة الكيميائية

Head of the department	Quality Assurance Unit Manager	Dean of the institute
Assoc.Prof.Dr./ Hend Elsayed Gadow	Assoc.Prof.Dr./ Ramadan Abdelghany Elkateb	Prof.Dr./ Osami Elsaeed Rageh

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مستوى ثالث

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وزارة التعليم العالى المعهد العالى
للهندسة والتكنولوجيا
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Annual Course Report: Engineering Probability and Statistics

(MTH301)

A. Basic Information:

Program Title	Chemical Engineering Program		
Department Offering the Program	Basic Science and Engineering Department		
Department Responsible for the Course	Basic Science and Engineering Department		
Course Title	Engineering Probability and Statistics		
Course Code	MTH301		
Year/Level	Level: 3		
Specialization	Major		
Authorization data of course report	3/2021		
Exam Committee Selection Rule	Commissioning of the Institute of Management		
External Revision of Examination	--		
Lecturers Number:	1		
Teaching hours	**Lectures**	**Tutorial**	**Practical**
	2	2	-

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		181	100%
Students completing the course		181	100%
Results	**Passed**	173	95.58%
	Failed	8	4.42%
Grading of successful students	**Excellent**	66	36.46%
	Very Good	55	30.39%
	Good	27	14.92%
	Pass	25	.13.81%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Probability theory	4	4	-
2	Discrete and continuous probability distributions	6	6	-
3	Statistics in engineering	4	4	-
4	Descriptive Statistics Sampling distributions	2	2	-
5	Estimation and confidence intervals	4	4	-
6	Hypothesis testing	4	4	-
7	Simple regression	4	4	-
Total		**28**	**28**	**-**

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Annual Course Report: Engineering Probability and Statistics

(MTH301)

- Topics taught as a percentage of the content specified: 90 %

- Lecturers commitment of the course content: 100 %
- Coverage of exam topics to course content: 90 %
- Used Teaching and Learning Methods

No.	Teaching Method	Choice
1	Lectures	√
2	Discussion Sessions	×
3	Information Collection from Different Sources	√
4	Practical	x
5	Research Assignment	x
6	Field Visits	×
7	Case Studies	x
8	Smart Sessions	×
9	…	×

- Student Assessment:

No.	Assessment Method	Weights
1	Mid Term Examination and semester work	40%
2	Oral Examination	0%
3	Practical Examination	0%
4	Other types of assessment	0%
5	Final Term Examination	60%
Total		100%

3. Facilities Required for Teaching and Learning:

No.	Facility	Choice
1	Lecture Classroom	√
2	Lab Facilities	√
3	White Board	√
4	Data Show System	√
5	Visualizer	×
6	Smart Board	×

No.	Facility	Choice
7	Wireless Board	×
8	Presenter	×
9	Sound System	√
10	Wire-Internet	x
11	Wireless Internet	√
12	…	×

4- Administrative Constraints:

No.	Constraints
1	**None**

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**82.79%**

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Annual Course Report: Engineering Probability and Statistics

(MTH301)

6- Course enhancement suggestions

No.	Suggestions
1	Make all lectures available as videos and pdf
2	More interact with student through MOODEL

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	References need update

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Increasing applied problems

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	All suggestions have been implemented	-----

10- What has been implemented from the action plan in the previous year?

No.	Action
1	Adding some scientific reference in the electronic library of the institute.

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Self learning	Enhance searching	2021-2022	Dr Mohamed Shokery

Course Coordinator: Dr: Mohamed Shokery

Head of Department: Associate prof. Khaled Samir

Date of Approval: 2020-2021

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Annual Course Report: Organic Chemistry

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 202
Year/ Level	Level two
Specialization	Major
Authorization date of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	3	0	2

B. Specialized information:

1. Statistics

Subject		**Percentage**
Students attending the course		100%
Students completing the course		100%
Results	**Passed**	84.6%
	Failed	15.4%
Grading of successful students	**Excellent**	28.8%
	Very Good	26.25%
	Good	11.55%
	Pass	18%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Organic Chemistry: basic concepts Practical Identification of hydrocarbons	3	-	2
2	Alkanes Practical	3	-	2

Annual Course Report: Organic Chemistry

3	Stereochemistry Practical Identification of phenols	3	-	2
4	Alkenes Practical Identification of aldehydes and ketones	6	-	4
5	Alkynes Practical Identification of aliphatic carboxylic acids	3	-	2
6	Aromatic Compounds Practical Identification of aromatic	6	-	4
7	Alcohols Practical Identification of salt of carboxylic acids	3	-	2
8	Ethers Practical Identification of amines	3	-	2
9	Aldehydes and Ketones Practical Identification of carbohydrates	3	-	2

Annual Course Report: Organic Chemistry

10	Carboxylic Acids and Their Derivatives Practical Scheme for identification of unknown organic compounds	3	-	2
11	Amines Practical Revision	3	-	2
12	Poly functional compounds Practical Practical exam	3	-	2
Total		**42**	**-**	**28**

- Topics taught as a percentage of the content specified: 90%
- Lecturers commitment of the course content: 95%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Organic Chemistry: basic concepts	x	x												X

Annual Course Report: Organic Chemistry

	Practical Identification of hydrocarbons														
2	Alkanes Practical Identification of alcohols	**x**	**x**												**X**
3	Stereochemistry Practical Identification of phenols	**x**	**x**												**X**
4	Alkenes Practical Identification of aldehydes and ketones	**x**	**x**												**X**
5	Alkynes Practical Identification of aliphatic carboxylic acids	**x**	**x**												**X**
6	Aromatic Compounds Practical Identification of aromatic	**x**	**x**												**X**
7	Alcohols Practical Identification of salt of carboxylic acids	**x**	**x**												**X**

Annual Course Report: Organic Chemistry

8	Ethers Practical Identification of amines	**x**	**x**												**X**
9	Aldehydes and Ketones Practical Identification of carbohydrates	**x**	**x**												**X**
10	Carboxylic Acids and Their Derivatives Practical Scheme for identification of unknown organic compounds	**x**	**x**												**X**
11	Amines Practical Revision	**x**	**x**												**X**
12	Poly functional compounds Practical Practical exam	**x**	**x**												**X**

- Student Assessment:

No.	Evaluation method	Weights

Annual Course Report: Organic Chemistry

1	Midterm examination	10%
2	Semester work (sheets, quizzes)	20%
3	Practical Examination	10%
4	Final term examination	60%
	Total	100%

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	5	Data show system
2	Presenter	6	Sound system
3	White board	7	Wireless internet
4	Lab		

4- Administrative Constraints:

Constraints
No constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**80.26%**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Integrating work experiences with education.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**The experimental part is canceled from the fourteenth week and is distributed over the other weeks.**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Using smart boards**	

10- What has been implemented from the action plan in the previous year?

Annual Course Report: Organic Chemistry

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11. Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Introduce virtual lab technique**	**Used suitable videos**	**2021-2022**	**Associate prof. Khaled Samir**

Course Coordinator: Associate prof. Khaled Samir

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval: 8/2021

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Annual Course Report: Inorganic Chemistry

A. Basic Information

Program Title	Chemical engineering
Department offering the Program	Chemical engineering department
Department Responsible for the Course	Chemical engineering department
Course Code	CHE 203
Year/ Level	One
Specialization	Major
Authorization data of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching hours	Lectures	Tutorial	Practical
	2	-	2

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		74	100%
Students completing the course		71	95.94%
Results	**Passed**	47	66.19%
	Failed	24	33.8%
Grading of successful students	**Excellent**	4	5.6%
	Very Good	10	14.08%
	Good	7	9.8%
	Pass	26	36.61%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Atomic structure – periodic table Practical • Introduction in investigation for Acidic and basic Radical in sample salts • Dilute HCl group	6	-	12
2	Chemical bonding	4	-	-

Annual Course Report: Inorganic Chemistry

3	Representative elements (from Gr.1 to gr.7) Practical • Miscellaneous group • Scheme of identification of acidic radical • Investigation for Basic Radical in sample salts group Dil. HCl	12	-	12
4	Nobel gases, Lanthanides and Actinides **Practical** • $NH_4OH + NH_4Cl + (NH_4)_2 CO_3$	6	-	4
Total		**28**		**28**

- Topics taught as a percentage of the content specified: 86%
- Lecturers commitment of the course content: 95%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	lab
1	Atomic structure – periodic table Practical • Introduction in investigation for Acidic and basic Radical in sample salts	**x**	**x**								**x**				**X**

Annual Course Report: Inorganic Chemistry

	• Dilute HCl group • Concentrated H_2SO_4 group														
2	Chemical bonding	**x**	**x**								**x**				**X**
3	Representative elements (from Gr.1 to gr.7) Practical • Miscellaneous group • Scheme of identification of acidic radical • Investigation for Basic Radical in sample salts group Dil. HCl • Dil. HCl + H_2S group • NH_4OH + NH_4Cl group • NH4OH + NH4Cl + H2S group	**x**	**x**								**x**				**X**
4	Nobel gases, Lanthanides and Actinides **Practical** • NH_4OH + NH_4Cl + $(NH_4)_2$ CO_3 group • Scheme of identification of basic Radical	**x**	**x**								**x**				**X**

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Annual Course Report: Inorganic Chemistry

- Student Assessment:

No.	Evaluation method	Weights
1	Midterm examination	10%
2	Semester work (sheets, quizzes)	20%
3	Practical Examination	10%
4	Final term examination	60%
	Total	100%

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	5	Data show system
2	Presenter	6	Sound system
3	White board		
4	Lab		

4- Administrative Constraints:

Constraints
No Constraints.

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**78%**

6- Course enhancement suggestions

No.	Suggestions
1	**Integrating work experiences with education.**
2	**Transplant And Assess Pedagogy Utilizing Such Technologies To Enhance Students' Learning.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**The experimental part is canceled from the fourteenth week and is distributed over the other weeks.**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**

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Annual Course Report: Inorganic Chemistry

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Using online course material.	Needing of extra internet system and smart boards

10- What has been implemented from the action plan in the previous year?

No.	Suggestions
1	Adding some scientific reference in the electronic library of the institute.

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Increase some of scientific reference In the library of the institute	Add more scientific reference In the electronic library of the institute	2021-2022	Institute management
2	Visit some petrochemical laboratories.	Provide field visits	2021-2022	Institute management

Course Coordinator:Dr. Ramadan Elkateb

Head of Department:Ass. Asso.prof. Hend Elsayed Gadow

Date of Approval: 3/2021

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Annual Course Report: Physical Chemistry

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 301
Year/ Level	Level 3
Specialization	Major
Authorization data of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching hours	Lectures	Tutorial	Practical
	2	-	2

B. Specialized information:

1. Statistics

Subject		**Percentage**
Students attending the course		100%
Students completing the course		100%
Results	**Passed**	60%
	Failed	40%
Grading of successful students	**Excellent**	20%
	Very Good	10%
	Good	15%
	Pass	15%

2. Course Teaching:

No.	Topics	Lectures	Tutorial	Practical
1	Gases (Ideal gas, real gas)	4	-	-
2	Solutions (true and colloidal solutions) Practical • The nature of Copper – Ammonia Complex in aqueous Solution	4	-	4

Annual Course Report: Physical Chemistry

3	Chemical kinetics (Rate of reaction) Practical • Study of Homogeneous Catalytic Decomposition of H_2O_2 by Initial Rate Method • Catalytic decomposition H_2O_2 • Determination of The order of the reaction between H_2O_2 and HI	10	-	20
4	Chemical equilibrium	4	-	-
5	Surface chemistry (Adsorption) Practical • Adsorption of Oxalic Acid on Charcoal	4	-	4
6	Chemical thermodynamic	2	-	-
Total		**28**	**-**	**28**

- Topics taught as a percentage of the content specified: 87%
- Lecturers commitment of the course content: 95%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab

Annual Course Report: Physical Chemistry

1	Gases (Ideal gas, real gas)	**x**	**X**								**x**				
2	Solutions (true and colloidal solutions) Practical • The nature of Copper – Ammonia Complex in aqueous Solution	**x**	**X**												**X**
3	Chemical kinetics (Rate of reaction) Practical • Study of Homogeneous Catalytic Decomposition of H_2O_2 by Initial Rate Method • Catalytic decomposition H_2O_2 • Determination of The order of the reaction between H_2O_2 and HI	**x**	**X**			**X**									**X**
4	Chemical equilibrium														
5	Surface chemistry (Adsorption) Practical • Adsorption of Oxalic Acid on Charcoal	**x**	**X**												**x**
6	Chemical thermodynamic	**x**	**X**			**X**									

- Student Assessment:

No.	Evaluation method	Weights

Annual Course Report: Physical Chemistry

1	Midterm examination	10%
2	Semester work (sheets, quizs , presentation)	20%
3	Practical Examination	10%
4	Final term examination	60%
Total		100%

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	5	Data show system
2	Presenter	6	Sound system
3	White board		
4	Lab		

4- Administrative Constraints:

Constraints
No constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**80.76%**

6- Course enhancement suggestions

No.	Suggestions
1	**Integrating work experiences with education.**
2	**Transplant And Assess Pedagogy Utilizing Such Technologies To Enhance Students' Learning.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**Topics are short in course specs that should be modified.**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Using online course material.**	**Needing of extra internet system and smart boards**

10- What has been implemented from the action plan in the previous year?

