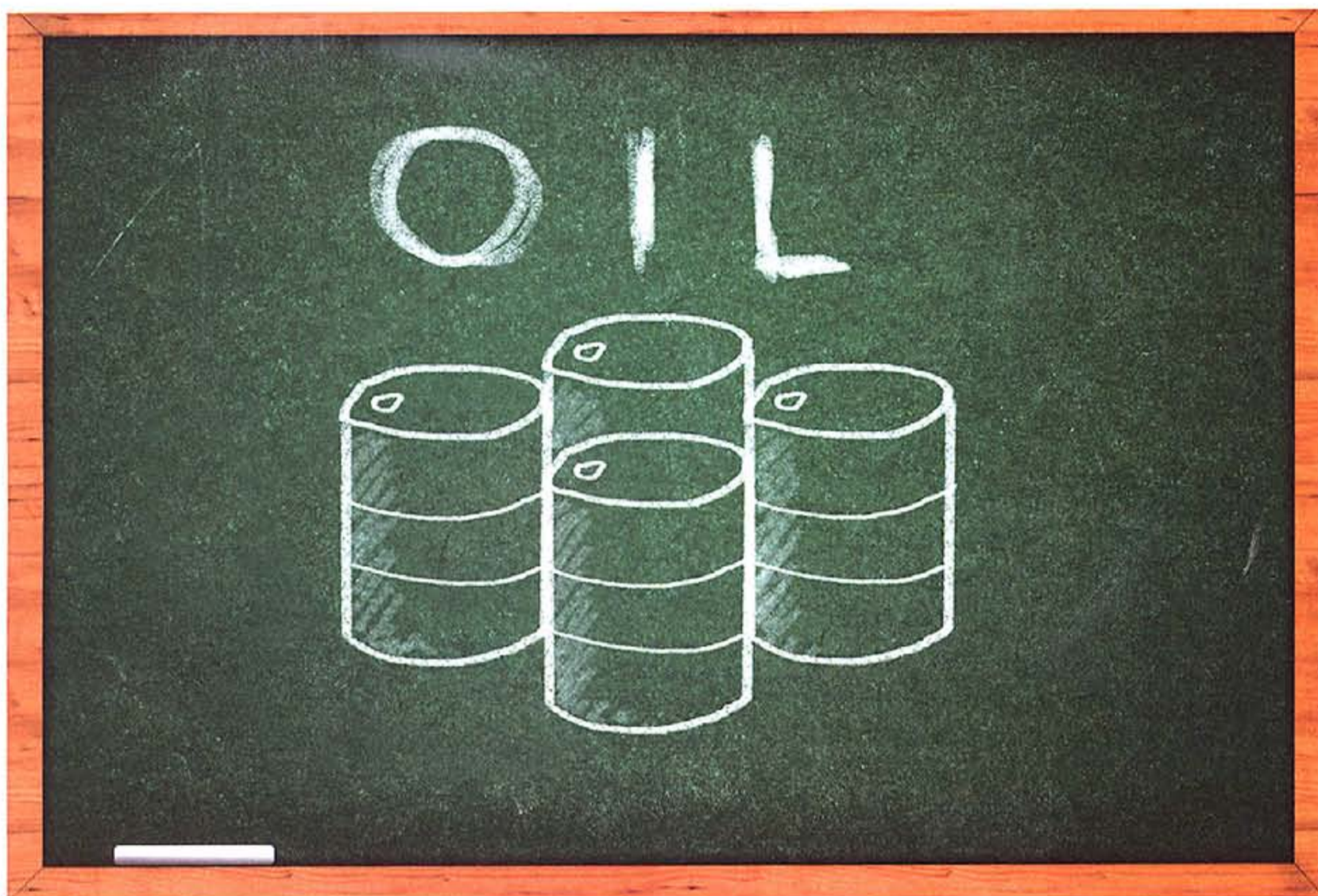


## Educating the OIL & GAS GENERATION



WITH HYDROCARBONS ON THE HORIZON UNIVERSITIES ARE SEEKING TO ADAPT

*By Jeremy Arbid*

**T**he emerging oil and gas industry in Lebanon may have hit a few speed bumps recently (see page 26), but that hasn't stopped the country's universities from starting to think about the industry's potential. Lebanon's universities have always graduated students into the oil and gas professions but they are beginning to recognize the demand for specialized programs that will prepare students to work in the petroleum industry in Lebanon if and when the country does extract its hydrocarbons.

