Joint Masters’ program

**Advance Well Construction and Operation Technologies**

**Direction of training 21.04.01 “Petroleum Engineering”**

**Goal**
Training of a new generation of specialists, ready to work in the leading energy companies in the world.

**Specialization**
Oil and gas wells construction and operations.
Technologies of construction and operation of wells made a major contribution to the efficiency and environmental safety of hydrocarbon deposits development.

**Program features**
1) A rich scientific and pedagogical experience of the two leading universities of Russia and Austria
2) Modern requirements of leading energy companies
3) Professional participation of specialists from energy companies in the educational process

**Duration of training**
2 years

**Advantages**
- 2 master degrees from partner universities simultaneously
- Career prospects in leading energy companies
- Participation in solving real business problems
- Cross cultural interaction

**Cost of training**
- The commercial basis: 600 000 rub. for 2 years of studies *(for the students enrolled in Gubkin University)*
- The competition basis: receiving grant from sponsor companies

**Admission requirements**
- Bachelor’s or Master’s degree in the oil and gas industry areas
- TOEFL or IELTS certificate
- Successful completion of interview
Organization of the program

To complete the Program successfully, each student shall be required to complete courses totaling 120 ECTS, including Master Thesis defense. List of courses of the program:

1st semester, Gubkin University (MUL students study equivalent disciplines)

1. System analysis and modeling.
2. Organization and management in the oil and gas industry
3. Information and communication technology
4. Fluid flow in wells and pipelines.
5. Computational Continuum mechanics
6. Advanced well logging.
7. Material engineering in oil and gas industry.
8. Well drilling process design.
9. Well cementing

2nd semester, Gubkin University:

2. Philosophical issues in science and technology.
4. Project management in the oil and gas industry (offshore fields development).
5. Drilling equipment (training at NOV simulator).
6. Design and modeling of machines and equipment for oil and gas complex.
7. Ecological safety of oil and gas complex.
8. Advanced drilling technologies.
9. Well control (training on a simulator, IADC certificate obtaining).
10. Well completion.
11. Prevention and Elimination of Problems and Accidents in the Wells Construction.

Summer internship in the Oil and Gas companies.

3rd semester, Leoben Mining University-(MUL):

1. Wellbore and Reservoir Geomechanics.
5. Well Construction Fluids Lab
6. Well Construction Mechanical Lab.
7. Measurement Control, Monitoring and Analysis.
8. Advanced Well Production Monitoring and Analysis.
9. Well reconstruction, restoration, plug and abandonment.

4th semester

Preparation of Master thesis and its defence.

Elective courses

1. Modern technology of gas wells exploitation.
2. Disperse systems in well construction.
3. LNG equipment and technologies.
4. Oil and Gas reserves estimation.