



Double-Diploma Programme

The Master's Programme provides an opportunity to obtain two diplomas - from Gubkin University (Russia) and Heriot-Watt University (UK).

The courses of the Heriot-Watt programme are taught *in English at the Gubkin University* in the second year of programme. The Heriot-Watt programme assumes an additional competitive selection of students at the end of the first year (the test and interview in English). The training is conducted **solely on a commercial basis** (although for the best students the University will provide an opportunity for free training through the sponsorship of the leading oil and gas companies).

Students of the Heriot-Watt programme are provided with individual teaching materials; training and self-study will be conducted in a specialized separate computerized classroom.

Courses taught for the Heriot-Watt programme:

- Reservoir Concepts
- Petroleum Basins
- Formation Evaluation
- Reservoir Sedimentology
- Geomechanics and Flow Dynamics
- Petroleum Systems Analysis
- Petroleum Geophysics
- Applied Stratigraphy

Project work:

- Team Exploration Project
- Independent Project

Admission Procedure

Applicants must have a bachelor's, master's or engineer's degree in geological, geophysical specialties and / or an oil and gas industry. The applicant may study on a budget, commercial basis or target.

1. 1. Submission of applications and documents - from June 20 to July 22, 2013 at 119991, Moscow, Leninsky Prospect, 65, State Oil and Gas **(in person or by mail).**

2. Admission tests - July 2013 in accordance with the schedule of the Admissions Committee

3. Admission to master's programme and the beginning of classes - September 1, 2013.

Admission Rules are published at the Admissions Committee page of the Gubkin University website (<http://www.gubkin.ru>) – in the section For applicants – Admission Committee – Admission Rules

Heriot-Watt Education Program (on a commercial basis):

4. Applying – February – May 2014

5. Admission tests (in English) – June - July 2014

6. Intensive English course at Gubkin University – *August 2014*

7. Heriot-Watt programme classes start at Gubkin University– *September 1, 2014*

Contact Information

Dept. of Exploration Geophysics, Gubkin University

phone: +7 (499) 1357026

e-mail: seis@gubkin.ru

Programme coordinator –

assoc.prof. *Alexandre Belousov*

e-mail: belousov.a@gubkin.ru



Gubkin Russian State
University of Oil and Gas

GRADUATE PROGRAMME

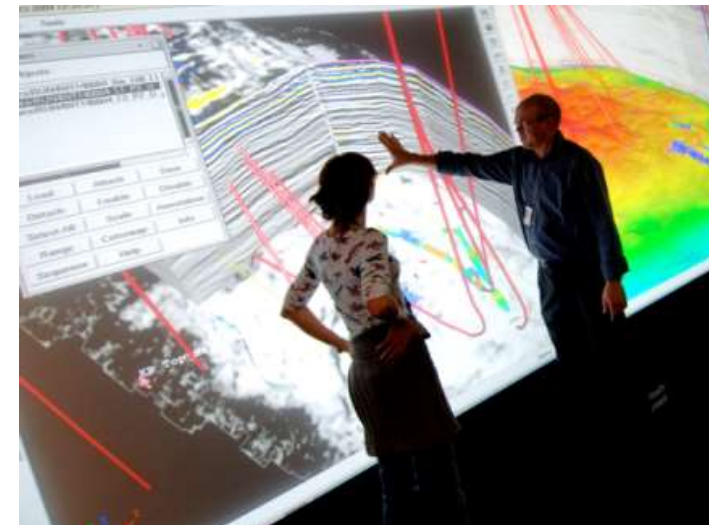
APPLIED PETROLEUM GEOSCIENCE

(131000.41 Geological & Geophysical Methods

for Petroleum Reservoirs Study)

Master in Engineering and Technology, direction
131000 «Petroleum engineering» from Gubkin
University

MSc in Applied Petroleum Geoscience from the
Heriot-Watt University



INTRODUCTION

The **main goal** of this Programme is to train specialists for oil and gas companies and also for geological services enterprises. The Programme is applicable for postgraduate students with a BSc / Engineer's degree in technical sciences. It allows the students to acquire necessary knowledge and skills for design, operation and management in the geologic exploration sphere.

The **main purpose** for the Programme graduates is searching of oil deposits and effective planning of exploration and development activities. The traditional types of hydrocarbonates as well as nontraditional such as oil-forming shale, heavy crude etc. are subjects for research activities. The Programme provides training of specialists for exploration of all above mentioned potential hydrocarbon reserves.

The Master's Degree Programme includes all educational subjects related to the development of the detailed 3D geological models for structurally complicated deposits.

The Programme graduates will be capable to accomplish tasks in the following spheres:

- Modern lithological and petrophysical studies;
- Modern research methods for structurally complicated deposits on the basis of seismic and well-logging data;
- Integrating 3D seismic data and well log results on the basis of rock physics models;
- Joint interpretation of geological and geophysical data in the process of 3D geological modeling;
- 4D monitoring of oil and gas fields development.

The Master's Degree Programme has been created out by the scientists of several Departments such as Depts. of Exploration Geophysics and Computer Systems, Lithology, Geophysical Information Systems. The classes are conducted by the high experienced lecturers of The Gubkin Russian State University of Oil and Gas.

COURSES TAUGHT

GENERAL:

- Philosophy and Methodology of Science
- Information systems
- Economics and management of oil and gas production
- Profiled foreign language

FIELD DEVELOPMENT:

- Design methodology in the oil and gas industry
- Mathematical modeling in the oil and gas industry.
- Methods of Mathematical Physics
- The general theory of dynamical systems
- Techno-economic analysis
- Management of field development

GEOLOGY:

- Geological onsite monitoring of field development
- Prediction of subsurface oil and gas reservoirs
- Sedimentology of oil and gas deposits
- Lithology of natural reservoirs
- Reservoir rocks of oil and gas
- Sedimentary basins of oil and gas fields

GEOPHYSICS:

- Theory and algorithms of geophys. data processing
- The study of well sections using geophysical methods
- Geophysical methods of geological section determination
- Geological and geophysical properties of reservoirs
- Geological and geophysical modeling
- Integrated interpretation of seismic data
- Geomechanics
- Seismic surveying in wells

Job Expectations and Professional Demand for Graduates

The Graduates of the Master's Degree Programme are qualified to take part in all stages of exploration and development of oil and gas fields starting from geologizing and up to oil and gas production. The Master Programme Graduates are in demand in data interpretation centres of geophysical companies, such as Schlumberger, Halliburton, Baker Hughes, CGG Veritas, Fugro Jason, Paradigm, LARGE, CGE etc., and scientific centres of oil companies: LUKOIL, GASPROM, ROSNEFT, GASPROMNEFT and TNK-BP.

One of the main purposes of the Master Programme is the scientific development. It's possible for Programme graduates to work towards their PhD in Gubkin University.

Mode and Duration of Study

Mode of Study – full-time tuition.

Duration of Study – two years

Diploma

On successful completion of the program graduates receive a Master of Engineering and Technology in " Petroleum engineering" from Gubkin University

It is also possible to obtain a diploma from the University Heriot-Watt (UK) - see the section "double-diploma programme."

