

University Lectures

The materials under NATURAL GAS stem from lectures at NTNU in Trondheim and the University of Tromsø (now, The Arctic University of Norway). In Trondheim, the course was offered by the now expanded Department of Geoscience and Petroleum (old name, Department of Petroleum Engineering and Applied Geophysics). In Tromsø, the course was offered by the Department of Engineering and Safety.

The NTNU course *TPG 4140 Natural Gas* was started by Professor Gudmundsson a long time ago, providing an overview of the natural gas industry and natural gas engineering. The course was an elective course for all engineering students (petroleum, mechanical, chemical) in their fourth year of their five-year masters of science programme. The course was also open for other interested students; several came from economics and entrepreneurship. The number of students was in the range 40-60 each year. The course was a mixture of lectures by Professor Gudmundsson and invited experts from the Norwegian oil and gas industry. The external experts were a major attraction for the students. The students said that they finally heard something about the real world; their future working environment. Instead of classical weekly exercises, students were asked to form groups of 4-5 and write a full-scale technical report on a chosen natural gas topic. The reports counted 30 % of the final course grade.

The University of Tromsø course *PRO-2003 Natural Gas Processing* had been given by local professors for several years. The university (UiT) started the course in response to the increased oil and gas developments (offshore and onland) in Northern Norway, including the LNG plant in Hammerfest. Professor Gudmundsson was approached to take-over the course to strengthen the course's contents based on his long-term experience at NTNU. The course was taught by Professor Gudmundsson as an adjunct professor at the University of Tromsø. The course at UiT was different from the NTNU course in that there were not lectures given by external experts. The course contained also more petroleum engineering related materials. The number of students was in the range 15-20 each year. Semi-weekly exercises had to be completed to take the final examination.

The materials under NATURAL GAS are limited to the lectures/presentations given by Professor Gudmundsson at NTNU and UiT. The presentations of the external experts given at NTNU are *not included*. Various text materials made available to students at NTNU and in particular at UiT, are neither included. At both universities, course websites provided access to hand-outs, simulation tools and various teaching materials.