Annual Course Report: Physical Chemistry

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11.Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Visit some plants**	**Provide field visits**	**2021-2022**	**Institute management**

Course Coordinator: Dr. Mohamed Fakeeh

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 3/2021

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Annual Course Report: material science and metallurgy

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 302
Year/ Level	Level 3
Specialization	Major
Authorization data of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

	Lectures	**Tutorial**	**Practical**
Teaching Hours	2 hours per week for 14weeks	2 hours per week for 14weeks	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		49	100%
Students completing the course		47	95.91%
Results	**Passed**	36	76.59%
	Failed	11	23.4%
Grading of successful students	**Excellent**	10	21.27%
	Very Good	7	14.89%
	Good	7	14.89%
	Pass	12	25.53%

2. Course Teaching:

1	Structure of metals and alloys(crystalline structure of metals-types of deformation)	10	10	-
2	Structure of ceramics and glasses (theories and applications)	4	4	-
3	Structure of polymers	4	4	-
4	Thermodynamics of condensed phase(equilibrium phase diagrams of binary systems, the iron carbon phase diagram, phase transformations in steel)	4	4	-
5	metals and alloys(Casting- Melting- Forming Operations- Solidification)	6	6	-
Total		28	**28**	-

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Annual Course Report: material science and metallurgy

- Topics taught as a percentage of the content specified: 85%
- Lecturers commitment of the course content: 95%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	lab
1	Structure of metals and alloys(crystalline structure of metals- types of deformation)	x	x			x					x				
2	Structure of ceramics and glasses (theories and applications)	x	x	X		x					x				
3	Structure of polymers	x	x			x					x				
4	Thermodynamics of condensed phase(equilibrium phase diagrams of binary systems, the iron carbon phase diagram, phase transformations in steel)	x	x			x	X								
5	metals and alloys(Casting- Melting- Forming Operations- Solidification)	x	x			x	X								

- Student Assessment:

Annual Course Report: material science and metallurgy

No.	Assessment method	Weights
1	Midterm examination	20%
2	Semester work (sheets, quizs, presentation)	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

No.	Constraints
1	**-**

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**66%**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Integrating work experiences with education.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**This course isn't followed to define the percentage of credit hours for communication hours.**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Using online course material.**	**Needing of extra internet system and smart boards**

Annual Course Report: material science and metallurgy

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Using the internet in the research**	**self-study**	**2021-2022**	**Dr: Hend ElSayed Gadow**
2	**Increase some of scientific reference In the library of the institute**	**Add more scientific reference In the electronic library of the institute**	**2021-2022**	**Institute management**

Course Coordinator: Asso.prof. Hend Elsayed Gadow

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 3/2021

Annual Course Report: **Fluid Mechanics**

A. Basic Information

Program Title	Chemical Engineering Department
Department Offering the Program	Chemical Engineering Department
Department Responsible for the Course	Basic Science and Engineering Department
Course Title	Fluid Mechanics
Course Code	ENG301
Year/Level	level 3
Specialization	Major
Authorization data of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching hours	**Lectures**	**Tutorial**	**Practical**
	2	2	-

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		36	100%
Students completing the course		36	100%
Results	Passed	27	75.0%
	Failed	9	25.0%
Grading of successful students	Pass	12	44.4%
	Good	5	18.5%
	Very Good	7	25.9%
	Excellent	3	11.1%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**	**lecture**
1	Fluid properties, fluid statics, kinematics	2	2	2	**Dr. Shala Dafea**
2	Fluid dynamics including energy and Momentum equations	4	2	2	
3	Dimensional analysis, Laminar flow, turbulent flow and its applications	2	2	2	
4	Forces on immersed bodies, Introduction to compressible flow	4	2	2	
5	Applications to filtration and fluidization	4	2	2	
6	Laboratory course in Fluid Mechanics includes experiments on venture-meter,	6	2	2	

Annual Course Report: **Fluid Mechanics**

	friction losses in pipes				
7	Center of pressure, Flow measuring apparatus, multi-pump test (Pump characteristics) and losses in piping systems	6	2	2	
Total		**28**	**14**	**14**	

- Topics taught as a percentage of the content specified: 95%
- Lecturers commitment of the course content: 98 %

- Used Teaching and Learning Methods

No.	Teaching Methods	Choice
1	Face-to-Face Lecture	√
2	Discussion sessions	√
3	Information collection from different sources	√
4	Research assignment	√
5	Online Lecture	√
6	Problem solving	√
7	Brain storming	√
9	Self-learning and Research	√
10	Lab	√

- Student Assessment:

No.	Evaluation method	Weights
1	Mid-term examination	10%
2	final examination	60%
3	Practical examination	10%
4	Semester work	20%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	Choice
1	Lecture Classroom	√
2	White Board	√
3	Data Show System	√
4	Presenter	√

No.	Facility	Choice
5	Sound System	√
6	Wire-Internet	√
7	Wireless Internet	√
8	Lab	√

4- Administrative Constraints:

No.	Constraints
1	**None**

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**90%**

Annual Course Report: **Fluid Mechanics**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Integrating work experiences with education.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**This courses is not followed to define the percentage of credit hours for communication hours**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Using online course material.**
2	**Provide training on how to use a new teaching technology in their classes.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**More field visits for more learning about the course**	**No practice in the course**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Teaching methods**	**Field visits**	**2020-2021**	**Dr. Shala Dafea**

Course Coordinator: Dr. Shala Dafea

Head of Department: Assoc. Prof. Khaled Samier

Date of Approval: 2021

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Annual Course Report: Principles of engineering design

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	ENG 302
Year/ Level	Level 3
Specialization	Major
Authorization data of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching hours	Lectures	Tutorial	Practical
	2	2	-

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		33	100%
Students completing the course		33	100%
Results	**Passed**	32	96.97%
	Failed	1	3.03%
Grading of successful students	**Excellent**	16	50%
	Very Good	4	12.5%
	Good	6	18.75%
	Pass	6	18.75%

2. Course Teaching:

No.	Topics	Lectures	Tutorial	Practical
1	Design definition Classifications of machine design Mechanical Elements Design General considerations in Machine design Phases and Interactions of the Design Process Common Dimensioning Terminology Standards and Codes	2	2	-

Annual Course Report: Principles of engineering design

2	Forces and Stress Analysis Load and Stress Analysis, Stresses, strains and material properties Stresses and strains Analysis	6	6	-
3	Principal Stresses and Shear Stresses Hoop Stress, (Pressure vessels, and Pipelines) Bearing Stress	2	2	-
4	Torsional Shear Stress Impact Stress Bending Stress in Straight Beams Buckling of Columns	4	4	-
5	Power Screw Multiple Threaded Screws Terminology of Power Screw Torque Requirement, Lifting and Lowering Design of Screw and Nut, Design of Screw Jack	4	4	-
6	Flexible Drives Belt Drives	2	2	-
7	Flat Belt Pulleys Types of Pulleys for Flat Belts Cast Iron Pulleys Steel Pulleys Wooden Pulleys Rolling-Contact Bearings	6	6	-
8	Sliding Contact Bearings Journal Bearings Gear Drives	2	2	
	Total	28	28	-

- Topics taught as a percentage of the content specified: 87%
- Lecturers commitment of the course content: 97%

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Annual Course Report: Principles of engineering design

- Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	lab
1	Design definition Classifications of machine design Mechanical Elements Design General considerations in Machine design Phases and Interactions of the Design Process Common Dimensioning Terminology Standards and Codes	x	x	x		x									
2	Forces and Stress Analysis Load and Stress Analysis, Stresses, strains and material properties Stresses and strains Analysis	x	x			x	x								
3	Principal Stresses and Shear Stresses Hoop Stress, (Pressure vessels, and Pipelines) Bearing Stress	x	x			x	x	x							
4	Torsional Shear Stress Impact Stress Bending Stress in Straight Beams Buckling of Columns	x	x			x	x								

Annual Course Report: Principles of engineering design

5	**Power Screw Multiple Threaded Screws Terminology of Power Screw Torque Requirement, Lifting and Lowering Design of Screw and Nut, Design of Screw Jack**	x	x			x	x	x							
6	**Flexible Drives Belt Drives**	x	x			x	x								
7	**Flat Belt Pulleys Types of Pulleys for Flat Belts Cast Iron Pulleys Steel Pulleys Wooden Pulleys Rolling-Contact Bearings**														
8	**Sliding Contact Bearings Journal Bearings Gear Drives**	x	x			x	x	x							

- Student evaluation:

No.	Assessment method	Weights
1	Periodic exams	20%
2	Student load	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	5	Data show system
2	Presenter	6	Sound system
3	White board		
4	Lab		

4- Administrative Constraints:

No.	Constraints
1	**There are no constraints**

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Annual Course Report: Principles of engineering design

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	78%

6- Course enhancement suggestions

No.	Suggestions
1	Integrating work experiences with education.
2	Transplant and assess pedagogy utilizing such technologies to enhance students' learning.

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	Proposal improvement in courses are similar despite their different nature

8- What has been implemented from the student's suggestions in the previous year?

No.	Suggestions
1	Provide training on how to use a new teaching technology in their classes.

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Using online course material.	Needing of extra internet system and smart boards

10- What has been implemented from the action plan in the previous year?

No.	Suggestions
1	Adding some scientific reference in the electronic library of the institute.