The Exploration and Production Agreement, which is still awaiting approval from the Lebanese government, requires that four-fifths of a company's local labor be Lebanese nationals. According to one well-informed source, meeting the labor needs for the sector will be a challenge, though it does present an unlikely opportunity. The 80 percent requirement could prompt companies to hire based on merit rather than *wasta*. While political pressure is being applied to hire connected individuals, as more technical

opportunities become available it is unlikely that any one sect could dominate hiring. Clearly, making sure that Lebanon's youth are trained to work in the sector is a key priority for the country.

### **PICKING THE RIGHT PROGRAM**

A number of universities in the country are introducing new academic programs or expanding existing programs to cater for the next generation. Université Saint Joseph has developed a master's in



oil and gas exploration, production and management. The program is admitting individuals with technical and engineering backgrounds and will prepare students within a two-tier system: a technical upstream track for students to gain expertise in the domain of exploration, and a downstream track for students to gain expertise in management issues. The dean of the engineering department, Fadi Geara, told EXECUTIVE the program is prepared to customize studies based on the background of the student and desired specialization for sub-field expertise.

A major draw for students will be the organizations affiliated with the program. Partners include French energy giant Total, with the participation of the French Petroleum Institute and additional support from Attock Oil International and the Embassy of France in Lebanon. Students will have the opportunity to associate with high-level industry experts, including a 3-4 month training period reporting to Geara and Petroleum Administration member Nasser Hoteit. As Geara noted, partners of the program will facilitate collaboration in teaching methodology and research: "For the



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moment, it is a professional program, [there] is no research program. It is an option for the future," he added.

At the American University of Beirut the approach appears more holistic. The university already has several programs at the technical and undergraduate level to prepare students for entry into the petroleum industry. These programs include petroleum geology and a planned petroleum engineering minor to

## UNIVERSITY PROGRAMS RELATED TO GAS AND OIL

University	Program	Degree level	Status	Affiliates
<i>American University of Beirut</i>	Energy studies	Master's	Planned	Graduate Institute Geneva (proposed)
	Petroleum geology	BA	Current	None
	Petroleum engineering	BE	Planned	
<i>University of Balamand</i>	Chemical engineering, petroleum major	Master's	Current	
<i>Beirut Arab University</i>	Petroleum engineering	BE	Beginning	None
<i>Holy Spirit University of Kaslik</i>	Chemical engineering, petroleum major	Master's	Current	
<i>Lebanese University</i>	Petroleum engineering	BE	Beginning	None
	Master's of offshore petroleum engineering	Master's	Beginning	None
<i>Notre Dame University</i>	Petroleum engineering	BEPE	Planned	
	Chemical engineering	BEChE	Planned	
<i>Université Saint Joseph</i>	Master of oil & gas	Master's	Beginning	Total, IFP, Attock Oil International, French Embassy Lebanon

Source: EXECUTIVE



be offered within the chemical engineering department.

A noteworthy development from AUB is an interdisciplinary master of energy studies program, due to launch next spring, which will address the energy social sciences with emphasis on the economic mechanism, funding mechanism, policy, and technical aspects. The master's degree will target individuals who anticipate careers as executives with decision-making responsibilities.

## PLANNING AHEAD

Also under development within AUB, and possibly attached to the energy studies program, is a partnership with the Graduate Institute of Geneva, which would offer a six-credit course for oil and gas training. The program would be jointly sponsored by AUB and the Graduate Institute of Geneva, with the first training workshop tentatively scheduled for this coming January, and would admit the general public, not just AUB students.

Other universities are also rethinking their programs. The Lebanese University, Notre Dame University, and the Beirut Arab University, are all set to offer degrees related to the industry.

