



Petroleum Engineering Department

New Academic Program for Petroleum Engineering (BSc)

TƏDRIS PLANI 2024

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Curriculum Program for PE

Year 1 – SEM 1

YEAR 1 (FOUNDATION), SEMESTER 1			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
ENG 101	English 1	0 + 18 + 0	20
COMP 103	Application of ICT in Engineering 1	4 + 0 + 4	10

Total Credit: 30

Curriculum Program for PE

Year 1 – SEM 2

YEAR 1 (FOUNDATION), SEMESTER 2			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
ENG 102	English 2	0 + 18 + 0	20
COMP 104	Application of ICT in Engineering 2 (Python programming)	4 + 0 + 4	10

Total Credit: 30

Curriculum Program for PE

Year 2 – SEM 1

YEAR 2, SEMESTER 1			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
CHE205	General Chemistry	3 + 2 + 0	6
PHYS211	Physics 1	3 + 1 + 0	6
MATH215	Calculus 1	3 + 1 + 0	6
AZL225	Azerbaijani Language and Art of Speech	2 + 1 + 0	4
HIST225	History of Azerbaijan	3 + 1 + 0	5
PETE201	Junior Student Paper Content	1 + 1 + 0	3

Total Credit: 30

Curriculum Program for PE

Year 2 – SEM 2

YEAR 2, SEMESTER 2			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
MATH214	Calculus 2	3 + 1 + 0	5
PETE204	Engineering Mechanics 1	3 + 2 + 1	5
PHYS232	Physics 2	3 + 1 + 1	5
CHEPE204	Petroleum Chemistry	3 + 2 + 0	5
PETE224	Introduction to Petroleum Engineering	3 + 2 + 0	4
PETE292	Summer Internship	0 + 0 + 0	6

Total Credit: 30

Curriculum Program for PE

Year 3 – SEM 1

YEAR 3, SEMESTER 1			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
MATH315	Differential Equations	3 + 1 + 0	6
PETE303	Engineering Mechanics 2	3 + 2 + 1	6
PETE315	Fundamentals of Fluid Mechanics	3 + 2 + 1	6
GEOL321	Physical Geology	3 + 2 + 1.5	6
PETE331	Engineering Design, Academic and Professional Skills	3 + 2 + 0	6

Total Credit: 30

Curriculum Program for PE

Year 3 – SEM 2

YEAR 3, SEMESTER 2			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
PETE342	Reservoir Rock and Fluid Properties	3 + 2 + 1	5
MATH314	Linear Algebra	3 + 1 + 0	4
PETE318	Heat Transfer	3 + 2 + 1	5
GEOL322	Petroleum Geology and Geophysics	3 + 1 + 1.5	5
PETE340	Fundamentals of Engineering Thermodynamics	3 + 2 + 0	5
PETE392	Summer Internship	0 + 0 + 0	6

Total Credit: 30

Curriculum Program for PE

Year 4 – SEM 1

YEAR 4, SEMESTER 1			
Course ID	Title	In class hours (L + T + P)	Credits ECTS
PETE435	Drilling	3 + 2 + 0.5	6
PETE407	Reservoir Engineering 1	3 + 2 + 0	6
MATH421	Probability and Statistics	3 + 1 + 0	5
PETE415	Petrophysics and Well Log Analysis	3 + 2 + 0	7
PETE425	Production Technology 1	3 + 2 + 0	6

Total Credit: 30

Curriculum structure for PE

Year 4 – SEM 2

YEAR 4, SEMESTER 2			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
PETE422	Well Completion	3 + 2 + 0	6
PETE404	Reservoir Engineering 2	3 + 2 + 0	6
	Elective Block 1	3 + 2 + 0	6
PETE496	Summer Internship	0 + 0 + 0	6
PETE444	Production Technology 2	3 + 2 + 0	6

Total Credit: 30

Elective subjects – Block 1			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
PETE432	Energy Engineering	3 + 2 + 0	6
PETE472	Fundamentals of Renewable Energy	3 + 2 + 0	6

Curriculum Program for PE

Year 5 – SEM 1

YEAR 5, SEMESTER 1			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
PETE515	Reservoir Flow Simulation	3 + 2 + 0	7
PETE505	Field Development A	5 + 0 + 0	6
PETE531	Health, Safety, Environment and Sustainability	3 + 1 + 0	4
PETE521	Energy Geopolitics and Petroleum Economics	3 + 2 + 0	7
	Elective Block 2	3 + 2 + 0	6

Total Credit: 30

Elective subjects – Block 2			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
PETE517	Well Testing and Analysis	3 + 2 + 0	6
PETE527	Directional horizontal and multilateral drilling	3 + 2 + 0	6

Curriculum Program for PE

Year 5 – SEM 2

YEAR 5, SEMESTER 2			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
MACD513	Fundamentals of Civil Defense and Medical Aid	1 + 1 + 0	3
PETE598	Petroleum Engineering Design (Az: Dövlət Attestasiyası)	2 + 0 + 0	10
PETE507	Field Development B	5 + 0 + 0	6
	Elective Block 3	3 + 2 + 0	5
CHE582	Oil and gas processing	4 + 1 + 0	6

Total Credit: 24

Elective subjects – Block 3			
Course ID	Title	In class hours (T + P + L)	Credits ECTS
PETE568	Engineering and Management (management of engineering projects, optimization of resources)	3 + 2 + 0	5
PETE532	Enhanced Oil Recovery	3 + 2 + 0	5