

# PI: Towards a premier technical university

## PI's activities for the academic year 2007-2008 and Plans for 2008-2009

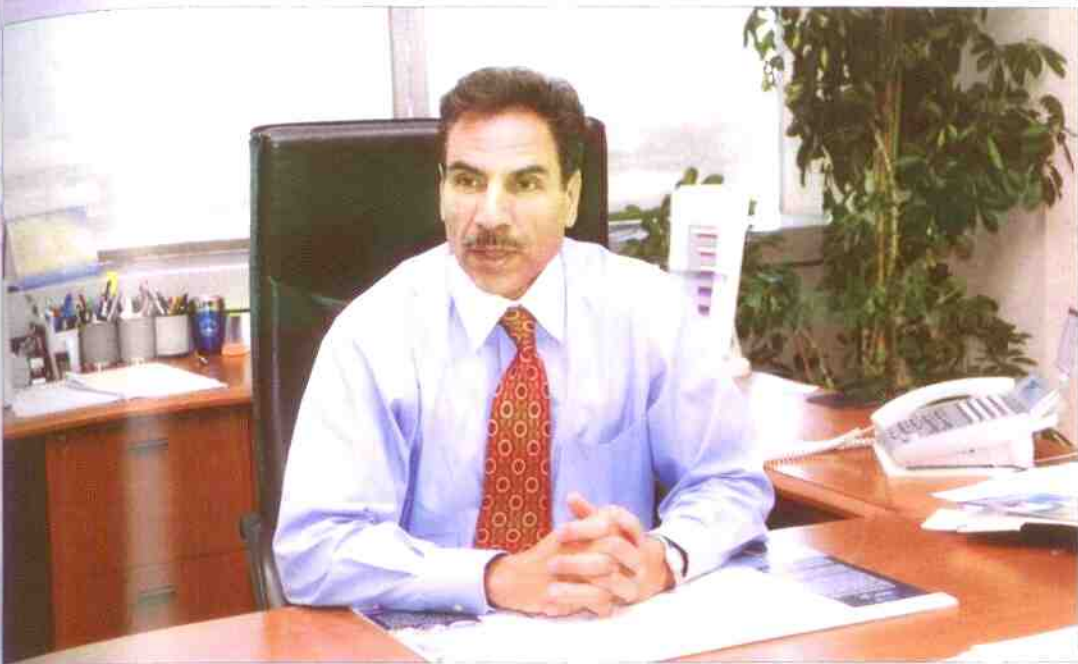
The Petroleum Institute (PI) is on its way to establishing itself as a premier technical university with relevant significance to its sponsors and the broader energy industry in Abu Dhabi and beyond.

In a statement to *ADNOC News* at the start of the new academic year 2008-2009, Dr. Michael Ohadi, PI Provost and Acting President, said the PI's uniqueness was due to its high caliber students and faculty, excellent facilities, the sponsorship of ADNOC operating companies and international majors, namely BP, JODCO, Shell, and Total), and the unique collaborations it has with internation-

al partner institutions.

"Today at PI we have 1,163 undergraduates (848 male and 315 female) and 52 graduate students. This represents a total of 1,215 students, all engineering and close to 80% UAE nationals. By the end of our five-year plan in 2012 this number is supposed to reach 1,800 and by 2020 when PI reaches its steady state it will have nearly 3,000 students," Dr. Ohadi





*Dr. Michael Ohadi, PI Provost and Acting President*

said. He added that the PI plan was to stay a relatively smaller university even in the long run, but with significant contribution and strengths in engineering and applied sciences, noting that there had been 50% admission this year of the students who applied to PI.

"Each year we will raise our admission standards, with the goal of creating an environment of learning and prospering for students who want to be high performers and leaders in their field of expertise when they graduate, who are not afraid of taking challenges and learning from their experience, and who enjoy engineering and the student life at PI," Dr. Ohadi said.

