

CHEMICAL ENGINEERING NEWSLETTER

Special points of interest:

- PEC accreditation
- Approval of 2 million funds & its tenders.
- Department wins 13 million grant for labs

INSIDE THIS ISSUE:

Message from the head	1
PEC visit	2
7th BOS meeting	3
Research Activities	3
Publications	3
New Faculty	4-5
Faculty Achievement	5
Poster Presentation	6
Mini Project Presenta-	6
Computer Lab	6
List of new equipments	7
Industrial Tour	7
Welcome Party	8
Sports Galla	8
Naatia Competition	8

Message from the HoD

Assalam-o-Alaikum

Year 2009 was welcomed as another year of growth for the department. It started with the new challenges and resolutions like accreditation of PEC, collaboration with international universities funding exploration for faculty development, approval and allocation of development funds and launching of MS/PhD programme.

By the Grace of ALLAH Almighty most of the challenges have been met like the accreditation of PEC and fund approval. Remaining are on the fast track and hopefully shall be accomplished during this year.

It is worth mentioning here that the founder of Chemical Engineering Department **Dr. A. H. Dilawari** has rejoined us.

A strong undergraduate program is a necessary component of a strong department. Our struggle for academic excellence is paying off in terms of attracting talented students to the program.

Alhamdulillah! our first batch has leaped into final semester carrying out their studies and projects in liasion with industry and under the kind supervision of their faculty.

Research groups like-Bio-mass Conversion Research Group (BCRG) and Mathematical Modeling Simulation Research Group (MMSRG) are working under the umbrella of chemical engineering department to promote the research culture especially in petrochemical, petroleum, gas and energy sectors.

The job market for



chemical engineers has changed tremendously, and the old way of looking for a job- that of companies visiting campus for job interviews has also changed. All of this adds to our responsibilities in helping students locating a job.

Conspicuously, Chemical Engineering Department has a great potential of development and is fully capable of contributing Pakistan's economy in particular and global in general.

Dr. Moinuddin Ghauri

PEC Accreditation-A Giant Leap

PEC Visit to Chemical Engineering Department

By the Grace of Allah Almighty Department of Chemical Engineering CIIT Lahore got accredited by PEC (Pakistan Engineering Council) on 25th March 2009. It is indeed an achievement for any educational institution on national level. The entire team of the department including HoD, Dean Engineering, advisors, faculty members and laboratory staff was determined to get the accreditation so it was set as a priority resolution in the very start of this year. It was made possible by the dedicated efforts of faculty members who worked day and night specially to improve the state of the art laboratories by giving special input in the design and fabrication of equipment. It could not be possible without the in-depth supervision of team leader Dr. Moinuddin Ghauri, who took special interest in the accomplishment of the accreditation process. Director CIIT Dr. Shaukat Ali Hayat was also very keen about it and contributed as much as he could in achieving the goal.

PEC Engineering Accredi



tation and Quality Evaluation Committee (EA & QEC) has been specially formed to carry out assessment of various engineering programmes through a systematic and well documented process. It works aligned with Higher Education Commission (HEC) of Pakistan.

Because of PEC's stringent and high standards, it takes unflinching efforts to meet the criteria. PEC is the only government body in Pakistan which recognizes the engineering degree awarding educational institutions on the basis of a tough criteria including faculty profile, lab standards, financial resources, human resources, pay scales, facilities available in the department and many other factors. PEC gives membership to only those engineers who have

been awarded degrees from the accredited institutions after passing through a long and competitive process. It is worth mentioning here that chemical engineering department has a unique status of getting the accreditation before even the first batch has passed out.

This is just the beginning and there are miles to cover. The whole team of Chemical Engineering Department is committed to grow rapidly and to maintain the title of PEC Accreditation.

7th Meeting of ChE BoS

The 7th Meeting of the Board of Studies (BoS) for Chemical Engineering was held on 20th March 2009 at the Conference Room, CIIT, Lahore Campus. Dr Moinuddin Ghauri, In-charge, Department of Chemical Engineering, CIIT Lahore chaired the meeting. Mr. Liaquat Mahmood, Senior Manager, Engineering Presson

Descon International (Pvt) Ltd., Prof. Dr. M. Khaleeq-ur-Rehman, Chairman, Dept. of Physics, UET, Lhr., Dr. Waheed M. Butt MD, TECHMA, Lhr., attended the meeting BoS, following items were deliberated upon:

- The BoS confirmed the minutes of the 6th meeting of the BoS for Chemical Engineering.
- The BoS checked whether any action was taken on the recommendation of the 6th meeting of BoS or not.
- The BoS recommended the consideration of Contents of elective courses to be offered in the 7th and 8th semesters of BS-Chemical Engineering.
- The BoS recommended the consideration of summer semester in HEC approved curriculum as a separate Semester of 4 to 6 weeks duration.

