



Che.Eng.Dept. Committee Service and Activities

Annual Report 2020

i- Committee Members

Committee Cordinator	Dr.Salah Eldeen Fadoll Hegazi
Committee Members	Dr.Omar Bakathee Dr.Ibrahim Maffa
Supervision	Dr.Naser Ibrahim Zoali



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ii. MISSION:

The main purpose of the committee enable all the ChE dept. to contribute with the community and society Activities facilitates meaningful involvement, community engagement and leadership development.

iii. Introduction

The Following are the contribution of the chemical Engineering Dept.to the community in the Jazan region (Southern region of the Saudi Arabia) during last two years.

The main contribution focuses on providing the southern region and all the kingdom with skilled chemical engineers .

The following are examples of the chemical engineering department services to the community:

1. Projects and training courses

1.1 Simulation and Optimization of Combined Cycle Power Plants Fired with Natural Gas Using Design II Software

The graduation projects:

1438/1439

Simulation and Optimization of Combined Cycle Power Plants Fired with Natural Gas Using Design II Software

(Project Supervisor: Dr. Mohamed Ibrahim Hassan)

With revolution of technology in the last years, generating electricity has become an essential demand in our life by modern techniques that fit with the environmental regulation. This project presents a study on simulation and optimization of a combined cycle power plant over a single cycle power plant. In the beginning, the single cycle was modeled and simulated by using Design II software. In this step, actual unit data were used in order to test the validity of the model. After the validation of model, the single cycle power plant was converted to a combined cycle power plant (CCPP). In this case, the exhausted gas released from the gas turbine was introduced to a heat recovery steam generator (HRSG), which consists of three heat exchangers: an economizer, an evaporator and a super heater. HRSG converts the water into steam, which is used as heating medium in the steam power section. In this proposed model, many operating conditions were conducted in order to get the optimal parameters, which give the highest net power and efficiency. The net power of CCPP was increased to 105.959 MW whereas the overall efficiency of the unit was reached to 45.05%, consuming the same amount of fuel for the single cycle power plant.

The following cooperation activities arranged by chemical engineering during summer semester 2020/21 and due to the Corona viruses the dept. avoids students carry their training in the field so the dept. and training unit managed to host pioneer and experienced engineers in the industrial field in Saudi Kingdom to enrich the cooperation with firms and industrial companies.

1.2 My Journey to Invention

The announcement below shows the participation of Dr. Fahd Al-Shuraihi, Vice President of Energy Efficiency and Carbon Management at SABIC, in the lecture "My Journey with Innovation. The purpose of presenting such lectures was to participate with the community in enhancing confidence in students and developing their innovative ideas."



كلنا مسؤول

VISION 2030
المنطقة العربية السعودية
KINGDOM OF SAUDI ARABIA

معتمد
ACCREDITED

جامعة جازان
JAZAN UNIVERSITY

نعود بحذر

يسر قسم الهندسة الكيميائية
بجامعة جازان دعوتكم الى استضافة
الدكتور/ فهد بن عبد العزيز الشريهي



نائب الرئيس لكفاءة الطاقة وإدارة الكربون في (سابك)
عنوان المحاضرة/ رحلتي مع الابتكار

الأحد
2020/6/21

5:00 عصراً

Bb
Blackboard
على منصة البلاك بورد

خاصة بطلاب
التدريب الصيفي

1.3 The role of chemical engineer in Crude Refining

The announcement below shows the participation of Ahmed Muhammad Maafa, Director of Desalination Station, in the lecture "The role of the chemical engineer in operating desalination plants. The purpose of presenting such lectures was to participate with the community to enhance confidence in students and train them in the practical aspect of operating desalination plants.



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مستوى
مسؤول

نعود بحذر

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بجامعة جازان دعوتكم الى استضافة
المهندس/ أحمد بن محمد معافا



مدير محطات تحلية الشقيق

عنوان المحاضرة/ دور المهندس الكيميائي في تشغيل محطات التحلية

الخميس
2020/7/23

10:00 م

خاصة بطلاب
التدريب الصيفي

Bb
Blackboard
على منصة البلاك بورد

1.4 Awareness and Management of Chemical Hazards

The announcement below shows the participation of Engineer Mudar Ahmad Kumait, coordinator of environmental works at the Aramco Distribution Station in Jizan, with the lecture "Awareness of chemical dangers and ways to deal with them."



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بجامعة جازان دعوتكم الى استضافة
المهندس/ مضر بن حمد كميت



منسق اعمال البيئة في محطة ارامكو للتوزيع في جازان
عنوان المحاضرة/ الوعي بالأخطار الكيميائية وطرق التعامل معها

الثلاثاء
2020/7/14

9:00 م

Blackboard
على منصة البلاك بورد

خاصة بطلاب
التدريب الصيفي

1.5 Journey after graduation

The announcement below shows the participation of Eng. Jabran Mohammed Ibrahim, CEO of some local and Gulf companies, in the lecture "graduation journey after between graduation and reality." The purpose of presenting such lectures was to participate with the community in training students on postgraduate challenges.