"You can see" we are not an easy program, but we offer close coaching and mentorship of our students to see them succeed. but higher, one where students who are eager to be challenged and stretched," he said, emphasizing the importance of spending more time to further refine the five-year plan and develop action items with relevant time tables and deliverables to achieve the PI's goals.

Dr. Ohadi pointed out that the PI's focus areas in the academic year 2008-2009 are in-line with the five-year strategic plan for the

institute and are as follows:

- Improved image of the PI in the eyes of our own people at PI, in the UAE and abroad
- Improvement of student recruitment and retention—improvement of student life and the learning environment at PI, with equal dedication to both male and female students.
- Improvement of our packages with additional incentives for recruiting and retention of high caliber, internationally recognized, faculty and staff. Retention of high quality existing faculty and staff is of course of prime focus for AY 2008-2009 as well.

Further strengthening of graduate studies and research, including Development of PI Research Center (PIRC).

Continuous improvement in the quality of our undergraduate education, including further establishment of Center for Teaching Excellence and the requirement of Fundamentals of Engineering (FE) examinations for all students before they graduate. FE exams will provide us with a bench mark to gage the quality of our students from an international standard. FE exams are designed and

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*Dr. Nadia Hasani, Director of the Arzanah Campus*

graded by the National Engineers Council in the U.S.

Full Accreditation of both undergraduate and graduate programs by the Ministry of Higher Education.

Preparation for ABET accreditation for submission of the application in January 2010. This is a major undertaking and substantial efforts are needed to assure our success in the first round.

Implement new programs of strategic need to the sponsors while assuring PI's growth and its impact for the future. Materials Science, Civil, infrastructure, environmental engineering, and some form of engineering management are among the fields considered, subject to approval by the board.

Implementation of space planning and campus facilities based on the five-year plan approved by the board.

Enhancement and expansion of the international collaborations, including establishment of partnership with chemical engineering at University of Minnesota and Petroleum engineering at Stanford University.

For her part Dr. Nadia Hasani, Director of the Arzanah Campus, said that with an increase of 30% in Arzanah's student population and the offering of new courses in engineering, the women's campus was better positioned to engage students in teaching and research activities.

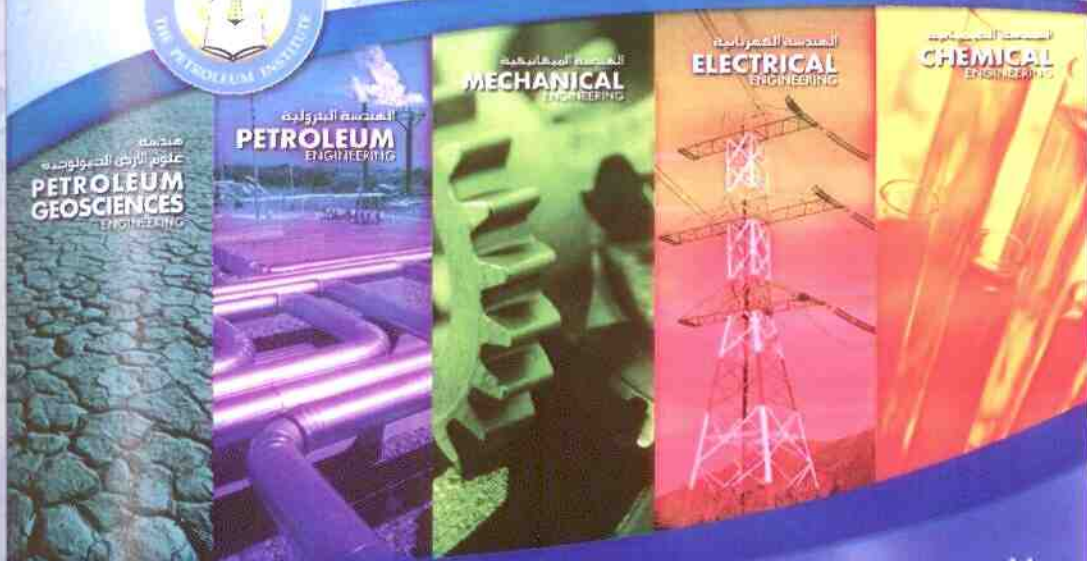
Talking to *ADNOC News* about the highlights of the previous year and the plans for the new academic year 2008-2009, Dr. Nadia said: "We have already begun these initiatives with students assisting faculty with their research and teaching activities. These activities are a vital part of our students' training in time management, multi-tasking and team work. It also exposes them to their discipline from a total different perspective.