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Increase some of scientific reference in the library of the institute	Add more scientific reference in the electronic library of the institute	2021-2022	Institute management
2	Integrating work experiences with education.	Provide field visits	2021-2022	Institute management

Course Coordinator: Dr. Moataz Mostafa
Head of Department: Asso.prof. Hend Elsayed Gadow
Date of Approval: 3/2021

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Annual Course Report: Engineering Economy

A. Basic Information

Program Title	Chemical Engineering program		
Department offering the Program	Basic Sciences and Engineering		
Department Responsible for the Course	Basic Sciences and Engineering		
Title course	Engineering Economy		
Course Code	ENG303		
Year/ Level	Level 3		
Specialization	Major		
Authorization data of course report	5/2021		
Exam Committee Selection Rule	Commissioning of the Institute Management		
External Revision of Examination	--		
Lecturers Number:	1		
Teaching Hours	Lectures	Tutorial	Practical
	2	0	2

B. Specialized information:

1. Statistics

Subject		No.	Percentage
Students attending the course		181	100%
Students completing the course		181	100%
Results	Passed	163	90.055%
	Failed	18	9.49%
Grading of successful students	Excellent	45	24.86%
	Very Good	49	27.07%
	Good	48	26.51%
	Pass	39	21.54%

2. Course Teaching

No.	Topics actually taught	No. of hours			Lecturer
		Lecture	Tutorial/Practical	Total	
1	Basic concepts of engineering economy as applied to the evaluation of capital investment alternatives in both the private and public sectors of our economy	4	-		**Dr.**Abdu El-Naquib
2		6	-		
3	Attention is given to the time value of money by showing the concepts and techniques for evaluating the worth of products, systems, structures, and services in relation to their cost	6	-		

Annual Course Report: Engineering Economy

4	Deprecation and method used for calculating	6	-		
5	Economic and cost concepts: calculating economic equivalence, comparison of alternatives and replacement economy	6	-		
	Total	28	-	28	

- Topics taught as a percentage of the content specified: 100 %
- Lecturers commitment of the course content: 90 %
- Coverage of exam topics to course content: 90 %
- Used Teaching and Learning Methods

No.	Teaching Methods
1	Hybrid learning (Lectures - ELearning)
2	Expeditionary Learning
3	Personalized Learning
4	Inquiry-based Learning
5	Cooperative learning

- Student Assessment:

No.	Evaluation method	Weights
1	Periodic exam	37%
2	Student load	3%
3	Final-term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board	6	Moodle

4- Administrative Constraints:

No.	Constraints
1	None

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	67.9%

6- Course enhancement suggestions

No.	Suggestions
1	Provide training on how to use a new teaching technology in their classes.
2	Introducing recent topics to the course on a permanent and continuous basis

Annual Course Report: Engineering Economy

3	Mention to sources, references and web sites to update the general material of the course.

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**References need update**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	The course is expanded from theoretical and software engineer views to include a piratical work view and increase field visits
2	Increase collaborative teaching to design programs.
3	Converting course from traditional course to particular online course

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	----------	----------

10- What has been implemented from the action plan in the previous year?

No.	**Action**
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Review the course description and its vocabulary	Review and update Courses	During of the academic year	staff
2	Changing the course description (texts and questions)	Review and update Courses	One semesters	Staff

Course Coordinator: Dr.Abdu El-Naquib
Head of Department: Assoc.prof. Khaled Samier
Date of Approval: 5/2021

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Annual Course Report: Numerical Methods in Engineering

A. Basic Information:

Program Title	Chemical Engineering Program		
Department Offering the Program	Basic Science and Engineering Department		
Department Responsible for the Course	Basic Science and Engineering Department		
Course Title	Numerical Methods in Engineering		
Course Code	MTH302		
Year/Level	Level: 3		
Specialization	Major		
Authorization data of course report	3/2021		
Exam Committee Selection Rule	Commissioning of the Institute of Management		
External Revision of Examination	--		
Lecturers Number:	1		
Teaching hours	**Lectures**	**Tutorial**	**Practical**
	2	2	-

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		155	100%
Students completing the course		155	100%
Results	**Passed**	134	86.45%
	Failed	21	13.55%
Grading of successful students	**Excellent**	42	27.1%
	Very Good	33	.21.29%
	Good	26	16.77%
	Pass	33	.21.29%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Numerical solution of linear and nonlinear systems	4	4	-
2	Numerical differentiation and integration	6	6	-
3	Curve fitting and interpolation	10	10	-
4	Numerical solution of initial value problems	4	4	-
5	Boundary and Eigen value problems	4	4	-
Total		**28**	**28**	**-**

- Topics taught as a percentage of the content specified: 90 %
- Lecturers commitment of the course content: 100 %
- Coverage of exam topics to course content: 90 %
- Used Teaching and Learning Methods

No.	**Teaching Method**	**Choice**
1	Lectures	√
2	Discussion Sessions	×

Annual Course Report: Numerical Methods in Engineering

3	Information Collection from Different Sources	√
4	Practical	x
5	Research Assignment	x
6	Field Visits	×
7	Case Studies	x
8	Smart Sessions	×
9	…	×

- Student Assessment:

No.	Assessment Method	Weights
1	Mid Term Examination and semester work	40%
2	Oral Examination	0%
3	Practical Examination	0%
4	Other types of assessment	0%
5	Final Term Examination	60%
Total		100%

3. Facilities Required for Teaching and Learning:

No.	Facility	Choice
1	Lecture Classroom	√
2	Lab Facilities	√
3	White Board	√
4	Data Show System	√
5	Visualizer	×
6	Smart Board	×

No.	Facility	Choice
7	Wireless Board	×
8	Presenter	×
9	Sound System	√
10	Wire-Internet	x
11	Wireless Internet	√
12	…	×

4- Administrative Constraints:

No.	Constraints
1	**None**

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**81.26%**

6- Course enhancement suggestions

No.	Suggestions
1	**Make all lectures available as videos and pdf**
2	**More interact with student through MOODEL**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**References need update**

Annual Course Report: Numerical Methods in Engineering

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Increasing applied problems

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	All suggestions have been implemented	-----

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Self learning**	**Enhance searching**	**2021-2022**	**Dr Mohamed Shokery**

Course Coordinator: Dr: Mohamed Shokery

Head of Department: Associate prof. Khaled Samir

Date of Approval: 3-2021

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Annual Course Report: Chemical Engineering Principles II

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 303
Year/ Level	Level 3
Specialization	Major
Authorization date of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	3	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		56	100%
Students completing the course		55	98.21%
Results	**Passed**	52	94.54%
	Failed	3	5.454%
Grading of successful students	**Excellent**	12	21.81%
	Very Good	7	12.72%
	Good	10	18.18%
	Pass	23	41.81%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Simultaneous material and energy balances of complete process flow sheets.	4	4	-
2	Introduction of computer methods to solve chemical engineering problems.	4	4	-
3	Equation-based approach and Degrees of freedom analysis.	4	4	-
4	Conceptual design of chemical processes	4	4	-
5	Introduction to basic Chemical Engineering processes (e.g. humidification, binary distillation, extraction).	8	8	-
6	Computer-aided process design.	4	4	-
Total		**28**	**28**	**-**

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Annual Course Report: Chemical Engineering Principles II

- Topics taught as a percentage of the content specified: 90%
- Lecturers commitment of the course content: 95%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	lab
1	Simultaneous material and energy balances of complete process flow sheets.	x	X			X	X								
2	Introduction of computer methods to solve chemical engineering problems.	x	X				X	x							
3	Equation-based approach and Degrees of freedom analysis.	x	X				X								
4	Conceptual design of chemical processes	x	X			X									
5	Introduction to basic Chemical Engineering processes (e.g. humidification, binary distillation, extraction).	x	X			X	X								
6	Computer-aided process design.	x	X			X	X	x							

- Student Assessment:

No.	Assessment method	Weights
1	Midterm examination	20%
2	Semester work	20%

Annual Course Report: Chemical Engineering Principles II

3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

No.	Constraints
1	-

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**72.26%**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Make visits to industrial plants.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**Review writing references for courses in a uniform style.**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions
1	**Using online course material.**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

Annual Course Report: Chemical Engineering Principles II

11. Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Simulate of actual industrial data	Application of material and energy balance	2021-2022	Dr. Sohier Abo Bakr

Course Coordinator: Dr. Sohier Abo Bakr

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 8/2021

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Annual Course Report: chemical engineering thermodynamics

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 304
Year/ Level	Level 3
Specialization	Major
Authorization data of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	3	0	2

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		59	100%
Students completing the course		59	100%
Results	**Passed**	54	91.52%
	Failed	5	8.47%
Grading of successful students	**Excellent**	9	15.25%
	Very Good	13	22.03%
	Good	12	20.33%
	Pass	20	33.89%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Thermodynamic properties of homogeneous mixtures **Practical** • Calibration of the Calorimeter • Specific Heat Capacity of an Unknown Metal	14	-	8
2	Phase equilibria **Practical** Heat of Fusion of Ice	12	-	6
3	Electrolyte solutions **Practical**	2		4

Annual Course Report: chemical engineering thermodynamics

	Heat of Solution			
4	Chemical reactions equilibria **Practical** Heat of Neutralization	14		10
Total		42	-	28

- Topics taught as a percentage of the content specified: 88%
- Lecturers commitment of the course content: 90%

- Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	lab
1	Thermodynamic properties of homogeneous mixtures **Practical** • Calibration of the Calorimeter • Specific Heat Capacity of an Unknown Metal	x	x												X
2	Phase equilibria **Practical** Heat of Fusion of Ice	x	x			X									X
3	Electrolyte solutions **Practical** Heat of Solution	x	x												X
4	Chemical reactions equilibria **Practical**	x	x			x									X

Annual Course Report: chemical engineering thermodynamics

	Heat of Neutralization														

- Student Assessment:

No.	Assessment method	Weights
1	Midterm examination	10%
2	Semester work (sheets ,quizzes , presentation)	20%
3	Practical Examination	10%
4	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	5	Data show system
2	Presenter	6	Sound system
3	White board		
4	Lab		

4- Administrative Constraints:

Constraints
No constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**78.09%**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Integrating work experiences with education.**
3	**Using online course material.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**The experimental part is canceled from the fourteenth week and is distributed over the other weeks.**

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Annual Course Report: chemical engineering thermodynamics

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Using online course material.**	**Needing of extra internet system and smart boards**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11. Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Increase some of scientific reference in the library of the institute**	**Add more scientific reference in the electronic library of the institute**	**2021-2022**	**Dr.Mohamed Elbendary**

Course Coordinator: Dr. Mohamed Elbendary

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval: 8/2021

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Annual Course Report: Analytical chemistry

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 305
Year/ Level	Three
Specialization	Major
Authorization data of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2	0	2

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		65	100%
Students completing the course		64	98.46%
Results	**Passed**	58	90.62%
	Failed	6	9.375%
Grading of successful students	**Excellent**	14	21.875%
	Very Good	16	25%
	Good	16	25%
	Pass	12	18.75%

2. Course Teaching:

No.	Topics	Lectures	Tutorial	Practical
1	Basic tools in analytical chemistry Practical • Preparation of Standard Solution of solid salt • Preparation of a Standard Solution of concentrated Acid	4	-	4

Annual Course Report: Analytical chemistry

2	Titrimetric Methods of Analysis Practical • Mohr's method for determining chloride • EDTA standardization against metallic magnesium • Determination of magnesium using eriochrome black T indicator • Determination of aluminium using EBT as indicator (back – titration)	8	-	10
3	Gravimetric Methods of Analysis Practical Gravimetric Analysis	4	-	6
4	Evaluating Analytical Data	8	-	-
5	Instrumental chemical analysis Practical • Conductimetry • PH meters • Spectrophotometer	4	-	8
Total		28	-	28

- Topics taught as a percentage of the content specified: 95%
- Lecturers commitment of the course content: 95%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	lab

Annual Course Report: Analytical chemistry

1	Basic tools in analytical chemistry **Practical** • Preparation of Standard Solution of solid salt • Preparation of a Standard Solution of concentrated Acid	**x**	**x**			**x**									**X**
2	Titrimetric Methods of Analysis **Practical** • Mohr's method for determining chloride • EDTA standardization against metallic magnesium • Determination of magnesium using eriochrome black T indicator • Determination of aluminium using EBT as indicator (back –titration)	**x**	**x**												**X**
3	Gravimetric Methods of Analysis **Practical** Gravimetric Analysis	**x**	**x**												**X**
4	Evaluating Analytical Data	**x**	**x**			**X**									
5	Instrumental chemical analysis **Practical** • Conductimetry • PH meters • Spectrophotometer	**x**	**x**								**X**				**X**

- Student Assessment:

Annual Course Report: Analytical chemistry

No.	Assessment Method	Weights
1	Midterm examination	10%
2	Semester work (sheets ,quizzes , presentation)	20%
3	Practical Examination	10%
4	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	5	Data show system
2	Presenter	6	Sound system
3	White board		
4	Lab		

4- Administrative Constraints:

No.	Constraints
1	**There are no constraints**

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**74.79%**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Improving the laboratory tools used**
3	**Integrating work experiences with education.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**The experimental part is canceled from the fourteenth week and is distributed over the other weeks.**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Visit one of the companies that has a central laboratory that performs analyzes using innovative devices**	**Lack of success in arranging with companies on a date for the visit**

Annual Course Report: Analytical chemistry

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11. Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Introduce virtual lab technique**	**Used suitable videos**	**2021-2022**	**Associate prof. Hend Gadow**