Research Activities

- 2 lectures were delivered on Mathematical modeling and simulation by Dr. Asad to group members of MMSRG.
- Dr. Anwar prepared Novel dyes and soap.
- Locally Activated Charcoal was prepared by Engr. M. Tahir (j) and Dr. Moinud-din Ghauri.
- Energy conservation using room heater, geysers and DRA research work is carried by Engr. A.A. Bazmi, Engr. Aamir Ala udin., Engr. Fahad Rehman under the supervision of Dr. A.H. Dilawari.
- Dr. Anwar ul Haq Introducing new area of research: Porphyrin and phthalocynine synthesis and their application in Photodynamic Therapy and in nonlinear optics.
- Following research activities are conducted by Dr. Nasir, Dr.Kardar and Dr. Anwar:
- Microwave reaction using for aryl halide to form new carbon-heteroatom bond. We developed a fast easy methodology using domestic microwave irradiation. The reaction time decreased to 2.5 minutes instead of 12 hrs with 95% yield.
- Establishment of Computational Chemistry research area in chemical engineering department.
- Reinvestigation of spectroscopic Studies and ab initio calculation of natural products isolated from Plant and Fungi.

Publications

- Preparation of Activated Carbon from Acacia Arabica (Kikar) Wood Sawdust for Treatment of Textile Effluents, M. Tahir, M. Ghauri, A. U. Khan, A. Chughtai, Submitted to Chemical Engineering Journal.
- Direct Comparison Between Rotational and Extrusion Rheometers, A. U. Khan, N. Mahmood and A. A. Bazmi, Submitted to Mat. Sci. Poland.
- Diffusion Aided Joint Healing in Polymers at Interfaces, N. Mahmood, A. U. Khan and J.Kressler. Submitted to J. Adhesion.

New Faculty

Name: Engr. **Amna Akhtar**
Designation: Lecturer
Qualification: M.Sc. Engg (UET, Pak), B.Sc. Engg (UET, Pak)
Research Area: Separation, Flocculation
PEC Reg #
Email: Amina@ciitlahore.edu.pk



Name: Engr. **Fawad Ahmed Khan**
Designation: Lecturer
Qualification: M.Sc. Engg (UET, Pak), B.Sc. Engg (PU, Pak)
Research Area: Renewable Technologies, Bio Diesel
PEC Reg # Chem-5055
Email: FAKhan@ciitlahore.edu.pk



Name: Engr. **Muhammad Shahzad Khurram**
Designation: Lecturer
Qualification: M.Sc. Engg(Myongji, SK), M.Sc. TQM (PU, Pak), B.Sc. Engg (PU, Pak)
Research Area: Industrial Waste water treatment, Renewable energy, Pyrolysis of Polymer Waste
PEC Reg # Chem-4647
Email: MSKhurram@ciitlahore.edu.pk



Name: Engr. **Awais Mazhar**
Designation: Lab Engineer
Qualification: B.Sc. Engg (PU, Pak)
Research Area: Polymer Technology
PEC Reg # Chem-7205
Email: AwaisMazhar@ciitlahore.edu.pk



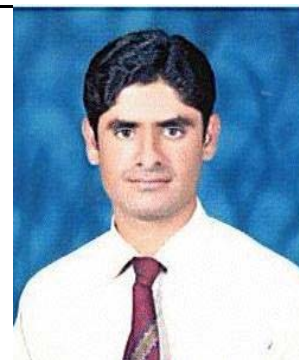
CIIT Lahore

New Faculty

Name: Engr. Ayesha Saddiqa
Designation: Lab Engineer
Qualification: B.Sc. Engg (PU, Pak)
Research Area: Advanced Separation Processes
PEC Reg #
Email: ASaddiqa@ciitlahore.edu.pk



Name: Engr. Ashfaq Ahmed
Designation: Lab Engineer
Qualification: B.Sc. Engg (NFC, Pak)
Research Area: Energy Conservation
PEC Reg #
Email: AshfaqAhmed@ciitlahore.edu.pk



Faculty Achievements

The department of Chemical Engineering is proud to have one of the best faculties in town; always ready to sharpen their tools and prove their individuality, versatility and abilities. Petronas is one of the leading Petrochemical firms of the world and has done some great developmental works in the academics and research fields. It is quite customary of her to offer research projects to faculty of University technology, Petronas in various capacities and areas. Recently, five faculty members have been awarded fully funded PhD scholarships by University of Technology Petronas, Malaysia. The details are:

Engr. Abrar Inayat and Engr. Zakir Khan shall be working in the areas of Bio gasification and Biodiesel formation, Engr. Ghulam Murshid, Engr. Faizan Ahmad, Engr. Sikander Rafiq

The scholars shall also be focusing on developing relations between the two insti-



Manuscript written by one of the faculty members **Mr. Khurram Hussain** was accepted by ASEE (American Society of Engineering Education) Technical Committee on **18th March 2009**. The title was “*Challenging Economic Aspects of Thermoplastic Recycling*”. It was accepted for presentation in ASEE 2009 Conference and for inclusion in the Conference Proceedings, to be held in April 2009 at **Bridgeport University USA**.

