MESSAGE

On behalf of the faculty and staff of Chemical Engineering Department, CIIT Lahore, I would like to welcome newly appointed Faculty members to the university community. I have had the privilege of working at several fine institutions in the past, and if I have learned anything in my career, is the fact that a university teaches simply by being what it is: a community of individuals—students, faculty, and staff—who are interested in personal growth and intellectual development that reaches beyond the classroom.

One of the great things about being on a campus is the feeling of freedom that comes from being in a place that accepts and respects so many different points of view. That is what a university is all about and that concept is integral to our mission and responsibility.

In my role as Head of Department, I also work with dedicated staff in the Division of Student Affairs who are committed to supporting students as they pursue their goals in the University. I strongly believe that whatever takes place outside the classroom has a significant impact on classroom learning. I hope you shall like reading about Chemical Engineering Department. Wishing you all the very best.

(Engr. Dr. Moinuddin Ghauri)
Incharge/ HoD Department of Chemical Engineering
A pre-conference seminar on “Options for Sustainable Energy Future in Pakistan” was organized by Chemical Engineering Department under the supervision of Engr. Dr. Moinuddin Ghauri, Engr. Abrar Inayat (Convener COMSATS Society for Sustainability, CSS) and student members of CSS.

Speakers were invited from all over Pakistan; including Dr. Muhammad Naseem (Dawood College of Engineering & Technology), Dr. Abdul Waheed Bhutto (Dawood College of Engineering & Technology), Dr. Khaliq Ansari (Mehran University), Dr. Mushtaq Ahmad (Quaid-e-Azam University), Dr. Pervaz Akhtar (Pakistan Council for Renewable Energy Technology), Dr. Ghulam Muhammad Sarhandi (Pakistan Council for Renewable Energy Technology), Mr. Naveed Bukhari (Alternative Energy Development Board of Pakistan) and Dr. Murid Hussain (COMSATS Institute of Information Technology).

Dr. Moinuddin Ghauri inaugurated the seminar with his welcome speech. All the speakers described various alternate energy resources & technologies available and the work being carried out in Pakistan in that regard. The participants greatly applauded the research work, facilities and the opportunities being explored in this sector.

A meeting of Departmental Academic Review Committee (DARC) was held on Thursday April 17, 2008.

Participants: Dr. Moinuddin Ghauri (Convener), Dr. M. Shamim Sabir (Advisor), Dr. Nasir Mehmood (Asst. Prof.), Mr. Aqeel Ahmed Bazmi (Asst. Prof.), Mr. Javed Ahmad (Asst. Prof.), Dr. M. N. Kardar (Asst. Prof.), and Dr. Murid Hussain (Asst. Prof.)

Main points of the meeting:

- Improvement in Student’s General Required Skills for oil and gas sector
- To develop skills in Analytical, Management, Mathematics and English, it was agreed that quizzes and assignments shall develop new analytical skills and promote proficiency in English.
- Development of Marking Criteria (Global Marking System). A committee was formulated that will check global wide practices and thereby submit suggestions regarding measures for Quality of Education.
- To develop a system for measuring Quality of Education
- Departmental Programs for Faculty Development. Another committee was constituted for developing guidelines to develop teaching qualities.
- Implementation of agenda made in Fall semester 2008. The house extended the aspersions regarding the development of labs with particular focus of batch -1 students who would be graduating in Fall 2009. It was mentioned that every now and then senior students in particular and junior students in general extend their concern about laboratories.
Pakistan Engineering Council paid zero visit to the department of chemical engineering for the accreditation of B.Sc. Chemical Engineering degree course. During the visit the team was briefed about the induction procedures, management & financial affairs and upcoming projects. The team visited laboratories and the library facilities. They also had interaction with the students and were very much satisfied.

The students of 6th semester (Mr. Usman Shoukat, Mr. Shoaib Ghaffar, Mr. Johar Saeed, Mr. Kashif Mehmood, Mr. Muhammad Tayyeb, and Ms. Qandeel Fatima) took part in Project Exhibition, 2008 organized by Ghulam Ishaq Khan University. The project titled as “Application of Industrial Automation Process Control”, supervised by Engr. Javed Ahmad consisted of a remotely controlled Pressure control system with option for satellite control. The model was widely appreciated and declared third in the category. Engr. Zakir Khan accompanied the students.