Course Coordinator: Associate prof. Hend Gadow

Head of Department: Associate prof. Hend Gadow

Date of Approval: 8/2021

Annual Course Report: process dynamic and control

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 306
Year/ Level	Level 3
Specialization	Major
Authorization data of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		77	100%
Students completing the course		73	94.8%
Results	**Passed**	65	89.04%
	Failed	8	10.95%
Grading of successful students	**Excellent**	13	17.8%
	Very Good	10	13.69%
	Good	16	21.91%
	Pass	26	35.61%

2. Course Teaching:

No.	Topics	Lecture	Exercise	laboratory
1	Automatic control merits and basic features Practical Introduction and experiments demonstrating the principles of temperature measuring devices	2	2	-
2	Classification of control action (openloop and closed-loop, feed-back and feed-forward, process and position control) Practical •Introduction and experiments demonstrating the principles of pressure measuring devices	4	4	-

Annual Course Report: process dynamic and control

3	Mathematical tools (Linearization, Laplace transforms and block diagram algebra) Practical •Introduction and experiments demonstrating the principles of flow and concentration measuring devices	4	4	-
4	Process dynamics (first, second and higher orders) Practical Process control simulation for compressor.	2	2	-
5	Measuring and actuating elements Practical Process control simulation for Heat exchanger.	4	4	-
6	Two-position controller and Three-term controller Practical Process control simulation for Separator.	4	4	-
7	Controller mechanism and optimum setting Practical Process control simulation for reactors.	4	4	-
8	System stability (algebraic and graphical methods). Practical	4	4	-
	□ Process control simulation for reactors.			
Total		28	28	-

- Topics taught as a percentage of the content specified: 88%
- Lecturers commitment of the course content: 98%
Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	lab
1	Automatic control merits and basic features **Practical** • Introduction	x	x				X								X

Annual Course Report: process dynamic and control

	and experiments demonstrating the principles of temperature measuring devices														
2	Classification of control action (open-loop and closed-loop, feed-back and feed-forward, process and position control) **Practical** • Introduction and experiments demonstrating the principles of pressure measuring devices	**x**	**x**			**X**	**X**								**X**
3	Mathematical tools (Linearization, Laplace transforms and block diagram algebra) **Practical** • Introduction and experiments demonstrating the principles of flow and concentration measuring devices	**x**	**x**			**X**	**X**	**X**							**X**
4	Process dynamics (first, second and higher orders) **Practical** • Process control simulation for compressor.	**x**	**x**				**X**	**X**							**X**
5	Measuring and actuating elements **Practical** • Process control simulation for Heat exchanger.	**x**	**x**				**X**								**x**
6	Two-position controller and Three-term controller	**x**	**x**			**x**	**x**	**X**							**X**

Annual Course Report: process dynamic and control

	Practical • Process control simulation for Separator.														
7	Controller mechanism and optimum setting **Practical** • Process control simulation for reactors.	**x**	**x**			**X**	**X**								**x**
8	System stability (algebraic and graphical methods). **Practical** • Process control simulation for reactors.	**x**	**x**			**x**	**X**								**x**

- Student Assessment:

No.	Evaluation method	Marks
1	Periodic exams	20
2	Student load	20
3	Final term examination	60
Total		100

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	5	Data show system
2	Presenter	6	Sound system
3	White board		
4	Lab		

4- Administrative Constraints:

Constraints
No constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**81.21%**

6- Course enhancement suggestions

No.	Suggestions
1	**Cooperate with some companies to explain the latest technology used in control rooms.**
2	**Introducing real models of industrial applications.**

Annual Course Report: process dynamic and control

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**Review writing references for courses in a uniform style**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Using online course material.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions
1	**None**

10- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Increase some of scientific reference In the library of the institute**	**Add more scientific reference for control system In the electronic library of the institute**	**2021-2022**	**Institute management**

Course Coordinator: Prof. Dr. / Taha E. Farrag

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 3/2021

Ministry of Higher Education
The Higher Institute of
Engineering and Technology
new Damietta

وزارة التعليم العالى
المعهد العالى للهندسة والتكنولوجيا
بدمياط الجديدة

Annual Course Report: Operation research

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Basic Sciences and Engineering Department
Course Code	ENG 308
Year/ Level	3th level
Specialization	Major
Authorization data of course report	7/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

	Lectures	**Tutorial**	**Practical**
Teaching Hours	2 hours per week for 14 weeks	2 hours per week for14 weeks	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		37	100%
Students completing the course		37	100%
Results	**Passed**	37	100%
	Failed	0	0%
Grading of successful students	**Excellent**	30	81%
	Very Good	4	11%
	Good	2	5%
	Pass	1	3%

2. Course Teaching:

No.	**Topics actually taught**	No. of hours			**Lecturer**
		Lectures	Tutorial	Practical	
1	Models and methods of operations research in solving engineering and management problems.	4	4		**Dr.Sameh Abdelhameed**
2	Linear programming, simplex method, duality, sensitivity analysis	4	4		
3	Transportation, assignment and transshipment models	4	4		
4	Network flows models and integer programming	4	4		

Annual Course Report: Operation research

5	Probabilistic models in operations research problems	4	4		**Dr.Sameh Abdelhameed**
6	Queuing theory, Markov chain and decision analysis	4	4		
7	Marko vain decision process and utility functions	4	4		

- Topics taught as a percentage of the content specified: 88%
- Lecturers commitment of the course content: 97%

Used Teaching and Learning Methods

No.	Teaching Method	Choice
1	Lectures	√
2	Discussion Sessions	√
3	Information Collection from Different Sources	√
5	Research Assignment	√

- Student Assessment:

No.	Assessment Method	Weights
1	Mid Term Examination	20%
2	Oral Examination	0%
3	Practical Examination	0%
4	Semester work	20%
5	Other types of assessment	0%
6	Final Term Examination	60%
Total		100%

3. Facilities Required for Teaching and Learning:

No.	Facility	Choice
3	White Board	√

No.	Facility	Choice
9	Sound System	√

4- Administrative Constraints:

Constraints
No constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**79.27%**

6- Course enhancement suggestions

No.	Suggestions

Annual Course Report: Operation research

1	**Using computer programs to find the optimum solution**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**References need update**
2	**The previous prerequisite is not mentioned**
3	**Use of standardized teaching and learning model**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Using online course material.**	**Needing of extra internet system and smart boards**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Increase some of scientific reference In the library of the institute**	**Add more scientific reference In the electronic library of the institute**	**2020-2021**	**Institute management**

Course Coordinator: Dr.Sameh Abdelhameed

Head of Department: Associate prof. Hend Gadow

Date of Approval: 7/2021

وزارة التعليم العالي
المعهد العالي للهندسة والتكنولوجيا
بدمياط الجديدة

قسم الهندسة الكيميائية

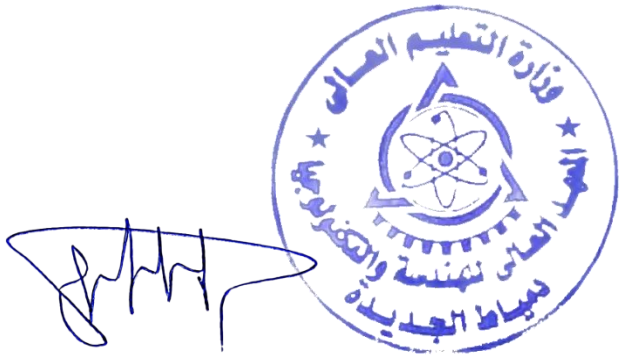
تقارير المقررات قسم الهندسة الكيميائية

إعتماد مجلس القسم لتقارير المقررات قسم الهندسة الكيميائية

بتاريخ 2021/8/23

إعتماد المجلس العلمي لتقارير المقررات قسم الهندسة الكيميائية

بتاريخ 2021/11/9



وزارة التعليم العالي
المعهد العالي للهندسة والتكنولوجيا
بدمياط الجديدة

2020- 2021

تقارير المقررات لقسم الهندسة الكيميائية

Head of the department	Quality Assurance Unit Manager	Dean of the institute
Assoc.Prof.Dr./ Hend Elsayed Gadow	Assoc.Prof.Dr./ Ramadan Abdelghany Elkateb	Prof.Dr./ Osami Elsaeed Rageh

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المعهد العالي للهندسة والتكنولوجيا
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مستوى رابع

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Annual Course Report:Reactor Design

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 401
Year/ Level	Level 4
Specialization	Major
Authorization data of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

	Lectures	**Tutorial**	**Practical**
Teaching Hours	3 hours per week for 14weeks	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		38	100%
Students completing the course		38	100%
Results	**Passed**	37	97.36%
	Failed	1	2.6%
Grading of successful students	**Excellent**	9	23.68%
	Very Good	11	28.94%
	Good	5	13.15%
	Pass	12	31.57%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Fundamentals of thermodynamics and kinetics of chemical reactions	3	2	-
2	Analysis of batch, plug-flow and continuous stirred tank reactors for different types of reactions	6	4	-
3	Non ideal reactor analysis, including residence time distribution, back mixing and dispersion models	3	2	-
4	Kinetics of isothermal and non-isothermal ideal reactors.	6	4	-
5	Kinetics of heterogeneous or catalytic reactions	3	2	-
6	Design of different types of catalytic and non-catalytic reactors	6	4	-

Annual Course Report:Reactor Design

7	Mass and energy transfer limitations in heterogeneous reaction systems	6	4	-
8	Catalyst effectiveness	3	2	-
9	Reactor stability and sensitivity to operating parameters	3	2	-
10	Optimization of reactor design and Factors affecting choice of reactors	3	2	-
Total		**42**	**28**	**-**

- Topics taught as a percentage of the content specified: 90%
- Lecturers commitment of the course content: 95 %
- Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	lab
1	Fundamentals of thermodynamics and kinetics of chemical reactions	x	x			x	x								
2	Analysis of batch, plug-flow and continuous stirred tank reactors for different types of reactions	x	x			x	x	X							
3	Non ideal reactor analysis, including residence time distribution, back mixing and dispersion models	x	x			x	x	X							
4	Kinetics of isothermal and non-isothermal ideal reactors.	x	x			x	x	X							

Annual Course Report:Reactor Design

5	Kinetics of heterogeneous or catalytic reactions	x	x			x	x	X							
6	Design of different types of catalytic and non-catalytic reactors	x	x			x	x	X							
7	Mass and energy transfer limitations in heterogeneous reaction systems	x	x			x	x	X							
8	Catalyst effectiveness	x	x			x	x	X							
9	Reactor stability and sensitivity to operating parameters	x	x			x	x	X							
10	Optimization of reactor design and Factors affecting choice of reactors	x	x			x	x	X							

- Student Assessment:

No.	Assessment Method	Weights
1	Midterm examination	20%
2	Semester work (sheets, quizzes)	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

No.	Constraints
1	-

Annual Course Report:Reactor Design

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	78%

6- Course enhancement suggestions

No.	Suggestions
1	Improve lecture notes
2	Integrating work experiences with education.

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	Proposal improvement in courses are similar despite their different nature

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Provide training on how to use a new teaching technology in their classes.

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Using online course material	Needing of extra internet system and smart boards

10- What has been implemented from the action plan in the previous year?

No.	Action
1	Adding some scientific reference in the electronic library of the institute.