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JAZAN UNIVERSITY

نعود بحذر

يسر قسم الهندسة الكيميائية
بجامعة جازان دعوتكم الى استضافة
المهندس/ جبران محمد ابراهيم غاشم



مدير اعلى في سابقك سابقاً والمدير التنفيذي لبعض
الشركات المحلية والخليجية
عنوان المحاضرة/ رحلة ما بعد التخرج ما بين الهاجس والواقع

الخميس
2020/7/16

9:00 م

Blackboard
على منصة البلاك بورد

خاصة بطلاب
التدريب الصيفي

1.6 Cement Industry lecture

The announcement below shows the participation of Engineer: Ali Yahya Haddadi, Head of Production Functions at Jazan Cement Factory, with a lecture on "Cement Industry". The purpose of presenting such lectures was to participate with the community in training students in the cement industry.



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KINGDOM OF SAUDI ARABIA

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JAZAN UNIVERSITY

نعود بحذر

يسر قسم الهندسة الكيميائية
بجامعة جازان دعوتكم الى استضافة
المهندس/ علي بن يحيى علي حدادي



رئيس مهام الإنتاج بمصنع اسمنت جازان
عنوان المحاضرة/ صناعة الأسمنت

الأربعاء
2020/7/22

1:00 ظهراً

خاصة بطلاب
التدريب الصيفي

Bb
Blackboard
على منصة البلاك بورد

1.7 The Role the Chemical Engineer in Oil Refineries

The announcement below shows the participation of Engineer: Abdulrahman Al-Fadil, Director of Aramco Refinery in Riyadh, with the lecture "The Role the Chemical Engineer in Oil Refineries". The purpose of presenting such lectures was to participate with the community in training students in the oil industry and to introduce the role of the chemical engineer in operating oil refineries.



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يسر قسم الهندسة الكيميائية
بجامعة جازان دعوتكم الى استضافة
المهندس/عبد الرحمن الفاضل



مدير مصفاة أرامكو السعودية بالرياض

عنوان المحاضرة/ نعمة النفط ودور المهندس الكيميائي
في مصافي النفط

الجمعة
2020/6/26

4:30 عصراً

Blackboard
على منصة البلاك بورد

خاصة بطلاب
التدريب الصيفي

1.8 Industrial safety

At the beginning of the session, Dr. Nasser Ibrahim Zouly thanked the Civil Defense and thanked them for their cooperation with the College of Engineering in providing information on industrial safety. In his explanation, the lecturer dealt with the importance of industrial safety in protecting the elements of production and removing dangers from them, especially from the human element, as well as preventing occupational diseases and preventing work accidents. Fighting fire, preventing its dangers, and raising production capacity and efficiency.



1.9 Uses of Aspen Hysys

The Department of Chemical Engineering organized a lecture on "Using the HiSes Program for Chemical Engineering Students", presented by Dr. Abdul Samad Muhammad Adam, and the goal was to train students on the program.



The poster features a geometric background with a network of lines and dots. At the top, there are logos for 'كلنا مسؤول' (We are all responsible), 'VISION 2030' (رؤية 2030), 'ACCREDITED' (مُعتمد), and 'Jazan University' (جامعة جازان). Below these, the text reads: 'يسر قسم الهندسة الكيميائية بجامعة جازان دعوتكم الى استضافة الدكتور/ عبدالصمد محمد آدم' (The Chemical Engineering Department of Jazan University is pleased to invite Dr. Abdul Samad Muhammad Adam). A portrait of Dr. Abdul Samad Muhammad Adam is shown in a rounded rectangle. Below the portrait, it says 'عضو هيئة التدريس بجامعة جازان' (Faculty Member of Jazan University) and 'عنوان المحاضرة/ استخدام برنامج Aspen Hysys' (Lecture Title/ Use of Aspen Hysys Program). At the bottom, there is a Blackboard logo with the text 'على منصة البلاك بورد' (on Blackboard platform), a calendar icon with the date 'الثلاثاء 2020/7/5' (Tuesday 2020/7/5), a clock icon with the time '9:00 م' (9:00 PM), and the text 'خاصة بطلاب التدريب الصيفي' (Special for summer training students).

1.10 Students Rights and Duties lecture

The Department of Chemical Engineering organized a lecture on "Duties and Rights of Students for Chemical Engineering Students" presented by Dr. Ahmed Abu Talib, with the aim of strengthening and consolidating the basic concepts of the students regulations.



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نعود بحذر

يسر قسم الهندسة الكيميائية
بجامعة جازان دعوتكم الى استضافة
الدكتور/ أحمد أبوطالب



عميد كلية الهندسة بجامعة جازان
عنوان المحاضرة/ حقوق و واجبات الطالب

الثلاثاء
2020/6/3

9:00 م

Blackboard
على منصة البلاك بورد

خاصة بطلاب
التدريب الصيفي

1.11 The significance of using JU -email for students

The Department of Chemical Engineering organized a lecture on "the importance of using university email for chemical engineering students" presented by Dr. Imad Saeed, and the aim was to focus on the importance of using university email for the department's students.

