NEW ECONOMIC SCHOOL
Masters in Energy Economics

Global Petroleum and Gas market Outlook

Module 3, 2020

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Course information

Course Website: https://my.nes.ru/

Instructor's Office Hours:

Class Time:

Room Number:

TAs: -

Course description

The objective of the course is to provide the student with the fundamental knowledge and applied skills necessary to develop of economic rationales for making informed operation and strategic decisions in global Fossil Fuel markets. The students will:

- get acquainted with historic background and modern fundamentals of global Oil & Gas industry, its basic notions, definitions and theories;
- implement assignments on global primary energy balance research (Oil, Gas, Coal, Nuclear, Renewables), shale oil production modelling and global oil market balance analysis
- develop the solid competence of working in team and excellent command of their business-communication abilities;
- practice to solve the most actual tasks of Research, Strategy and Planning Departments at Investment Banks (IB) and Oil & Gas industry.

Course requirements, grading, and attendance policies

Prerequisites: Micro- and macroeconomics, Statistics, Econometrics

Teaching and Work Forms: 2 lectures or 1 lecture + 1 workshop every week. Workshops will be devoted to the individual or group presentation of the student's independent researches.

Grading policy: the Grade will come via following criteria:	max	threshold
· Attendance	14%	8%
· Presentation	10%	6%
· Homeworks	36%	22%
· Final exam	40%	24%

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1. Introduction:
   - Course overview, grading, sources of information, basic definitions
   - Energy and its role in the modern economy, units of measurement
   - Global primary energy balance (Oil, Gas, Coal, Nuclear, Renewables)
2. Oil exploration:
   - Primary energy balance workshop
   - What is oil?
   - Hypothesis of hydrocarbon's origin
   - Oil geology overview
   - Resources and reserves classification (global and Russian)
   - Conventional vs. non-conventional resources
3. Oil production:
   - Oil value chain
   - Technological aspects of oil production
   - Oil service industry structure and majors
   - Shale gas & oil revolution
   - Peak oil concept and Hubbert curve
4. Shale oil production modelling workshop
5. Oil consumption:
   - Drivers of oil consumption
   - Key technologies of oil consumption
   - Oil consumption by industries and countries
   - Oil logistics
   - Oil refining
6. Global oil market modelling workshop
7. Global gas market:
   - Resources, supply, demand and trade
   - LNG market and pipeline transportation
8. Final exam

Description of course methodology
The course will mix conventional lecturing with more interactive techniques, such as class discussions, discussions of cases, student presentations, research papers, etc.

Course materials

Required textbooks and materials

There will be no base textbook. The course will be predominantly based on papers, presentations, data tables, provided before and during the course. Basic sources of information on international oil and gas markets are the following:

International Energy Agency (IEA)

U.S. Energy Information Administration (EIA)
Organization of the Petroleum Exporting Countries (OPEC)
Joint Organisations Data Initiative (JODI)
BP Energy Economics
Shell: Future of Energy
IMF Primary Commodity Prices
IHS
Wood Mackenzie
Rystad Energy
Energy Strategy of Russia for the period up to 2030

Additional materials

Daniel Yergin, The Prize: The Epic Quest for Oil, Money, and Power, Dec 2008, 928 p.
ARGUS
Oil on the Bloomberg
Platts

Baker Hughes Drilling Rigs monitoring

Intercontinental Exchange

ЦДУ ТЭК

IB reports: GS, Citi, MS, ML, DB, Barclays, UBS, etc.

Academic integrity policy

Cheating, plagiarism, and any other violations of academic ethics at NES are not tolerated.