Mr. Zeeshan Shahid, student of Chemical Engineering (BEC-III) and member of COMSATS society for Sustainability (CSS), presented his research paper on “Irrigation with waste water and their effects on health” at the World Student Summit, Canada. His total tour was sponsored by the WSCSD – World Student Community for Sustainable Development. Students from all over the world participated in the conference and he was the only undergraduate student to attend the same. His work is reckoned as the best paper of the conference and is awarded with an i-POD.

COMSATS SOCIETY FOR SUSTAINABILITY (CSS): The idea for formal student community at COMSATS based on Sustainable Development comes in the shape of COMSATS Society for Sustainability. The main goals of this society are to carry out projects in the domain of sustainable development both independently and in collaboration with other student communities of the world. These projects include energy conservation, resource conservation and awareness regarding sustainable development at COMSATS. We plan to get this student society affiliated with World Student Community for Sustainable Development (WSCSD). This collaboration will help in providing international exposure to our students. Mr. Abrar Inayat, Lecturer of Chemical Engineering Dept. is the Convener.
**RESEARCH & DEVELOPMENT**

**Biomass Conversion Research Group (BCRG)** has been established by Engr. Aqeel Ahmed Bazmi in collaboration with Engr. Abdul Waheed Bhutto (DCET) to support the science and technology goals of Government of Pakistan. Headquartered at CIIT Lahore, this virtual center unifies Pakistan’s efforts to advance technology for producing fuels, chemicals, materials, and power from biomass. BCRG will be a collaborative effort between CIIT, DCET, MUET and HEJ.

The Biomass Conversion Research Group (BCRG) **Aims** to apply chemical engineering science and technology to the development of advanced processes for the production of electricity, liquid fuels and gaseous fuels and chemicals from natural sources.

The primary **Goal** of the research group is to tap the intellectual capital of our nation’s institutions to tackle issues of resources conservation and diversification and environmental sustainability.

The **Mission** of the Biomass Conversion Research Group at CIIT is to develop cost effective and environmentally attractive means of generating fuels, chemicals, materials, foods and feeds from renewable plant biomass. We seek to shift the raw material basis of modern society away from excessive dependence on fossil resources, particularly petroleum, and toward biomass.

The **Strategic Area** will have the following activities for research: feedstock development, conversion processes, system integration, and public policy matters.

**Director**
Engr. Dr. Moinuddin Ghauri (CIIT-Lahore)

**Principle Supervisor**
Dr. M. Nadeem Kardar (CIIT-Lahore)

**Resource Persons**
Dr. Muhammad Mushtaq (QAU, Islamabad)
Engr. Aqeel Ahmed Bazmi (CIIT-Lahore)
Engr. Abdul Waheed Bhutto (DCET, Karachi)
Engr. Sohail A. Soomro (MUET, Jamshoro)
Engr. Javed Ahmad (CIIT-Lahore)

**Engr. Abrar Inayat** (CIIT-Lahore)
**Engr. Amjad Riaz** (CIIT-Lahore)
**Engr. Muhammad Rizwan** (CIIT-Lahore)
**Engr. Muhammad Yasin** (CIIT-Lahore)

**Fellow Students**
Muhammad Tayyab (BEC-Student)
Kashif Mehmood (BEC-Student)
Sohail Irshad (BEC-Student)
Anum Sattar (BEC-Student)

**Projects in Progress**
- Bio-diesel Production and Quality
- Production of Bio-ethanol From Rice-wheat Straw
- Biomass Gasification

Collaboration with Prof. Dr. Mushtaq Ahmed, Quaid-e-Azam University has been established to provide lab testing facility for Fellow students of BCRG on the project. Fellow students also visited Quaid-e-Azam University under the supervision of Dr. Nadeem Kardar.

**For Registration please contact:**

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PRESENTATIONS

Engr. Imran Aslam, Lecturer Department of Chemical Engineering presented his research paper entitled “Adsorptive desulphurization of Kerosene and Diesel for fuel processes in fuel cell system” in International conference on Plant Equipment and Reliability (ICPER) 2008, Malaysia.

Engr. Ghulam Murshid, Lecturer Department of Chemical Engineering presented his research paper entitled “Investigation of Power Failure effects on a Biological waste water treatment Process in International conference on Plant Equipment and Reliability (ICPER) 2008, Malaysia.