1.12 Introduction to Petroleum Refining

The Department of Chemical Engineering, in coordination with the Student Activities Unit, organized a lecture on "Petroleum Refining for Chemical Engineering Students", presented by Dr. Omar Bakathir. The aim was to focus on introducing students to different methods of oil refining for the students of the department.

1.13 Petrochemicals Training course

The Chemical Engineering Department, in coordination with the Student Activities Unit, organized a lecture on "Petrochemicals for Chemical Engineering Students" presented by Dr.



Muhammad Ashraf. The aim was to focus on introducing students to the different methods of producing petrochemicals for oil refining for the students of the department.

1.14 Introduction to management of small projects training course

The Department of Chemical Engineering organized a lecture entitled : **Introduction to management of small projects presented by Dr.Majdi Mustapha**

Program Goals:

- 1- definition of a small enterprise,
- 2- define the characteristics and advantages of a small enterprise
- 3- Definition of planning in small enterprises
- 3- Principles of administrative organization
- 4- Study the major guidances and procedures and ability to manage small enterprises projects.

2 Sport activities

2.1 Tenuis Table competition

The Student Activities Unit at the College of Engineering organized the College Table Tennis Championship, in which the different departments participated and among the goals of the championship

- 1- Developing students 'skills in the game of tennis game.
- 3- Creating an atmosphere of competition among students in Tennis
- 3- Discovering new talents in the game of tennis.



2.2 Billiard Competition

The Student Activities Unit at the College of Engineering organized the College's Billiards Championship, in which the different departments participated and among the goals of the tournament.



2.3 Chess Championship

The Student Activities Unit at the College of Engineering organized the college's chess championship, in which the different departments participated and among the goals of the tournament



2.4 Taekwondo Championship

Department student Abdul Rahim Abdel Moneim participated in the Taekwondo Championship for Saudi universities in the city of Abha, where he won the gold medal



2.5 Staff Participation in sport activities

Some faculty members from the Chemical Engineering Department participated in the college's sports activities



3. Industrial Visit

3.1 Cement Factory scientific visit

The Chemical Engineering Department organized a scientific visit for the department's students to the chemical industries course, a visit to the South Cement Factory, within the framework of cooperation between the department and industrial sector, and the department's students were introduced to the operation steps of cement manufacturing.



3.2 AlMatree Water Treatment Unit

The Chemical Engineering Department organized a scientific visit for the department's students to the chemical industries course, a visit to the al-Materi water station within the framework of cooperation between the department and industrial establishments, and the department's students were introduced to the steps of water treatment.



4. World water Day event

Chemical eng. Dept. participated in the world water day

The Department of Chemical Engineering participated in the World Water Day, it participated in an exhibition prepared by the students of the Chemical Engineering dept. under the supervision of faculty members. The exhibition found appreciation from the attendees. The exhibition was in Kadi Mall in Jazan city.

The evidence of participation in the exhibition

 <p>Engineering College Chemical Engineering Dept.</p> <p>Engineering & Community safety</p> <p>Plastic Valuable benefits and great damages</p> 	<p>References</p> <ul style="list-style-type: none"> • https://www.dailymedicalinfo.com/view-article/ • https://www.supermama.me/post/3 • https://www.verywellhealth.com/is-plastic-a-carcinogen-or-not-796983 • https://cansa.org.za/files/2011/02/Polymers-additives-possible-effect-on-human-body-29312.pdf 	<p>Recommendation:</p> <ol style="list-style-type: none"> 1. Reducing the use of plastics and petrochemical materials. 2. Limiting the purchase of foodstuffs packed in plastic to transfer their effect to the food. 3. Drink liquids in glasses. 4. Do not use plastic when heating foods in the microwave. 5. Avoid plastic materials when drinking hot liquids.
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5.Participate in engineering and safety event in Jazan

The chemical engineering department participated in the exhibition :

Under the slogan of protection the the Civil Defense Department in Jizan City organized the exhibition. It received a large number of visitors .



6.Awards

6.1 2ND.Prize for SABIC Award for the best students project, Supervisor Dr.Ibrahim Maafa



6.2 1st. Poetry Olympiad Competition in Abha

Mohammed Saker Nagmi

Student Muhammad Najmi participated in the Poetry Olympiad in Abha and won the golden model.



6.3 1st.Price college Staff Chess Champion

Dr.Mubarak Eldoma

The Student Activities Unit organized a chess tournament for professors and college employees. The department participated with representatives and Dr. Mubarak won the gold medal



6.5 2nd in football champion Ch.E students Team

The chemical engineering football team participated in the foot ball college championship for departments, where it won second in the championship



Dr.Salah Eldeen Fadoll Hegazi
Coordinator of student's activities