Annual Course Report:Reactor Design

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Using the internet in the research	self-study	2021-2022	Prof. Dr. / Taha E. Farrag
2	Increase some of scientific reference In the library of the institute	Add more scientific reference In the electronic library of the institute	2021-2022	Institute management

Course Coordinator: Prof. Dr. / Taha E. Farrag

Head of Department: Ass. Dr. Hend Elsayed Gadow

Date of Approval: 3/2021

Ministry of Higher Education
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Annual Course Report: Mass Transfer

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 403
Year/ Level	Level 4
Specialization	Major
Authorization data of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

	Lectures	**Tutorial**	**Practical**
Teaching Hours	3 hours per week for 14 weeks	2 hours per week for 14 weeks	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		12	100%
Students completing the course		12	100%
Results	**Passed**	11	91.66%
	Failed	1	8.33%
Grading of successful students	**Excellent**	1	8.33%
	Very Good	1	8.33%
	Good	4	33.33%
	Pass	5	41.66%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Molecular mass transport in fluids	6	4	-
2	Transport Phenomena and the basic equation of change	6	4	-
3	Molecular mass transport in liquids and biological solutions	6	4	-
4	Mass transport phenomena in solids	3	2	-
5	Mass transfer coefficient in laminar and turbulent flow	6	4	-
6	Inter-phase mass transport	6	4	-
7	Continuous two-phase mass transport processes	9	6	-
Total		**42**	**28**	**-**

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Annual Course Report: Mass Transfer

- Topics taught as a percentage of the content specified: 80 %
- Lecturers commitment of the course content: 90 %
- Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	lab
1	Molecular mass transport in fluids	x	x			x					x				
2	Transport Phenomena and the basic equation of change	x	x			x	x								
3	Molecular mass transport in liquids and biological solutions	x	x			x		x							
4	Mass transport phenomena in solids	x	x			x	x								
5	Mass transfer coefficient in laminar and turbulent flow	x	x			x	x								
6	Inter-phase mass transport	x	x			x	x	x							
7	Continuous two-phase mass transport processes	x	x			x	x	x							

- Student Assessment:

No.	Assessment Method	Weights
1	Mid Term Examination	20%
2	Oral Examination	0%

Annual Course Report: Mass Transfer

3	Practical Examination	0%
4	Semester work	20%
5	Other types of assessment	0%
6	Final Term Examination	60%
Total		100%

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

Constraints
No constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**74%**

6- Course enhancement suggestions

No.	Suggestions
1	**Using data show techniques**
2	**Preparing power point file for lectures by Preparing power point file for lectures**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**Review writing references for courses in a uniform style**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Increasing the scientific references which relates to mass transfer operations.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Using online course material.**	**Needing of extra internet system and smart boards**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

Annual Course Report: Mass Transfer

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Dividing the students into groups for self-study**	**each group will create a model for designing separation unit and making a discussion with them**	2021-2022	Dr. Riham Atef

Course Coordinator: Dr. Riham Atef

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval: 8/2021

Ministry of Higher Education
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المعهد العالى للهندسة والتكنولوجيا
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Annual Course Report: Corrosion Engineering

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 404
Year/ Level	Level four
Specialization	Major
Authorization date of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	1	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		33	100%
Students completing the course		33	100%
Results	**Passed**	27	81.81%
	Failed	6	18.18%
Grading of successful students	**Excellent**	7	21.21%
	Very Good	2	6.06%
	Good	5	15.15%
	Pass	13	43.33%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Theories and principles of corrosion	1	2	-
2	Types of corrosion (Localized corrosion, pitting, crevice corrosion , cavitations, stress corrosion cracking and corrosion fatigue)	2	4	-
3	metallurgical factors	1	2	-
4	welding problems	1	2	-
5	material selection	1	2	-
6	Inspection and nondestructive testing	2	4	-
7	chemical cleaning flue gas attack	1	2	-
8	corrosion testing evaluation and simulation	2	4	-
9	corrosion prevention ,monitoring, cathode protection and anodic protection	1	2	-
10	water treatment for boilers and condensers	2	4	

Annual Course Report: Corrosion Engineering

Total	14	28	

- Topics taught as a percentage of the content specified 90%
- Lecturers commitment of the course content 88%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Theories and principles of corrosion	X	x			x					x				
2	Types of corrosion (Localized corrosion, pitting, crevice corrosion , cavitations, stress corrosion cracking and corrosion fatigue)	x	x	X		X	X								
3	metallurgical factors	x	x	x		X									
4	welding problems	x	x	x		X		X							
5	material selection	x	x	x		X		X							
6	Inspection and nondestructive testing	x	x	x		X									

Annual Course Report: Corrosion Engineering

7	chemical cleaning flue gas attack	x	x	x		X									
8	corrosion testing evaluation and simulation	x	x	x		X	x								
9	corrosion prevention, monitoring, cathode protection and anodic protection	x	x	x		X	X								
10	water treatment for boilers and condensers	x	x	x		X	x								

- Student Assessment:

No.	Assessment Method	Weights
1	Midterm examination	20%
2	Semester work(sheets, quizzes, presentation)	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

No.	Constraints
1	There are no constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**62.38%**

6- Course enhancement suggestions

No.	Suggestions
1	Improve lecture notes
2	Integrating work experiences with education.

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	Review writing references for courses in a uniform style.

Annual Course Report: Corrosion Engineering

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Provide training on how to use a new teaching technology in their classes.

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Using online course material.	Needing of extra internet system and smart boards

10- What has been implemented from the action plan in the previous year?

No.	Action
1	Adding some scientific reference in the electronic library of the institute.

11. Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Add some practical experiments on some alloys	Bring specimen of aluminum and steel alloy	2021-2022	Dr. Yasser Tawfiq

Course Coordinator: Dr. Yasser Tawfiq

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval: 8/2021

Annual Course Report: Project management and control

1. Basic Information:

Program Title	Chemical engineering Department
Department Offering the Program	Chemical engineering Department
Department Responsible for the Course	Basic science and Engineering Department
Course Title	Project Management and Control
Course Code	ENG408
Year/Level	Level 4 – Semester 1
Specialization	Major – Compulsory Course
Authorization data of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	1	2	-

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		241	100 %
Students completing the course		238	98.76 %
Results	**Passed**	226	93.776 %
	Failed	15	6.224 %
Grading of successful students	**Excellent**	70	30.97 %
	Very Good	70	30.97 %
	Good	38	16.81 %
	Pass	50	22.12 %

2. Course Teaching:

No.	**Topics**	**Lecture**	**Tutorial**	**Practical**
1	Development, Negotiation, and Specification of The Project Contract	4	4	-
2	Project Planning and Control Using Activity Network Models	4	4	-
3	Network Logic, Scheduling	8	8	-
4	Resource Allocation, Multi-Project Resource Allocation and Leveling Using Available Industrial Software	8	8	-
5	Time-Cost Trade-off Methods	4	4	-
Total		**28**	**28**	**-**

- taught as a percentage of the content specified: 90%
- Lecturers commitment of the course content: 95%
- Used Teaching and Learning Methods

Annual Course Report: Project management and control

1.

No.	Topics	Face-To-Face Lecture	Online Lecture	Flipped Classroom	Presentation and Movies	Discussion	Problem-Solving	Brain Storming	Projects	Site Visits	Self-Learning and Research	Cooperative	Discovering	Modeling	Lab
1	Development, Negotiation, and Specification of The Project Contract		√			√									
2	Project Planning and Control Using Activity Network Models	√					√								
3	Network Logic, Scheduling	√			√										
4	Resource Allocation, Multi-Project Resource Allocation and Leveling Using Available Industrial Software		√						√						
5	Time-Cost Trade-off Methods	√					√								

- Student Assessment:

No.	Evaluation Method	Weights
1	Semester Works (Quizzes, Sheets, Reports)	20%
2	Mid-Term Exam	20%
3	Final-Term Exam	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

Facility			
1	Lecture classroom	3	White board
2	Seminar	4	Data show system
5	Lab.		

4- Administrative Constraints:

No.	Constraints
1	-

Annual Course Report: Project management and control

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	73.41 %

6- Course enhancement suggestions

No.	Suggestions
1	Improve lecture notes
2	Integrating work experiences with education.
3	Transplant And Assess Pedagogy Utilizing Such Technologies To Enhance Students' Learning.

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	References need update

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Using online course material.
2	Provide training on how to use a new teaching technology in their classes.

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Designing a complete software by applications taught	Lack of resources

10- What has been implemented from the action plan in the previous year?

No.	Action
1	Adding some scientific reference in the electronic library of the institute.

11- Action plan for academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Add more neural networks(NNs) applications	Use neural applications in the coarse	2021-2022	Dr. Hamdy Abd-elatty

Course Coordinator: Dr. Hamdy Abd-elatty

Head of Department: Assoc. Prof. Amal Bahiry

Date of Approval: 2021

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Annual Course Report: Water Desalination

A. Basic Information

Program Title	Chemical Engineering Program
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 416
Level/ Semester	4thLevel /1st Semester
Specialization	Major
Authorization date of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	-
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2 hours / week	2hours/ week	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		28	100%
Students completing the course		28	100%
Results	**Passed**	23	82.14%
	Failed	5	17.85%
Grading of successful students	**Excellent**	3	10.71%
	Very Good	0	0%
	Good	7	25%
	Pass	13	46.42%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Basic concept of water desalination and combines water chemistry, scaling, corrosion, heat transfer principles and material behavior.	6	6	-
2	Design principles as applied to desalination processes.	8	8	-
3	Thermal (flash, vapor compression) and non-thermal (reverse-osmosis, electro -dialysis) desalination techniques.	8	8	-
4	Water properties and quality criteria and standards as well as corrosion behavior and its control in desalination plants.	6	6	-
Total		**28**	**28**	**-**

- Topics taught as a percentage of the content specified: 88%
- Lecturers commitment of the course content: 96%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Basic concept of water desalination and combines water chemistry, scaling, corrosion, heat transfer principles and material behavior.	x	x			x					x				
2	Design principles as applied to desalination processes.	x	x			x									
3	Thermal (flash, vapor compression) and non-thermal (reverse-osmosis, electro - dialysis) desalination techniques.	x	x			X	x								
4	Water properties and quality criteria and standards as well as corrosion behavior and its control in desalination plants.	x	x			x	x	X							

- Student Assessment:

No.	Assessment Method	Weights
1	Mid Term Examination	20%
2	Semester work	20%
3	Final Term Examination	60%

Total	100%

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

No.	Constraints
1	-

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	48%

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Integrating work experiences with education.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**Review writing references for courses in a uniform style**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Improve practical learning tasks
2	Improve learning resources and equipment

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Using online course material**	**Needing of extra internet system and smart boards**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Add more new technique**	**Research for the new technique**	**2021-2022**	**Dr. Yasser Tawfiq**

Course Coordinator: Dr. Yasser Tawfiq

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 3 /2021

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Annual Course Report: Mass Transfer Operations

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 405
Year/ Level	4th level
Specialization	Major
Authorization data of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2 hours	2 hours	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		32	100%
Students completing the course		31	96.87%
Results	**Passed**	29	93.54%
	Failed	2	6.45%
Grading of successful students	**Excellent**	5	16.129%
	Very Good	5	16.129%
	Good	9	29.03%
	Pass	10	32.25%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Mass transport in fluids	2	2	-
2	Mass transport phenomena in solids			
3	Inter-phase mass transport			
4	Continuous two-phase mass transport processes	2	2	-
5	Vapor-liquid equilibrium (VLE)	2	2	-
6	binary system distillation (plate and packed columns)	6	6	-
7	Gas- liquid and liquid- liquid extraction	6	6	-
8	solid-liquid extraction	2	2	-
9	Humidification and drying	2	2	-
10	Evaporation and crystallization	2	2	-

Annual Course Report: Mass Transfer Operations

11	Membrane separation technology	4	4	-
Total		**28**	**28**	**-**

- Topics taught as a percentage of the content specified: 86%
- Lecturers commitment of the course content: 95%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Mass transport in fluids	x	x			x	x	x							
2	Mass transport phenomena in solids	x	x			x	x	x							
3	Inter-phase mass transport	x	x			x	x	x							
4	Continuous two-phase mass transport processes	x	x			x	x	x							
5	Vapor-liquid equilibrium (VLE)	x	x			x	x	x							
6	binary system distillation (plate and packed columns)	x	x			x	x	x							
7	Gas- liquid and liquid- liquid extraction	x	x			x	x	x							

Annual Course Report: Mass Transfer Operations

8	solid-liquid extraction	x	x			x	x	x							
9	Humidification and drying	x	x			x	x	x							
10	Evaporation and crystallization	x	x			x	x	x							
11	Membrane separation technology	x	x			x	x	x							

- Student Assessment:

No.	Assessment Method	Weights
1	Midterm examination	20%
2	Semester work (sheets, quizzes, presentation)	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

Constraints
No constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**73.43%**

6- Course enhancement suggestions

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**
2	**Integrating work experiences with education by providing field visits.**
3	**Increasing the scientific references which relates to mass transfer operations.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**Topics are short in course specs that should be modified.**

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Annual Course Report: Mass Transfer Operations

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Increasing the scientific references which relates to mass transfer operations.

