

Master's Program For International Students Majoring in Oil and Gas
Engineering

石油与天然气工程专业留学生培养方案

(所属一级学科: 0820 石油与天然气工程)

(First Level Discipline: 0820 Oil and Gas Engineering)

1. 培养方向 Disciplinary subjects

(1) 油气井工程 Drilling Engineering

1) 油气井力学、信息与控制

Mechanics, information and control of oil and gas wells

2) 油气井岩石力学与工程

Rock mechanics and engineering

3) 油气井流体力学与工程

Fluid dynamics and engineering

4) 钻井液完井液化学与工程

Chemistry and engineering of drilling and completion fluid

(2) 油气田开发工程 Oil and Gas Field Development Engineering

5) 油气渗流理论与应用

Theory and application of oil and gas flow in porous medium

6) 油气田开发理论与系统工程

Theory and systematic engineering of oil and gas field development

7) 采油工程理论与技术

Theory and technology of oil production

8) 提高采收率与采油化学

Enhanced oil recovery and oilfield chemistry

9) 油气田开发信息技术与应用

Information technology and its application in oil and gas field development

3. 学习年限: 3年 Program duration: 3 years

4. 学分要求 Credit requirement

必修课共 6 门，总学分最低为 30 学分。6 compulsory courses. Minimum 30 credits.

5. 课程设置 Courses

课程类别 Course Type	课程编号 Course Code	课程名称 Course Name	学时 Teaching hours	学分 Credit	学期 Semester	备注 Notes
公共必修课 Public compulsory courses	LS00001	中国概况 Survey of China	36	2	1	
	LS00002	基础外语 Primary Foreign Language	80	4	1	
专业必修课 Specialized compulsory courses	LS00004	数值分析 Numerical analysis	56	3	1	
	LS02042	现代油气井工程理论和方法 Theory and method of modern oil and gas well engineering	48	3	2	
	LS02033	渗流物理 Physics of fluid flow in porous medium	48	3	2	
	LS02038	提高采收率原理与方法 Theory and technology of enhanced oil recovery	48	3	2	
	LS02054	油气井增产技术 Oil and gas well stimulation technology	48	3	2	
Compulsory sections	LS02001	参加 10 次以上学术报告，作 1 次公开学术报告。 Attend 10+ seminars, make 1 academic presentation		1	1-3	
	LS02003	文献综述与开题报告 Literature review and research proposal		1	3	
专业选修课 Specialized elective courses	LS02030	射流动力学 Jet flow dynamics	32	2	2	Choose 3-4 course
	LS02043	现代钻井液技术 Modern drilling fluid technology	32	2	2	

	LS02045	岩石破碎原理和方法 Theory and method of rock crashing	32	2	2	
	LS02047	油藏数值模拟 numerical reservoir simulation	32	2	2	
	LS02012	高等气藏工程 Advanced gas reservoir engineering	32	2	2	
	LS02028	气液两相流理论 Theory of gas-liquid flow	48	3	1	
	LS02016	工业流变学(非牛顿流体力学) Industry rheology (non-Newtonian fluid mechanics)	48	3	2	
	LS08052	技术经济学 Technological economic	32	2	2	
	LS02053	油气井流体力学 Fluid dynamics for oil and gas well engineeringd	32	2	2	
补修课 Suppleme ntary courses	LS02059	钻井工程 Drilling engineering	56	3.5	1	
	LS02046	油藏工程 Reservoir engineering	56	3.5	1	
	LS02005	采油工程 Oil production engineering	56	3.5	1	
	LS02056	油田化学 Oilfield chemistry	48	3	2	
	LS02015	工程流体力学 Engineering fluid mechanics	64	4	2	
	LS02032	渗流力学 Mechanics of flow in porous medium	56	3.5	2	
	LS02048	油层物理 Petrophysics	48	3	1	
	LS02044	岩石力学基础 Fundamentals of rock mechanics	32	2	1	
	LS02015	工程流体力学 Engineering fluid mechanics	64	4	1	
	LS09119	物理化学 Physicochemistry	32	2	2	

Note: The students must pass HSK level 3 to get the master degree