Engr. Dr. Moinuddin Ghauri, Incharge Department of Chemical Engineering submitted his research paper titled “Sustainability Considerations in the Production of Hydrogen from Biogas” in International conference on Plant Equipment and Reliability (ICPER) 2008, Malaysia.

Engr. Asim Laeeq Khan, Lecturer Department of Chemical Engineering submitted his research paper entitled “Design considerations in the Production of Hydrogen from Biogas Generated from Biogas in a Small-Scale unit” in International conference on Plant Equipment and Reliability (ICPER) 2008, Malaysia.

Ms. Irum Zia and Ms. Kanwal Rashid presented their research paper on “Antioxidant activity of Medicinal Plants” in 1st International Seminar on Medicinal Plants (ICMP). The seminar was jointly organized by University of Portsmouth, British Council and Lahore College University, Lahore.

Engr. Abrar Inayat, Lecturer Department of Chemical Engineering submitted his research work entitled “District Cooling System using River and Canal Water as Cooling Source in Pakistan” in International conference on Plant Equipment and Reliability (ICPER) 2008, Malaysia.

Dr. Nasir Mehmood, Asstt. Professor, is working on a HEC funded 1.98 million rupees research project in the field of polymer sciences. His research work involves investigation on synthesis, characterization and application of Thermoplastic polyurethane elastomers.
Following faculty members of the Chemical Engineering Department submitted their Research Papers for Oral Presentation in ESD-2008 to be held in November, 2008 at DCET, Karachi, jointly organized by Department of Chemical Engineering CIIT-Lahore and DCET-Karachi:

∞ “Comparison of zeolite and silica based sorbent for the desulfurization of liquid fuels” by Imran Aslam, Dr. Moinuddin Ghauri, Abrar Inayat and Muhammad Yasin.

∞ “Challenging Economic Aspects of Thermoplastic Recycling” by Khurram Hussain and Dr. Moinuddin Ghauri.


∞ “Application of Computational fluid dynamics – Optimal cooling of hardware components” by Faizan Ahmad and Dr. Moinuddin Ghauri.

∞ “Bio-Diesel Environmentally and Socially Sustainable Fuel Alternative for Pakistan” by *Muhammad Tayyab, *Kashif Mehmood, Aqeel Ahmad Bazmi, **Abdul Waheed Bhuutto and Dr. Nadeem Kardar

∞ “Process Design Considerations in Bio-Ethanol Production from Rice-Wheat Straw” by *Sohail Irshad, *Anum Abdul Sattar, Dr. Moinuddin Ghauri, **Abdul Waheed Bhuutto and Aqeel Ahmed Bazmi.

∞ “A study on Risks and Opportunities related to Sewage Irrigation” by Ghulam Murshid and *Zeeshan Shahid


∞ “Application of IR Radiation Thermometry to Temperature Measurements in Process Industry” by Zakir Khan, Dr. Moinuddin Ghauri and Ghulam Murshid.


(* Students of BEC, ** Assistant Professor DCET)

The Research Papers of Engr. Aqeel Ahmed Bazmi and Engr. Ghulam Murshid have been accepted for oral presentation in “International Conference on Environmental Science and Technology”, American Academy of Sciences, Houston, USA. The title of their papers are:

∞ “Air pollution control: A route to safer and healthier environment”

∞ “Environmental degradation and their social effects on society ”

Catalysis Research Group (CRG) — The department is trying to keep pace with the fast changing trends in chemical & process industry. The current and future research work shall mainly be in the field of catalysts. The field has widespread applications potential for researchers. Engr. Dr. Murid Hussain, being postgraduate in the very field, is working on the establishment of a Catalysis Research Group (CRG) in COMSATS. The main focus of that group shall be to bring awareness among the faculty and also to encourage students to take up projects pertaining to the field of catalysis.
INDUSTRIAL LIAISON SECTION

It is believed that effective collaboration between industry and academic institutions is vital for the development of Pakistan. It can play crucial role in improving efficiencies of existing processes and bringing innovative practices. “Industrial Liaison Section” in Department of Chemical Engineering is established for such collaboration that would involve joint research projects carried out at COMSATS for the development / improvement of industrial processes. Wishfully the section is working to establish eternal relation with industries that would facilitate escalation of professional skills in our graduating engineers by doing research projects on live process problem. The major events by this section are Industrial Visits & Industrial Internship Training Program. Engr. Abrar Inayat is working as Departmental Industrial Liaison Officer. Engr. Faizan Ahmad and Engr. Muhammad Shahid are members of this section.