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Using online course material.	Needing of extra internet system and smart boards

10- What has been implemented from the action plan in the previous year?

No.	Action
1	Adding some scientific reference in the electronic library of the institute.

11. Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Integrating work experiences with education by providing field visits.	Provide field visits	2021-2022	Institute management

Course Coordinator: Dr. Riham Atef

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval: 8/2021

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Annual Course Report: Bioorganic Chemistry

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 406
Year/ Level	Level 4
Specialization	Major
Authorization date of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

	Lectures	**Tutorial**	**Practical**
Teaching Hours	3 hours per week for 14 weeks	2 hours per week for 14 weeks	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		30	100%
Students completing the course		30	100%
Results	**Passed**	29	96.66%
	Failed	1	3.3%
Grading of successful students	**Excellent**	15	50%
	Very Good	5	16.66%
	Good	4	13.33%
	Pass	5	16.66%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Principles of bio chemistry	4	4	-
2	Carbohydrates	6	6	-
3	Amino acids	4	4	-
4	Proteins	2	2	-
5	Enzymes	2	2	-
6	Fatty acids	4	4	-
7	Oils and fats	2	2	-

Annual Course Report: Bioorganic Chemistry

8	Pharmaceutical compounds	4	4	
	Total	**28**	**28**	**-**

- Topics taught as a percentage of the content specified:90 %
- Lecturers commitment of the course content: 95 %
- Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Principles of bio chemistry	x	x			x					X				
2	Carbohydrates	x	x			x									
3	Amino acids	x	x			x	X				X				
4	Proteins	x	x			x	x								
5	Enzymes	x	x			x					x				
6	Fatty acids	x	x			x	x								
7	Oils and fats	x	x			x	x								

Annual Course Report: Bioorganic Chemistry

8	Pharmaceutical compounds	x	x			x	x				x				

- Student Assessment:

No.	Assessment method	Weights
1	Midterm examination	20%
2	Semester work (sheets, quizzes)	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

No.	Constraints
1	-

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**83%**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Introduce some experiments.**
3	**Enrich the library by more textbooks in Biochemistry.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**This courses is not followed to define the percentage of credit hours for communication hours**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons

Annual Course Report: Bioorganic Chemistry

1	**Using online course material.**	**Needing of extra internet system and smart boards**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Increase textbooks in field of biochemistry**	**Supply the Institute library by recent textbooks in the field**	**2021-2022**	**Institute management**

Course Coordinator: Associate prof. Khaled Samir

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 3/2021

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Annual Course Report: Mechanical unit operation

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 407
Year/ Level	2020-2021/Level fourth
Specialization	Major
Authorization date of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	3	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		56	100%
Students completing the course		56	100%
Results	**Passed**	48	85.71%
	Failed	8	14.28%
Grading of successful students	**Excellent**	8	14.28%
	Very Good	12	21.42%
	Good	13	23.21%
	Pass	15	26.78%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Filtration	2	2	-
2	Size reduction	2	2	-
3	Screening and Size Classification	2	2	-
4	Solid drying	4	4	-
5	Crystallization	2	2	-
6	Centrifugation	2	2	-
7	Sedimentation	4	4	-
8	Power consumption in gas /liquid contacting. Design principles for stirrer and model experiments for scale up.	2	2	
9	Computation methods in multistage and multicomponent systems and operations including particulate solids	8	8	-

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Annual Course Report: Mechanical unit operation

Total	**28**	**28**	**-**

- Topics taught as a percentage of the content specified: 90%
- Lecturers commitment of the course content: 95%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Filtration	X	x			x	x								
2	Size reduction	X	x			x					X				
3	Screening and Size Classification	X	x			x	x								
4	Solid drying	X	x			x	x				X				
5	Crystallization	X	x			x	x				X				
6	Centrifugation	X	x			x	x				X				
7	Sedimentation	X	x			x									

Annual Course Report: Mechanical unit operation

8	Power consumption in gas /liquid contacting. Design principles for stirrer and model experiments for scale up.	X	x			X									
9	Computation methods in multistage and multicomponent systems and operations including particulate solids	X	x			x					X				

- Student Assessment:

No.	Evaluation method	Weights
1	Midterm examination	20%
2	Semester work (sheets, quizs)	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

No.	Constraints
1	-

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**79.77%**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**Topics are short in course specs that should be modified.**

Annual Course Report: Mechanical unit operation

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Increasing the scientific references which relates to plant design

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Using online course material.	Needing of extra internet system and smart boards

10- What has been implemented from the action plan in the previous year?

No.	Action
1	Adding some scientific reference in the electronic library of the institute.

11. Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Relating the course with industrial field	Provide field visits	2021-2022	Institute management

Course Coordinator: Prof. Dr. Taha Farag

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 8/2021

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Annual Course Report: Process Modeling and Simulation

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 408
Year/ Level	Level 4
Specialization	Major
Authorization data of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	3	0	2

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		33	100%
Students completing the course		33	100%
Results	**Passed**	31	93.93%
	Failed	2	6.06%
Grading of successful students	**Excellent**	11	33.33%
	Very Good	7	21.21%
	Good	5	15.15%
	Pass	8	24.24%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Review of the basic principles of transport of momentum, heat, and mass with applied problems. **Practical** • Natural gas processing • Heat Exchanger	24	-	16
2	Numerical methods for solving more complex problems of transport phenomena and kinetics. **Practical** Chemical reaction	18	-	12

Annual Course Report: Process Modeling and Simulation

Total	**42**		**28**

- Topics taught as a percentage of the content specified: 90 %
- Lecturers commitment of the course content: 95%
- Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Review of the basic principles of transport of momentum, heat, and mass with applied problems. **Practical** • Natural gas processing • Heat Exchanger	X	x			x	x	X						x	x
2	Numerical methods for solving more complex problems of transport phenomena and kinetics. **Practical** Chemical reaction	X	x			x	x	X						x	x

- Student Assessment:

No.	Assessment method	Weights
1	Midterm examination	20%
2	Semester work	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

Annual Course Report: Process Modeling and Simulation

No.	Facility	No.	Facility
1	Lecture classroom	5	Data show system
2	Presenter	6	Sound system
3	White board		
4	Computer lab		

4- Administrative Constraints:

Constraints
No constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**79.12%**

6- Course enhancement suggestions

No.	Suggestions
1	**Using online course material.**
2	**Introducing real models of industrial applications.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**The experimental part is canceled from the fourteenth week and is distributed over the other weeks.**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Cooperate with some companies to explain the latest technology**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Using online course material.**	**Needing of extra internet system and smart boards**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

Annual Course Report: Process Modeling and Simulation

11. Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Using the internet in the research	Self- study	2021-2022	Prof. Dr. / Taha E. Farrag

Course Coordinator: Prof. Dr. / Taha E. Farrag

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval: 8/2021

Ministry of Higher Education
The Higher Institute of Engineering
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New Damietta

وزارة التعليم العالى
المعهد العالى للهندسة والتكنولوجيا
بدمياط الجديدة

Annual Course Report: Liquefied Natural Gas

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 411
Year/ Level	2020-2021/Level four
Specialization	Major
Authorization date of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		49	100%
Students completing the course		49	100%
Results	**Passed**	40	81.63%
	Failed	9	18.36%
Grading of successful students	**Excellent**	11	22.44%
	Very Good	7	14.2%
	Good	12	24.48%
	Pass	10	20.4%

2. Course Teaching:

No.	**Topics actually taught**	**No. of hours**			**Lecturer**
		Lecture	**Tutorial/ Practical**	**Total**	
1	Refrigeration systems	4	4	8	**Dr./ Riham Atef**
2	Natural gas preparation and liquefaction	6	6	12	
3	thermodynamic aspects of liquefaction	4	4	8	
4	liquefaction plants	6	6	12	
5	Properties of LNG	4	4	8	
6	Vaporization losses and custody transfer.	4	4	8	

- Topics taught as a percentage of the content specified:85 %

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Annual Course Report: Liquefied Natural Gas

- Lecturers commitment of the course content: 90%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Refrigeration systems	x	x			x					X				
2	Natural gas preparation and liquefaction	x	x			x	x								
3	thermodynamic aspects of liquefaction	x	x			x	x								
4	liquefaction plants	x	x			x	x				X				
5	Properties of LNG	x	x			x	x								
6	Vaporization losses and custody transfer.	x	x			x		x			x				

- Student Assessment:

No.	Assessment method	Weights
1	Midterm examination	20%
2	Semester work (sheets, quizzes)	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

No.	Constraints

Annual Course Report: Liquefied Natural Gas

1	**There are no constraints**

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**74.49%**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Make visits to natural gas plants.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**Review writing references for courses in a uniform style.**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Giving enough time in each lecture to ask questions.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Making a visit to one of natural gas companies**	**Lack of academic time And consequences of corona epidemic**

10- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Improve lecture notes**	**By adding extra details concerning gas engineering**	**2021-2022**	**Dr./ Riham Atef**
2	**Relating the course with natural gas plants.**	**Provide field visits**	**2021-2022**	**Institute management**

Course Coordinator: Dr./ Riham Atef

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval: 8/2021

وزارة التعليم العالي
المعهد العالي للهندسة والتكنولوجيا
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قسم الهندسة الكيميائية

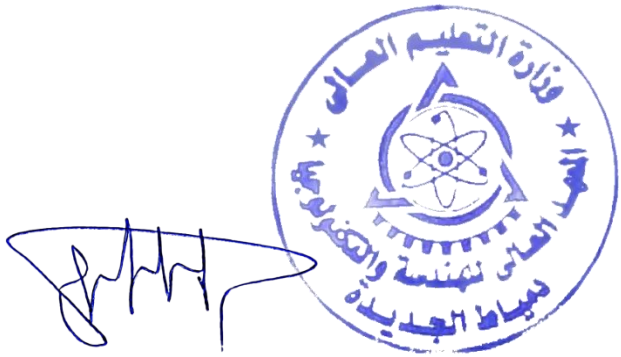
تقارير المقررات قسم الهندسة الكيميائية

إعتماد مجلس القسم لتقارير المقررات قسم الهندسة الكيميائية

بتاريخ 2021/8/23

إعتماد المجلس العلمي لتقارير المقررات قسم الهندسة الكيميائية

بتاريخ 2021/11/9



وزارة التعليم العالي
المعهد العالي للهندسة والتكنولوجيا
بدمياط الجديدة

2020- 2021

تقارير المقررات لقسم الهندسة الكيميائية

Head of the department	Quality Assurance Unit Manager	Dean of the institute
Assoc.Prof.Dr./ Hend Elsayed Gadow	Assoc.Prof.Dr./ Ramadan Abdelghany Elkateb	Prof.Dr./ Osami Elsaeed Rageh

وزارة التعليم العالي
المعهد العالي للهندسة والتكنولوجيا
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مستوى خامس

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وزارة التعليم العالى
المعهد العالى للهندسة والتكنولوجيا
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Annual Course Report: Chemical Engineering Computer applications

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 501
Year/ Level	Level 5
Specialization	Major
Authorization date of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

	Lectures	**Tutorial**	**Practical**
Teaching Hours	3 hours per week for 14 weeks	0	2 hours per week for 14 weeks

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		11	100%
Students completing the course		11	100%
Results	**Passed**	10	90.90%
	Failed	1	9.09%
Grading of successful students	**Excellent**	0	0%
	Very Good	0	0%
	Good	3	27.27%
	Pass	7	63.63%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Introduction **Practical** Application of MATLAB for some problem of chemical Engineering	6	-	4
2	Equations of state **Practical** Application of MATLAB for some problem of	6	-	4

