MINISTRY OF AGRICULTURE OF THE REPUBLIC OF KAZAKHSTAN
"NJSC "S. SEIFULLIN KAZAKH AGROTECHNICAL UNIVERSITY"

Approve
NJSC "Saken Seifullin Kazakh
Deputy Chairman of the Management
Board Academic Activity-Rector
_____ A.M Abdyrov.
«_____» _____ 2021.

CATALOG OF ELECTIVE COURSES

For students in groups of educational programs

Heat and Power engineering

Nur-Sultan, 2021

MINISTRY OF AGRICULTURE OF THE REPUBLIC OF KAZAKHSTAN
"NJSC "S. SEIFULLIN KAZAKH AGROTECHNICAL UNIVERSITY"

Brief description of elective disciplines of the educational program

Management Accounting

1	Name of course	Fundamentals of economics and law
2	Code of course	OEP 3119
3	Cycle of course	Socio-political
4	Amount of credits	5
5	Level of preparation	Undergraduate studies
6	Department	Heat and power Engineering
7	Year	3
8	Prerequisites	Man, society, law
9	Postrequisites	Diploma design
10	Course summary	Legal relations and the national economy
11	Learning outcomes	Legal relations and the national economy

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11	Learning outcomes	Legal relations and the national economy

1	Name of course	Mechanics
2	Code of course	Meh 2215
3	Cycle of course	Theoretical disciplines
4	Amount of credits	4
5	Level of preparation	Undergraduate studies
6	Department	Heat and Power engineering
7	Year	2
8	Prerequisites	School course in algebra and geometry
9	Postrequisites	Fluid and Gas Mechanics
10	Course summary	Axioms of Statics and dynamics
11	Learning outcomes	Axioms of Statics and dynamics

1	Name of course	Thermal engineering measurements
2	Code of course	TI 2213

3	Cycle of course	Theoretical disciplines
4	Amount of credits	5
5	Level of preparation	Undergraduate studies
6	Department	Heat and Power engineering
7	Year	2
8	Prerequisites	Physics, engineering and computer graphics
9	Postrequisites	Design of thermal points
10	Course summary	Solving applied problems of heat and power engineering
11	Learning outcomes	Solving applied problems of heat and power engineering

1	Name of course	Computer technologies in heat and power calculations
2	Code of course	KTTR 2216
3	Cycle of course	Computer technologies in heat and power calculations and engineering graphics
4	Amount of credits	4
5	Level of preparation	Undergraduate studies
6	Department	Heat and Power engineering
7	Year	2
8	Prerequisites	Physics, engineering and computer graphics

9	Postrequisites	Steam and gas turbines
10	Course summary	Computer technologies for solving applied problems of heat and power engineering
11	Learning outcomes	Computer technologies for solving applied problems of heat and power engineering

1	Name of course	Electrical equipment of thermal power plants
2	Code of course	ET 3225
3	Cycle of course	Sections of the diploma design
4	Amount of credits	4
5	Level of preparation	Undergraduate studies
6	Department	Heat and power Engineering
7	Year	3
8	Prerequisites	Theoretical foundations of heat engineering
9	Postrequisites	Energy saving in heat and power engineering and heat technology
10	Course summary	Readiness for acceptance and development of the introduced equipment
11	Learning outcomes	Readiness for acceptance and development of the introduced equipment

1	Name of course	Operation of heat engineering equipment
2	Code of course	ETO 4224
3	Cycle of course	Sections of the diploma design
4	Amount of credits	4
5	Level of preparation	Undergraduate studies
6	Department	Heat and Power engineering
7	Year	4
8	Prerequisites	Ecology and fundamentals of life safety
9	Postrequisites	Energy saving in heat and power engineering and heat technology
10	Course summary	Readiness for acceptance and development of the introduced equipment
11	Learning outcomes	Readiness for acceptance and development of the introduced equipment

1	Name of course	Steam and gas turbines
2	Code of course	PGT 3304
3	Cycle of course	Sections of the diploma design
4	Amount of credits	5
5	Level of preparation	Undergraduate studies
6	Department	Heat and Power engineering
7	Year	3
8	Prerequisites	Fluid and Gas Mechanics
9	Postrequisites	Implementation of technological processes and environmental technologies at thermal power plants
10	Course summary	Efficiency of the introduced equipment and equipment that has exhausted its resource
11	Learning outcomes	Efficiency of the introduced equipment and equipment that has exhausted its resource

1	Name of course	Heat networks and heat supply systems
2	Code of course	TSST 3305
3	Cycle of course	Sections of the diploma design
4	Amount of credits	6
5	Level of preparation	Undergraduate studies
6	Department	Heat and Power engineering
7	Year	3
8	Prerequisites	Physics, Technical thermodynamics and heat and mass transfer
9	Postrequisites	Energy saving in heat and power engineering and heat technology
10	Course summary	Schemes, designs and methods of calculation of group and local heat points
11	Learning outcomes	Schemes, designs and methods of calculation of group and local heat points

1	Name of course	Economics of enterprise and Entrepreneurship
2	Code of course	EPP 4308
3	Cycle of course	Sections of the diploma design
4	Amount of credits	3
5	Level of preparation	Undergraduate studies
6	Department	Heat and Power engineering
7	Year	4
8	Prerequisites	Fundamentals of Economics and Law, mathematics
9	Postrequisites	Energy saving in heat and power engineering and heat technology
10	Course summary	Organizational structure of the industry, methods of accounting for consumption, preparation of energy balances
11	Learning outcomes	Organizational structure of the industry, methods of accounting for consumption, preparation of energy balances

1	Name of course	Energy saving in heat and power engineering and heat technology
2	Code of course	ETT 4310
3	Cycle of course	Sections of the diploma design
4	Amount of credits	8
5	Level of preparation	Undergraduate studies
6	Department	Heat and Power engineering
7	Year	4
8	Prerequisites	High-temperature processes and installations
9	Postrequisites	Diploma design
10	Course summary	Development of energy saving measures
11	Learning outcomes	Development of energy saving measures

1	Name of course	Operating modes of thermal power plants
2	Code of course	RRTES 4306
3	Cycle of course	Modes and operation of TPP equipment
4	Amount of credits	6
5	Level of preparation	Undergraduate studies
6	Department	Heat and Power engineering
7	Year	4
8	Prerequisites	Steam and gas turbines
9	Postrequisites	Diploma design
10	Course summary	Main operating modes of heat engineering equipment
11	Learning outcomes	Main operating modes of heat engineering equipment