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to support the existing student clubs and encourage new student initiatives. It is our hope that these plans will encourage a broader range of students to participate in extracurricular activities,” she said, asserting her confidence that both PI and outside communities would witness the students’ academic achievements and personal growth in the near future.

She noted that the first class of Arzanah students was admitted in 2006 and the number of enrolled students doubled to over 200 students by Fall 2007, saying: “Arzanah students’ accomplishments last year were numerous thanks to the students’ commitment and our sponsors’ encouragement. Most notable is

our female students IEEE Chapter claiming first place at a national level competition for their community service project. It was their first submission and the team was the youngest among participants.

“Students also showed commitment to social causes through sponsorship of an on-campus Breast Cancer Awareness Week and participation in the Abu Dhabi Diabetes Walkathon. More impressive was their commitment to children as they celebrated UAE National Day with an invitation to two groups of orphans for a day of fun and games in Arzanah. All these activities were performed while diligently working on their courses and maintaining impressive academic results.”



## PI's major accomplishments in the Academic Year 2007-2008

### I) Preparation of Five-Year Strategic Plan

In 2007 a major task was initiated to develop a five-year strategic plan for the Institute. The Institute as a whole and each of the 7 units (Foundation, Arts and Sciences, as well as the five engineering programs) have devel-

oped their five-year plan (2007-2012). This fall the plans will be further discussed and refined. The final version of the five year plan will be submitted to the Governing Board of the Petroleum Institute in December 2008 for their review and approval.



### **II) Accreditation documents, preparation of various manuals and hand books**

This was a major undertaking. The PI was lacking many policies and handbooks that are required (not optional) by the ministry of higher education and other accreditation agencies for PI's accreditation of undergraduate and graduate programs. This involved developing new handbooks for faculty, undergraduate students, and graduate students. The PI also revisited its human resources policies and procedures and made revisions as necessary to represent a growing PI, with aspiration

to distinguish itself as a recognized engineering school first in the region and beyond. Various teams of faculty, administrators, and staff participated in this effort. The documents were presented to the ministry of higher education during their accreditation visit in June 2008.

### **III) Faculty Recruiting & Retention**

This was a major focus last year and remains as a strategic focus this year as well. Lack of sufficient engineering professors at PI is a major bottleneck for its growth and keeping up with its five-year strategic plan. The PI competes in an international market for pro-



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fessors, those who not only are excellent teachers in classrooms, but also excellent researchers and problem solvers for industry, and excellent role models for our students. In this issue of ADNOC News the PI introduces its new hires who began work in August 2008. The PI is pleased with the quality of its new hires. For every position hired, the PI interviewed at least 2 to 3 candidates, thus

one can imagine the energy it has put into recruitment. In Academic year 2007-2008 PI's governing board approved a budget line item for faculty and staff retention. Special funds are each year allocated for merit raises to select faculty who play a major role in achieving PI's strategic goals in the three major areas of teaching/student advising, research/scholarship, and service to the





Institute, to its sponsors, and to the broader technical community.

#### IV) Student Recruiting & Retention

No university can be a great university without the presence of great students. In 2007, the PI devoted more attention to recruiting academically strong students to the PI. Although today PI has the largest UAE national engineering enrollment in UAE, its sponsoring companies need many more engineers than the numbers it is currently graduating. The PI's student recruitment efforts have included visits of the high schools, arranging for campus open days, inviting headmasters of high schools various student groups to the PI campus for a tour, and establishing new scholarships for high performing students. Retention of students is equally important and we have special awards and incentives for students to perform well at PI. The PI students have the opportunity to do summer research at its partner institutions. They also get the opportunity to have field trips to international sites. Last year the PI had its students involved in summer research at Colorado schools of Mines, at University of Maryland, and a few had the opportunity to

benefit from JODCO (one of PI's sponsors)-sponsored summer internship to Japan. Additionally the students had the opportunity to engage in laboratory and field work in Austria and Italy. Linz and Leoben universities in Austria hosted our students to do laboratory work in the polymer engineering area.