Annual Course Report: Chemical Engineering Computer applications

	chemical Engineering			
3	Vapor- liquid Equilibrium **Practical** Application of MATLAB for some problem of chemical Engineering	6	-	4
4	Chemical reaction Equilibrium **Practical** Application of MATLAB for some problem of chemical Engineering	6	-	4
5	Mass Balances with recycle stream **Practical** Application of MATLAB for some problem of chemical Engineering	6	-	4
6	Chemical reactors **Practical** Application of MATLAB for some problem of chemical Engineering	6	-	4
7	MATLAB overview **Practical** Application of MATLAB for some problem of chemical Engineering	6	-	4
Total		42	-	28

- Topics taught as a percentage of the content specified: 87 %
- Lecturers commitment of the course content: 85 %
- Used Teaching and Learning Methods

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Annual Course Report: Chemical Engineering Computer applications

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Introduction **Practical** Application of MATLAB for some problem of chemical Engineering	x	x			X									X
2	Equations of state **Practical** Application of MATLAB for some problem of chemical Engineering	x	x				X								X
3	Vapor- liquid Equilibrium **Practical** Application of MATLAB for some problem of chemical Engineering	x	x				X								X
4	Chemical reaction Equilibrium **Practical** Application of MATLAB for some problem of chemical Engineering	x	x				X	x							X
5	Mass Balances with recycle stream **Practical** Application of MATLAB for some problem of chemical	x	x			x		X							X

Annual Course Report: Chemical Engineering Computer applications

	Engineering														
6	Chemical reactors **Practical** Application of MATLAB for some problem of chemical Engineering	**x**	**x**			**X**	**X**	**X**							**X**
7	MATLAB overview **Practical** Application of MATLAB for some problem of chemical Engineering	**x**	**x**			**X**	**X**								**X**

- Student Assessment:

No.	Assessment Method	Weights
1	Midterm examination	10%
2	Semester work(sheets, quizs)	20%
3	Practical Examination	10%
4	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	5	Data show system
2	Presenter	6	Sound system
3	White board		
4	Computer lab		

4- Administrative Constraints:

Constraints
No constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**72%**

6- Course enhancement suggestions

No.	Suggestions

Annual Course Report: Chemical Engineering Computer applications

1	**Transplant And Assess Pedagogy Utilizing Such Technologies To Enhance Students' Learning.**
2	**Using online course material.**
3	**Introducing real models of industrial applications.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**References need update**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Provide training on how to use a new teaching technology in their classes.**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Using online course material.**	**Needing of extra internet system and smart boards**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Use more advanced programs**	**Apply advanced chemical engineering programs such as hysys and java program**	**2021-2022**	**Prof. Dr. Taha Farag**

Course Coordinator: Prof. Dr. Taha Farag

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval: 8/2021

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Annual Course Report: Petrochemicals Engineering

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 502
Year/ Level	Level 5
Specialization	Major
Authorization date of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		16	100%
Students completing the course		16	100%
Results	**Passed**	16	100%
	Failed	0	0%
Grading of successful students	**Excellent**	3	18.75%
	Very Good	3	18.75%
	Good	6	37.5%
	Pass	4	25%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Petroleum chemistry; occurrence and composition of crude oil	3	2	-
2	Distillation	3	2	-
3	catalytic and thermal cracking	9	6	-
4	Alkylation	3	2	-
5	Hydrogenation	3	2	-
6	Isomerization	3	2	-
7	Polymerization	3	2	-
8	Techniques and economics of the production of basic and intermediate petrochemicals as well as some end products	15	10	-
Total		**42**	**28**	**-**

- Topics taught as a percentage of the content specified: 80 %

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Annual Course Report: Petrochemicals Engineering

- Lecturers commitment of the course content: 90 %
- Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Petroleum chemistry; occurrence and composition of crude oil	x	x	X	x	X									
2	Distillation	x	x			X	x								
3	catalytic and thermal cracking	x	x		X	X									
4	Alkylation	x	x	x		X					X				
5	Hydrogenation	x	x	x		X					X				
6	Isomerization	x	x	x		X					X				
7	Polymerization	x	x	x		X					X				
8	Techniques and economics of the production of basic and intermediate petrochemicals as well as some end products	x	x		X						X				

- Student Assessment:

No.	Assessment method	Weights
1	Midterm examination	20%
2	Semester work (sheets, quizs)	20%
3	Final term examination	60%
Total		**100%**

Annual Course Report: Petrochemicals Engineering

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

Constraints
No constraints.

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**71.13%**

6- Course enhancement suggestions

No.	Suggestions
1	**Make some scientific events to be up to date with the modern technology.**
2	**Make online sessions with some instructors who specialized in petrochemical industry.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**Topics are short in course specs that should be modified**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Improve scientific search skills**
2	**Education in learning groups**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Make visits to petrochemical plants**	**Lack of academic time**

10- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Relate the theoretical study by the practical field**	**Visits to petrochemical plants.**	**2021-2022**	**Institute management**

Course Coordinator: Dr. / Sohier Abo Bakr

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 3/2021

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Annual Course Report: Industrial Technologies in Chemical Engineering

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 503
Year/ Level	Level 5
Specialization	Major
Authorization date of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2	0	2

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		22	100%
Students completing the course		22	100%
Results	**Passed**	20	90.90%
	Failed	2	9.09%
Grading of successful students	**Excellent**	7	31.81%
	Very Good	5	22.72%
	Good	4	18.18%
	Pass	4	18.18%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Introduction of the main basics and concepts of chemical industries **Practical** • Introduction on laboratory apparatus for some creation of some organic compounds	3	-	2
2	Industries on chemical creation of some aromatic compounds involving nitration and sulphonation. **Practical** • Synthesis of nitronaphthalene	9	-	6

Annual Course Report: Industrial Technologies in Chemical Engineering

	• Sulphonation processes of some aromatic compounds			
3	Industries on chemical creation of some aromatic compounds involving halogenation and oxidation. **Practical** • Videos showing some industries on halogenated and some organic compounds by oxidation process	9	-	6
4	Some chemical industries that concern with polymerization process **Practical** • Visits to factories that concern with polymerization process	9		6
5	Flow charts of some chemical industries **Practical** • Video learning of some movies on industries were studied through flow charts	6		4
6	Study of chemical industry on some knitting of some natural fibers as cotton and wool. **Practical** • Discussion some problems on some chemical industries and solving	6		4
Total		**42**		**28**

- Topics taught as a percentage of the content specified: 90 %
- Lecturers commitment of the course content:95 %
- Used Teaching and Learning Methods

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Annual Course Report: Industrial Technologies in Chemical Engineering

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Introduction of the main basics and concepts of chemical industries **Practical** • Introduction on laboratory apparatus for some creation of some organic compounds	x	x			X					X				X
2	Industries on chemical creation of some aromatic compounds involving nitration and sulphonation. **Practical** • Synthesis of nitronaphthalene • Sulphonation processes of some aromatic compounds	x	x			X					X				X
3	Industries on chemical creation of some aromatic compounds involving halogenation and oxidation. **Practical** • Videos showing some industries on halogenated and	x	x	X		X									X

Annual Course Report: Industrial Technologies in Chemical Engineering

	some organic compounds by oxidation process														
4	Some chemical industries that concern with polymerization process **Practical** • Visits to factories that concern with polymerization process	x	x			x					X				X
5	Flow charts of some chemical industries **Practical** • Video learning of some movies on industries were studied through flow charts	x	x			X					X				X
6	Study of chemical industry on some knitting of some natural fibers as cotton and wool. **Practical** • Discussion some problems on some chemical industries and solving	x	x			X					X				X

- Student Assessment:

No.	Assessment method	Weights
1	Midterm examination	10%
2	Semester work(sheets, quizs)	20%
3	Practical Examination	10%
4	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility

Annual Course Report: Industrial Technologies in Chemical Engineering

1	Lecture classroom	5	Data show system
2	Presenter	6	Sound system
3	White board		
4	Lab		

4- Administrative Constraints:

No.	Constraints
1	-

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	71.52%

6- Course enhancement suggestions

No.	Suggestions
1	Improve lecture notes
2	Make visits to industrial plants.

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	Review writing references for courses in a uniform style

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Increasing the scientific references which relates to industrial technology

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Integrating work experiences with education by providing different plants visits.	----------

10- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Integrating work experiences with education by providing field visits.	Provide field visits	2021-2022	Institute management

Course Coordinator: Dr. Riham Atef

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval: 8/2021

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Annual Course Report: Electroplating

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 511
Year/ Level	Level 5
Specialization	Major
Authorization data of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

	Lectures	**Tutorial**	**Practical**
Teaching Hours	2 hours per week for 14weeks	2 hours per week for 14weeks	0

B. Specialized information:

1. Statistics

Subject		**Percentage**
Students attending the course		100%
Students completing the course		100%
Results	**Passed**	89.5%
	Failed	10.5%
Grading of successful students	**Excellent**	26.3%
	Very Good	21.1%
	Good	21.1%
	Pass	21.1%

2. Course Teaching:

No.	Topics	Lectures	Tutorial	Practical
1	Electrochemistry	4	4	-
2	Electrochemical cells	6	6	-
3	Surface preparation	6	6	-
4	Throwing power	2	2	-
5	Electrochemical baths	4	4	-
6	Factors affecting electroplating	4	4	-
7	temperature - bath concentration	2	2	-

Annual Course Report: Electroplating

Total	28	28	-

- Topics taught as a percentage of the content specified: 85%
- Lecturers commitment of the course content: 95%

Used Teaching and Learning Methods

No	Topics	Face to- Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self learning and Research	Cooperative	Discovering	Modeling	Lab
1	Electrochemistry	x	x	x		x	x								
2	Electrochemical cells	x	x			x	x	x							
3	Surface preparation	x	x			x	x				x				
4	Throwing power	x	x	x		x									
5	Electrochemical baths	x	x			x	x								
6	Factors affecting electroplating	x	x	x							x				

Annual Course Report: Electroplating

7	temperature - bath concentration	x	x			x	x								

- Student Assessment:

No.	Assessment method	Weights
1	Midterm examination	20%
2	Semester work (sheets, quizs, presentation)	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

No.	Constraints
1	**There are no constraints**

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**66%**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Integrating work experiences with education.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	**This course isn't followed to define the percentage of credit hours for communication hours.**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Using explanatory videos for curriculum topics to facilitate the understanding process**

Annual Course Report: Electroplating

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**A visit to companies that contain electroplating operations**	**Failure to make an agreement protocol for a field visit with the company**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Using a video presentation system**	**Using a video presentation system that is related to the topic to increase the clarity of the idea**	**2021-2022**	**Dr: Hend ElSayed Gadow**
2	**Increase some of scientific reference in the library of the institute**	**Add more scientific reference in the electronic library of the institute**	**2021-2022**	**Institute management**

Course Coordinator: Asso.prof. Hend Elsayed Gadow

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 3/2021

Annual Course Report: Ceramics

A. Basic Information

Program Title	Chemical Engineering Program
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 512
Level/ Semester	5thLevel /2nd Semester
Specialization	Major
Authorization date of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	-
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2 hours / week	2hours/ week	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		19	100%
Students completing the course		17	89.47%
Results	**Passed**	17	100%
	Failed	0	0%
Grading of successful students	**Excellent**	5	29.41%
	Very Good	4	23.52%
	Good	4	23.52%
	Pass	4	23.52%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Definition of ceramics and its history.	4	4	-
2	Classification of ceramics according to ASTM and it's according to its properties.	6	6	-
3	Methods of processing of nano ceramics and its characterization	8	8	-
4	Stander test method of ceramics.	6	6	-
5	Ceramic hazard and advanced applications	4	4	-
Total		**28**	**28**	**-**

- Topics taught as a percentage of the content specified: 88%
- Lecturers commitment of the course content: 96%

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Definition of ceramics and its history.	x	x			x									
2	Classification of ceramics according to ASTM and it's according to its properties.	x	x			x									
3	Methods of processing of nano ceramics and its characterization	x	x	x		x					x				
4	Stander test method of ceramics.	x	x			x					x				
5	Ceramic hazard and advanced applications	x	x		x	x					x				

- Student Assessment:

No.	Assessment Method	Weights
1	Mid Term Examination	20%
2	Semester work	20%
3	Final Term Examination	60%
Total		100%

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

Constraints
No **constraints**

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	63%

6- Course enhancement suggestions

No.	Suggestions
1	Make scientific visits to some European universities to see how ceramics can be prepared in virtual laboratories
2	**Make some scientific visits for petrochemical laboratories.**

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	Update references

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Improve practical learning tasks
2	Improve learning resources and equipment

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Manufacture of ceramic in lab.	Not enough raw materials

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Make some scientific visits for petrochemical laboratories.**	**Explaining practically the manufacture of ceramic in industry**	**2021-2022**	**Institute management**
2	**Adding some scientific reference in the electronic library of the institute.**	**Increase the number of ceramics manufacturing textbooks**	**2021-2022**	**Institute management**

Course Coordinator: Dr. SamehAbd El Hamid

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 3 /2021

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وزارة التعليم العالى
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Annual Course Report: Plant Design

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 504
Year/ Level	Level 5
Specialization	Major
Authorization data of course report	3/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	3	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		12	100%
Students completing the course		12	100%
Results	**Passed**	9	75%
	Failed	3	25%
Grading of successful students	**Excellent**	0	0%
	Very Good	1	8.3%
	Good	3	25%
	Pass	5	41.66%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Process choice, synthesis and screening of alternatives	4	4	-
2	Project planning	2	2	-
3	Construction of a detailed flow sheet.	2	2	-
4	Material and energy balances	2	2	-
5	Conservation of material and energy flows	4	4	-
6	Detailed design of equipment: size, construction details, materials of construction, instrumentation and control	4	4	-
7	Process economics: capital cost estimation, manufacturing cost estimation, profit forecast, return on investment - Sensitivity to errors in cost estimates	4	4	-
8	Venture analysis: the combined effect of technological and commercial uncertainties, the quantification of risk - Planning investment.	4	4	-
9	Safety and environmental issues	2	2	-

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Total	28	28	-

- Topics taught as a percentage of the content specified: 85 %
- Lecturers commitment of the course content: 87 %
- Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Process choice, synthesis and screening of alternatives	**x**	**x**			**x**									
2	Project planning	x	x			**x**									
3	Construction of a detailed flow sheet.	x	x				**x**								
4	Material and energy balances	x	x				**x**	**x**	**x**						
5	Conservation of material and energy flows	x	x			**x**	**x**	**x**	**x**						
6	Detailed design of equipment: size, construction details, materials of construction, instrumentation and control	x	x			**x**	**x**	**x**	**x**						
7	Process economics: capital cost estimation, manufacturing cost estimation, profit	x	x			**x**	**x**								

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	forecast, return on investment - Sensitivity to errors in cost estimates														
8	Venture analysis: the combined effect of technological and commercial uncertainties, the quantification of risk - Planning investment.	**x**	**x**		**x**										
9	Safety and environmental issues	**x**	**x**		**x**										

- Student Assessment:

No.	Evaluation method	Weights
1	Midterm examination	20%
2	Semester work (sheets, quizs, presentation)	20%
3	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

4- Administrative Constraints:

No.	Constraints
1	**There are no constraints**

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**74.67%**

6- Course enhancement suggestions

No.	Suggestions
1	**Improve lecture notes**
2	**Provide field visits**
3	**Reducing the academic content**

7- Comments from external evaluator(s) (if exists):

No.	Comments

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1	**References need update**

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	**Increasing the scientific references which relates to plant design**

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	**Using online course material.**	**Needing of extra internet system and smart boards**

10- What has been implemented from the action plan in the previous year?

No.	Action
1	**Adding some scientific reference in the electronic library of the institute.**

11- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	**Relating the course with industrial field**	**Provide field visits**	**2021-2022**	**Institute management**

Course Coordinator: Dr. Riham Atef

Head of Department: Asso.prof. Hend Elsayed Gadow

Date of Approval: 3/2021

Annual Course Report: Quality Assurances and Engineering Reliability

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	ENG 415
Year/ Level	Level 5
Specialization	Major
Authorization data of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		17	100%
Students completing the course		17	100%
Results	**Passed**	17	100%
	Failed	0	0%
Grading of successful students	**Excellent**	6	35.29%
	Very Good	8	47.05%
	Good	0	0%
	Pass	3	17.64%

2. Course Teaching:

No.	**Topics actually taught**	No. of hours		
		Lectures	Tutorial/ Practical	Total
1	The meaning of standardization and its methods	2	2	4
2	Define of STM, CAS, ISO, GMP, quality control and quality assurance.	2	2	4
3	Standardization of gases and their applications according to standard	4	4	8
4	Standardization of liquids and their applications according to standard	2	2	4
5	Standardization of materials and	4	4	8

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	their applications according to standard			
6	Standardization of tools , pipe lines and their applications according to standard	4	4	8
7	Standardization of instruments and reactors and their applications according to standard	2	2	4
8	Methods of quality control	4	4	8
9	Reliability on product quality.	4	4	8

- Topics taught as a percentage of the content specified: 90 %
- Lecturers commitment of the course content: 95 %

Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	The meaning of standardization and its methods	x	x			x									
2	Define of STM, CAS, ISO, GMP, quality control and quality assurance.	x	x	x		x					x				
3	Standardization of gases and their applications according to standard	x	x			x									
4	Standardization of liquids and their applications according to standard	x	x			x									

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5	Standardization of materials and their applications according to standard	**x**	**x**			**x**									
6	Standardization of tools , pipe lines and their applications according to standard	**x**	**x**			**x**	**x**				**x**				
7	Standardization of instruments and reactors and their applications according to standard	**x**	**x**			**x**	**x**								
8	Methods of quality control	**x**	**x**			**x**	**x**								
9	Reliability on product quality.	**x**	**x**			**x**	**x**								

- Student Assessment:

No.	Assessment Method	Weights
1	Midterm examination	20%
2	Semester work	20%
4	Final term examination	60%
Total		**100%**

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Wireless internet
3	White board	6	Sound system

4- Administrative Constraints:

Constraints
No constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	**77.63%**

Annual Course Report: Quality Assurances and Engineering Reliability

6- Course enhancement suggestions

No.	Suggestions
1	Introducing real models of industrial applications.
2	Using online course material.

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	Topics are short in course specs that should be modified.

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Using online course material.

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Make some scientific visits to quality departments in different companies	Lack of academic time

10- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Increase some of scientific reference in the library of the institute	Add more scientific reference in the electronic library of the institute	2021-2022	Institute management

Course Coordinator: Dr.Sameh Abdelhameed

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval: 8/2021

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Annual Course Report: Synthetic Fibers

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 517
Year/ Level	Level 5
Specialization	Major
Authorization data of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		32	100%
Students completing the course		32	100%
Results	**Passed**	32	100%
	Failed	0	0%
Grading of successful students	**Excellent**	10	31.25%
	Very Good	9	28.125%
	Good	8	25%
	Pass	5	15.62%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Classification of synthetic fibers	4	4	-
2	Properties of fibers	4	4	-
3	polyester	4	4	
4	Nylon 6 and Nylon 6, 6	4	4	-
5	Poly acrylic	2	2	
6	Amide fibers and Aramids	4	4	-
7	Glass fibers	4	4	-
8	Teflon	2	2	-

Annual Course Report: Synthetic Fibers

Total	28	28	-

- Topics taught as a percentage of the content specified: 80 %
- Lecturers commitment of the course content: 90 %

- Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Classification of synthetic fibers	x	x	X		x					x				
2	Properties of fibers	x	x		x	x					x				
3	Polyester	x	x		x	x					x				
4	Nylon 6 and Nylon 6, 6	x	x	X		x					x				
5	Polyacrylic	x	x	X		x					x				
6	Amide fibers and Aramids	x	x	X		x					x				
7	Glass fibers	x	x	X	x	x					x				
8	Teflon	x	x	X		x					x				

- Student Assessment:

No.	Assessment Method	Weights
1	Mid Term Examination	20%
2	Semester work	20%
3	Final Term Examination	60%
Total		100%

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

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4- Administrative Constraints:

No.	Constraints
1	-

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	83.68%

6- Course enhancement suggestions

No.	Suggestions
1	Improve lecture notes
2	Integrating work experiences with education.

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	Review writing references for courses in a uniform style

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Provide training on how to use a new teaching technology in their classes.

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Using online course material.	Needing of extra internet system and smart boards

10- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Visit some plants	Provide field visits	2021-2022	Institute management

Course Coordinator: Associate prof. Khaled Samir

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval:8/2021

Annual Course Report: Industrial Safety

A. Basic Information

Program Title	Chemical Engineering
Department offering the Program	Chemical Engineering Department
Department Responsible for the Course	Chemical Engineering Department
Course Code	CHE 520
Year/ Level	Level 5
Specialization	Major
Authorization data of course report	8/2021
Exam Committee Selection Rule	Commissioning of the Institute of Management
External Revision of Examination	--
Lecturers Number:	1

Teaching Hours	**Lectures**	**Tutorial**	**Practical**
	2	2	0

B. Specialized information:

1. Statistics

Subject		**No.**	**Percentage**
Students attending the course		16	100%
Students completing the course		16	100%
Results	**Passed**	16	100%
	Failed	0	0%
Grading of successful students	**Excellent**	5	31.25%
	Very Good	3	18.75%
	Good	4	25%
	Pass	4	25%

2. Course Teaching:

No.	**Topics**	**Lectures**	**Tutorial**	**Practical**
1	Introduction in safety	4	4	-
2	Preventing emergencies in the process of industry	4	4	-
3	Human error	4	4	-
4	Identification and assessment of hazards, Fires and explosions	6	6	-
5	Case studies of hazard of plant	6	6	-
6	Miscellaneous topics to be covered by invited Lecturers	4	4	-
Total		**28**	**28**	

- Topics taught as a percentage of the content specified: 90 %

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Annual Course Report: Industrial Safety

- Lecturers commitment of the course content: 95 %
- Used Teaching and Learning Methods

No	Topics	Face-to-Face Lecture	Online Lecture	Flipped Classroom	Presentation and movies	Discussion	Problem solving	Brain storming	Projects	Site visits	Self-learning and Research	Cooperative	Discovering	Modeling	Lab
1	Introduction in safety	X	x			x					x				
2	Preventing emergencies in the process of industry	X	x	x		x					x				
3	Human error	X	x			x					x				
4	Identification and assessment of hazards, Fires and explosions	X	x	x		x					x				
5	Case studies of hazard of plant	X	x	x		x					x				
6	Miscellaneous topics to be covered by invited lecturers	X	x	x		x					x				

- Student Assessment:

No.	Assessment Method	Weights
1	Mid Term Examination	20%
2	Semester work	20%
3	Final Term Examination	60%
Total		100%

3. Facilities Required for Teaching and Learning:

No.	Facility	No.	Facility
1	Lecture classroom	4	Data show system
2	Presenter	5	Sound system
3	White board		

Annual Course Report: Industrial Safety

4- Administrative Constraints:

No.	Constraints
1	There are no constraints

5- Student Evaluation Result of the Course:

No.	Evaluation Result
1	80.73%

6- Course enhancement suggestions

No.	Suggestions
1	Hosting people specialized in external work in factories, providing real examples
2	Improve lecture notes

7- Comments from external evaluator(s) (if exists):

No.	Comments
1	Review writing references for courses in a uniform style

8- What has been implemented of the student's suggestions in the previous year?

No.	Suggestions
1	Provide training on how to use a new teaching technology in their classes.

9- What has not been implemented of the suggestions (give reasons)?

No.	Suggestions	Reasons
1	Using online course material.	Needing of extra internet system and smart boards

10- Action plan for next academic year

No.	Areas of development	Description of development	Completion date	Person responsible
1	Increase some of scientific reference In the library of the institute	Add more scientific reference In the electronic library of the institute	2021-2022	Institute management
2	Visit some plants	Provide field visits	2021-2022	Institute management

Course Coordinator: Associate prof. Hend Elsayed Gadow

Head of Department: Associate prof. Hend Elsayed Gadow

Date of Approval:8/2021