INDUSTRIAL TOURS/ VISITS

∞ Engr. Zakir Khan and Engr. Faizan Ahmad accompanied Students of batch -2 for their study visit to Haier Pakistan’s Refrigeration and A/C units on 01st April, 2008.


∞ Batch – II students visited Ravi Motorcycles on Friday (April 18th, 2008), accompanied by three faculty members (Engr. Imran Aslam, Engr. Sidra Nisar, Engr. Arfa Nawaz). The main focus of the tour was to study the practical applications of Engineering Workshop Lab.

∞ Students of Batch-I, Batch-II & Batch-III visited the exhibition on Heating, Ventilation and Air Conditioning equipment at Expo Centre (Fortress Stadium). Mr. Khurram Hussain and Mr. Faizan Ahmad have accompanied Batch-I on 27th March 2008; Mr. Amjad Riaz, Mr. Abrar Faisal, Ms. Kanwal, Ms. Beenish and Ms. Arfa Nawaz accompanied Batch-II on 28th March; Mr. Muhammad Ahmad and Mr. Muhammad Rizwan accompanied batch-III on 29th March, 2008.

∞ Industrial tour to Chemical and allied industries located in Karachi was arranged by the departmental industrial liaison section. The boarding, lodging and transportation costs were beard by COMSATS. Engr. Aqeel Ahmad Bazmi, Engr. Amjad Riaz & Engr. Amir Alauddin accompanied the students for this week long tour. The students visited the main process area, utilities and the DCS rooms at plant sites of Pakistan Refinery Ltd., Pakistan Steel Mills, Engro Chemicals and polyester Ltd., KESC Thermal Power Plant, KESC Gas Turbine Station, Fauji Fertilizer Bin Qasim Ltd; to name a few. The industry personnel briefed the students about various aspects of chemical engineering and their practical applications. The visits ended with notes of thanks by the students and the faculty.
INDUSTRIAL TRAINING/ INTERNSHIPS

In pursuance of quality inculcation the Department of Chemical Engineering has set certain objectives for internship training. Knowing the importance of this activity, the department has assigned credits to this activity. During the semester break, the students shall be joining their assigned industries as intern. Pakistan Refinery Ltd., Attock Oil Refinery, Pak American Fertilizer, SNGPL, Bestway Cement, DG Cement, Dewan Salman Fibres Ltd., Ittehad Chemicals are some the industries where students shall be joining as intern during semester break.

In order to achieve the core objective of internship, the department has nominated honorable faculty members to keep an eagle eye on student's performance. The students are required to regularly update their reporting officers at the industry & COMSATS and consistently prepare a technical report to the industry and institute. Upon completion of the training every student shall make a comprehensive presentation before a house of expert faculty.

FACULTY

Engr. Muhammad Rizwan has been awarded MS leading to PhD scholarship offered by Higher Education Commission (HEC). He will be heading South Korea for his postgraduate study in Chemical Engineering at Hangyang University.

Engr. Muhammad Yasin has been awarded scholarship for higher studies under the COMSATS Faculty Development Programme. He'll be leaving for University of Sheffield, London for his MS in Environmental & Energy Engineering shortly.

Engr. Abrar Faisal has been awarded scholarship for higher studies under the COMSATS Faculty Development Programme. He'll be leaving for Lulea University of Technology, Lulea for his MS in Chemical Engineering very soon.

Engr. Dr. Murid Hussain has been awarded fully funded Italian Government scholarship for his Post Doctoral research work at University of Camerino, Italy in the field of Catalysis.

IT SECTION

Following the instructions of our worthy Director the Department of Chemical Engineering has established an Information Technology section under the guidance of our kind HoD. The main objective of developing this section is to co-ordinate with the campus Network section in solving various internet, computer and software related problems. The section is also responsible for the recommendation/ approval of engineering software's for teaching purposes. The section is already giving its development section of COMSATS. The section intends to organize software training sessions for faculty and students to cope with the current demands of industry and research activities. The section is headed by Engr. Amjad Riaz, who is also the IT Focal Person of the Department.
Students Welcome Party

Welcome party of 1st semester was arranged on May 16, 2008 by the students of 2nd semester. Chief organizers of the party were Engr. Ghulam Murshid and Ms. Kanwal Rashid. Students of 2nd semester actively participated in the arrangements of the party. Audience was entertained by the various skits performed by the senior batches. Misbah and Usman delivered their welcome and thanks speeches respectively on behalf of their batches. Dr. Ghauri appreciated the organizers and students for managing the party. Refreshment was served to faculty members in faculty block and to students in the discussion hall.