#### V) Faculty and Staff Development

Efforts have been launched to devote resources for professional development of its faculty and staff. The PI introduced Research Initiation funds for its new faculty hires to provide them with opportunity to kick-off their research. For assistant professors we assign mentors to assist them with development of best practices in teaching and research. For UAE national new hires the PI provides them with the opportunity for summer stay at its partner institutions for various teaching and research activities. For example, this summer the PI had three of UAE nationals participate in Future Faculty program at the University of Maryland. While there, in addition to teaching skills development, they have the opportunity to get to know the faculty in the U.S. and develop joint research proposals.

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### VI) Establishment of Center for Teaching Excellence

At PI excellence in both undergraduate and graduate studies is of prime importance to the Institute's mission. Therefore, parallel to its efforts to strengthen graduate studies, to assure quality of teaching the undergraduate level, in academic year 2007-2008, the PI introduced a center for teaching excellence which offers workshops, mentorship programs, and other program to further strengthen best practices in teaching for our faculty. Colorado School of Mines (CSM) will assist the PI in this activity, utilizing some of the existing programs they have in this area.

### VII) Assistance with Establishment of Glenelg School of Abu Dhabi (GSAD)

A great affiliate middle school and high school can provide some of the feedstock and quality students the PI needs for its intake. In

Academic year 2007-2008, PI assisted with establishment of a middle school and high school at a site close to PI. The curriculum is based on what is practiced at one of the excellent schools in the U.S. (Glenelg Country School, located in Ellicott City, Maryland) and of course meets the curriculum requirements of UAE ministry of education in terms of offering classes such as Islamic studies and Arabic. In the long run combination of the high school and the PI shall provide the high caliber technological leaders the country can use in the future. The PI thanks its Board chairman, H.E. Mr. Yousef Omair bin Yousef, for his vision to establish GSAD and for his restless assistance to both PI and GSAD.

### VII) Establishment of Graduate Studies and Research

In Fall 2007, for the first time PI opened its doors to graduate students. This was after successfully obtaining the required initial accreditation license from the United Arab Emirates

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Ministry of Higher Education. In Fall 2007 we were able to offer eight graduate courses among the various programs. A similar number was offered in Spring 2008, and we expect to double the number of graduate courses in Fall 2009. In addition, we have existing programs with partner institutions to offer on-line courses. In fall 2007 and spring 2008 the University of Maryland (UMD) offered two graduate courses through video conferencing. Parallel to the graduate instructions, the PI Research Center (PIRC) planning began, and initial needs and specifications were identified. PI is benefiting from the experience of its sponsors and affiliate companies in designing a research center that will focus on the needs of oil / gas and the broader petrochemical and energy industry that ADNOC and its operating group represent. The PI expects to finalize its Research Center (PIRC) specifications in late 2008/early 2009, with construction slated to begin in late 2009 with an expected date of completion for its Phase I by 2011.

### **VIII) Enhancement and Expansion of International Relationships**

In addition to the existing collaboration with CSM, in late 2006 the PI was able to launch collaboration between PI and the University of Maryland, College park. In Phase I of this collaboration eleven research and educational collaborations were launched and joint research publications have already emerged in well recognized journals. In 2007 PI signed agreements with Leoben University (Austria) and Linz University (Austria). In early 2008 PI signed a research collaboration agreement with the Technical University of Munich, and efforts are in progress to sign research agreements with the University of Minnesota and the Stanford University.

The joint research collaborations will assist PI in expanding its research capability, developing its faculty and students, and providing expanded resources to its industrial sponsors, namely ADNOC and its operating companies.

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