Poster Presentation:

An event of Poster Presentation was held on **18th February, 2009** conducted in the chemical engineering labs for the students of department of chemical engineering. The event was organized on advice by Head of Department Dr. Moinuddin Ghauri with the coordination of Departmental Student Representative (Mr. Modusser Tufail). All the 11 groups of Batch-1 transformed their learning experience of Internship in various reputed industries of Pakistan onto a poster and presented to the junior students and the faculty members of the department. The Director COM-

SATS Lahore Campus Mr. Shaukat Ali Hayat was the chief guest of the event who visited the venue and appreciated the students for this brilliant effort. Faculty members of other departments were also invited and



Mini Project Presentation of Unit Process

At the end of 7th semester the students of Batch-1 were assigned mini projects to cover the subject of unit process. A formal presentation of the projects was conducted on **25th February, 2009**, where the students presented their work and justified the grip on the thermodynamics, kinetics and mechanism of the unit process involved. All the students were examined by the panel of faculty members of Chemical Engineering.



Computer Labs

The department has now a computer lab in A Block. This dedicated lab is to facilitate the final year students to work on their Plant Design Project.



New equipment addition in Laboratories

Simultaneous Heat & Mass Transfer Operations Lab

Batch Distillation Column
Continuous Distillation Column
Tray Dryer

Heat Transfer Operations Lab

Fired heat exchanger
Open pan evaporator

Mass Transfer Operations Lab

Absorption Column
Adsorption Column
Packed Column
Wetted wall Column
Liquid-Liquid Extraction Unit

Engineering Workshop

Provision of fabrication
Project equipment/ research parts

Chemical Reaction Engineering Lab

Tubular reactor
Batch Reactor

IPC Lab

RTD's and AVO meters for calibration
Level Control Rig

Industrial Tour

Students of Chemical Engineering Batch-IV have visited many process and forming industries in the last week of January and the first week of February 2009. It was a rainy day when students left COM-SATS Lahore campus for Taxila/Hattar region on 26th January 2009, with strong enthusiasm and relax mind as they had finished the examination of the Fall-08 semester. The industries they visited included, Fauji Cement Company Limited, Fecto Cement Limited, HMC Taxila, ICI Soda Ash Limited, Tri Pack Limited and Dewan Cement Limited. Most of these industries are located in Taxila/Hattar region. In the first week of February they visited local industries in the Lahore/Faisalabad region. These industries are Sitara Chemical Industries Limited, Nimir Chemicals Limited, Ittehad Chemical Limited, Packages Limited and Jotun Powder Coatings Pakistan (Pvt.) Limited. It was

indeed a great opportunity for the students to learn about the various aspects of Chemical Engineering discipline being applied in these industries. Such industrial cum study tours add values to the learning process and facilitate in improving the professional skills of the graduating engineers. This tour was accompanied and guided by Dr. Asad Ullah Khan, Engr. Khurram Shahzad and Engr. Beenish of the Chemical Engineering Department. It was a very helpful and beneficial learning experience for the Chemical Engineering students to enhance their vision of the process industries.



Welcome Party

Extra curricular activities provide the students with an opportunity to socially groom themselves to be able to learn themselves and to learn other things besides academics. This year a combined welcome party of 1st Semester (students from chemical and electrical engineering) was arranged on **24th February, 2009** by chemical and electrical faculty. Ms. Kanwal Rashid (Incharge extra curriculum activities, Chemical Engineering Department) and Mr. Khurram Zaidi (Incharge, Telecom Engineering Department) arranged the function. Audience were entertained by the hilarious skits and performances by the students.



Sports Gala

Inter- Departmental sports competition has been a regular feature of COMSATS, Lahore. For the very first time, inter departmental girls competition was arranged by Ms. Kanwal Rashid (incharge extra curriculum activities) and Ms. Saima. Prof. Madam Talat Afza, Dean MS, was the convener. Mrs. Nava (Chair person, Chief Minister Task Force for Sports) was the chief guest. The students showed their active performance.

The departmental girls won the basket ball match and were runner up in cricket match. Later on, a prize distribution ceremony was held on **21st May, 2009** and the students were awarded shields and meddles in accordance with their ranking.



Na'tia Competition

Mehfil-e Na'at Khawani was held on **26th March 2009**. It was arranged by the department of chemical engineering. Ms. Kanwal Rashid (incharge extra curriculum activities) and Ms. Iram Zia were the main organizers. Students from all departments actively participated in this event. Mr. Habib ullah (Student of 3rd semester from Chemical Engineering) was the stage secretary of the event. Mr. Badar zaman, Engr. Aqeel Ahmad Bazmi and Mr. Mudassar Awaan were the judges. Dr. Moinuddin Ghauri was the chief guest. He encouraged the students

by his appreciating speech. At the end students were awarded with honorary shields for their outstanding performances.



NEWSLETTER TEAM

Patron

Dr. Shaukat Ali Hayat Director

Chairman

Engr. Dr. Moinuddin Ghauri HoD

Incharge

Engr. Dr. M. Shamim Sabir Advisor

Chief Editors

Ms. Maryam Irshad Lecturer

Engr. Khurram Hussain Lecturer

Members

Engr. Amna Akhtar Lecturer

Mr. Modassar BEC Student