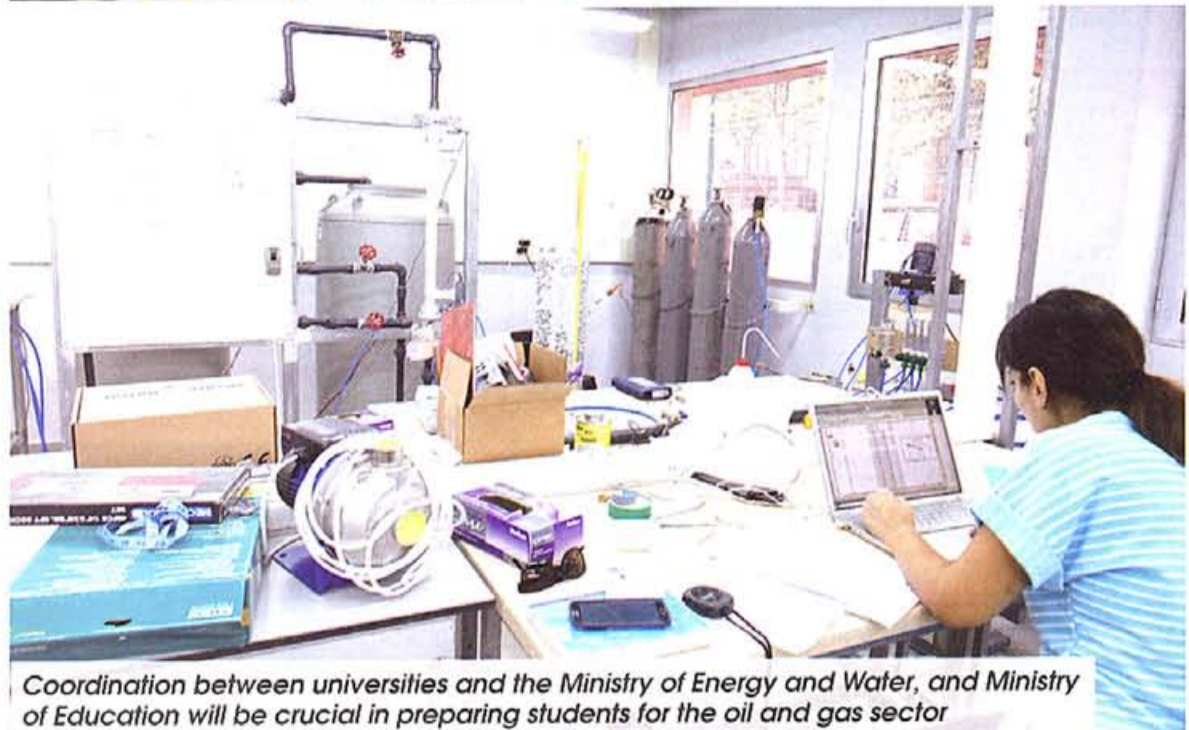
Meanwhile, the University of Balamand has established a master's program in chemical engineering with a major designated for petroleum studies. The Holy Spirit University of Kaslik has a similar master's degree.

These programs are very positive developments for Lebanon, but doubts remain. Will there be enough employment opportunities created for individuals to return to the country and work in the sector? Will companies be able to keep them from more lucrative work in the Gulf?

Asked whether he felt the universities were preparing to train a generation of Lebanese oil and



**THE NUMBER OF JOBS THAT LEBANON'S POTENTIAL OFFSHORE OIL AND GAS INDUSTRY COULD CREATE REMAINS OPEN TO SPECULATION**



*Coordination between universities and the Ministry of Energy and Water, and Ministry of Education will be crucial in preparing students for the oil and gas sector*

gas experts, Minister of Energy and Water Gebran Bassil said "Some are, some are not. It is a big educational challenge. But not difficult for the Lebanese, they know, they learn." But it requires coordination — the country must work to bolster its administrative capacity by organizing the energy sector to

make the most of its prospective gas wealth. The Ministry of Energy and Water and the Ministry of Education must work with the country's universities to establish advanced studies that prepare students for the sector. Laying the right foundations now will make a big difference for future generations.