

Fundamentals of Reservoir Engineering

Calendar: 5th day semester

Contact Hours: TP 60,0h; OT 15,0h

Scientific Area: Geotechnics / Chemical Industrial Engineering

Intended learning outcomes (knowledge, skills and competences to be developed by the students):

It is intended that students acquire skills and competences on petroleum and gas reservoirs, reservoirs main production mechanisms, fundamentals of stimulation and recovery, fundamentals of well testing and formation evaluation, introduction to tests planning and introduction to estimation of oil and gas reserves.

Syllabus:

1. Oil and gas reservoirs.
2. Reservoirs main production mechanisms.
3. Material balance equation. Water Influx.
4. Fundamentals of stimulation and recovery of reservoirs.
5. Fundamentals of well testing and formation evaluation.
6. Introduction to tests planning.
7. Introduction to estimation of oil and gas reserves.

Evidence of the syllabus coherence with the curricular unit's intended learning outcomes:

The content taught enable students to acquire the fundamental knowledge and skills required for the steps and the essential activities of the Reservoirs Engineering domain: the stimulation and recovery of reservoirs; well testing and testing planning, formation evaluation; estimation of oil and gas reserves.

References:

1. Dake, L.P.: Fundamentals of reservoir engineering, Elsevier Scientific Publishing Company Inc.. New York. 1978. 443p.
2. Craft, B., Hawkins, M., Terry, R. Applied petroleum reservoir engineering. Pearson, 2nd ed. 1991.
3. Chierici, G. Principles of Petroleum Reservoir Engineering. Vol. 2. Springer, 1995