N’atia Competition

The Department of Chemical Engineering arranged a Mehfil-e-Na’at khawani on 2nd of April, 2008. Mr. Ghulam Murshid (Departmental Student Advisor) and Ms. Kanwal Rashid (Incharge Extra Curriculum Activities) were the main organizers. Students representing different departments participated in the event. Mr. Mudassar Awan hosted the event. Mr. Badar Zaman, Engr. Aqeel Ahmad Bazmi and Engr. Ghulam Murshid were the judges and Engr. Dr. Moinuddin Ghauri presented honorary shields to the winners.

ESD Conference

An International conference on “Energy for Sustainable Development” is being jointly organized by COMSATS Institute of Information Technology (CIIT) and Dawood College of Engineering & Technology (DCET). The conference is scheduled in November, 2008. Engr. Aqeel Ahmad Bazmi (CIIT) is coordinating with Engr. Abdul Waheed Bhatti (DCET) in this regard. Renowned scholars from around the world shall be participating in this conference. A pre-conference seminar was also organized by CIIT, Lahore. The details about the conference may be viewed at www.dcet.edu.pk/conference.html.
Dr. Moinuddin Ghauri and Dr. Muhammad Shamim Sabir visited Haier Pakistan Limited for mutual collaboration. They discussed with Quality assurance Manager about the students internship programme and regarding their research and development problems to be worked upon by our students under the supervision of the faculty.

Dr. Moinuddin Ghauri visited Allied Paint Industries on April 10, 2008 and had meeting with General Manager, Production Heads and Plant Managers regarding provision of under graduate projects and live problems for active Research and Technological development.

Dr. Murid Hussain presented the faculty and students of chemical engineering department on the topic “Synthesis and Catalysis applications of Nano-porous Materials” in Seminar Room A-Block on April 09, 2008 as part of establishing catalysis research group.

Visit of Dr. Moinuddin Ghauri to BP Pakistan, Badeen (Sindh), the visit was about exploring opportunities for our graduating students regarding the provision of internship training, trainee engineers and for permanent job opportunities. During the course of visit he had the opportunity to visit their oil and gas exploration wells, gas compression facilities and head office at Karachi. Interaction with their Technical, Senior Management and Human Resource Management was also done. Communication regarding our tentative pass out was made and their expectations from the graduate engineers were also noted down.

Mr. Abrar Inayat, Lecturer Chemical Engineering Department visited NFC Institute of Fertilizer Research & Technology as External Examiner of Thermodynamics Practical Exams.

A meeting of the Faculty of Chemical Engineering Department was held in the Labs arena on 1st of April. The main objective of the meeting was to finalize preparations for the PEC accreditation committee visit. The focal point remained the placement of newly bought and locally manufacture lab equipment.
The Chemical Engineering Department defeated Computer Science Department in the final of Inter Departmental Basket Ball Championship organized by COMSATS by 8 points (41 - 33) on April 13, 2008.

In Inter Departmental Cricket Tournament was played on April 17, 2008. Chemical Engineering team progressed to semifinal by beating Physics by 9 runs, but beaten comprehensively by Computer Science department in the semifinal.

The department of Chemical Engineering organized the first ever Cricket Gala under the supervision of Engr. Abrar Faisal Sports Incharge of Chemical Engineering Department. It was attended by Engr. Dr. Moinuddin Ghauri who not only graced the opening and closing ceremonies but took great interest in all the events. The tournament started on April 7, 2008. All the 11 sections of 6 Batches participated in this tournament. There were monstrous launches on to the main road outside the boundaries of COMSATS, and into the adjacent farm fields. The brilliant performances even stopped people on the outside road as they climbed on COMSATS wall to witness the matches. The celebrations that ensued right after the final match had an extra tonic of zeal and exuberance. And why not so, they deserved every bit of this outlet.