KBTU courses for Spring semester

Course Name	KZ	ECTS
School of Energy and Petroleum Industry		
Descriptive geometry and Engineering graphics	3	5
Theoretical and Applied Mechanics	3	5
Strength of Material	3	5
Drilling Wells	3	5
Drilling oil and gas wells	3	5
Reservoir Engineering	3	5
Development of gas and gas condensate fields	3	5
Thermodynamics and heat engineering	3	5
Petroleum technology	3	5
Pipeline Transportation of Oil and Gas	3	5
Well logging	3	5
Well testing	3	5
Petroleum Well Workover	3	5
Gathering and Preparation Well Production	3	5
Anticorrosion Defence of Oil and Gas Equipment	3	5
Drilling and Grouting Mortars	3	5
Well production stimulation	3	5
Enhanced Oil Recovery Methods	3	5
Pumps and compressor stations	3	5
Reservoir simulation with ECLIPSE	3	5
Introduction to petroleum engineering	3	5
General Hydraulics	3	5
Rock and Fluid Properties	3	5
Offshore Development	3	5
Fluid mechanics in petroleum engineering	3	5
Well control	3	5
Machine Learning in Petroleum E&P	3	5
Finite element method in engineering	3	5
Well Design	3	5
Production System Optimization	3	5
Well operation	3	5
Communication engineering	3	5
Mechanical design	3	5
Pipeline Integrity Management Systems	3	5
Well complation	3	5
Occupational Safety and Health	3	5
Ecology and Sustainable Development	3	5
School of Applied Mathematics		
3D Modelling	3	5
Algebra	3	5
Analysis of data bases	3	5
Introduction to cryptography	3	5

Calculus-II	3	5
Classical Boundary Value Problems and Numerical methods. Matlab	3	5
Linear Algebra for Engineers	3	5
Mathematical Engineering in Economics II	3	5
Basics of Computer Vision and Deep Learning	3	5
Fundamentals of Mathematical and Computer Modeling of Natural Physical Processes	3	5
Introduction to financial mathematics	3	5
Enumerative Combinatorics	3	5
Theoretical Mechanics	3	5
Probability Theory and Math. Statistics	3	5
School of IT and Engineering		
Data Storage and Analysis	3	5
ICPC programming	3	5
IT Audit	3	5
UI/UX Design	3	5
VFX and 3D physics	3	5
Web Development	4	6
Backend Framework	3	5
Backend Framework. Django	3	5
Introduction to Media Studies	3	5
The Engineer, Ethics and Professional Responsibility (Industrial and Research Colloquim)	2	4
Engineer graphics on AutoCad	3	5
Information Communication Technology	3	5
Enterprise Architecture	3	5
IT Infrastructure and Computer Networks	4	6
Filmmaking and Motion Graphics	3	5
Computer Networks	3	4
Mathematical Foundations of Information Security	3	5
Machine Learning	3	5
Metrology and Measurements	2	3
Microprocessor Control Systems	3	5
Android Development	3	5
iOS Development	3	5
Object Modeling using Polygon Surface	3	5
Object-Oriented Programming and Design	3	5
Operating Systems	3	4
Real Time Operating Systems	3	5
Cyber Security Fundamentals	3	5
Programming Principles I	4	6
Programming Principles II	4	6
Advanced Statistics	3	5
Project Design (UniSim)	3	5
Robotics in Manufacturing	3	5
Networks and Telecommunications	3	5
Foundations of Electrical Engineering II	3	4

Theory of Non-Linear Control Systems	3	5
Technological Enterpreunership and Startups	3	5
Field Projects for Information Systems	3	5
Electronics and Digital Design	3	5
Ethical Hacking	3	5
Business School		
Financial Statement Analysis	3	5
Auditing	3	5
Business Statistics	3	5
Intermediate Accounting II	3	5
Introduction to Excel	1	1
Introduction to Business Management	3	5
Introduction to Finance	3	5
Investment Banking	3	5
Information systems in Accounting and Finance	3	5
Corporate Finance	3	5
Leadership and Motivation	3	5
International Economics	3	5
International Business	3	5
Small Business Management	3	5
Organizational Behavior	3	5
Introduction to Management	3	5
Basics of economic theory	3	5
Principles of Macroeconomics	3	5
Advanced Financial Management	3	5
Derivatives	3	5
Strategic marketing communications	3	5
Insurance	3	5
Marketing Management	3	5
Project Management	3	5
Management of Technology	3	5
Financial Risk Management	3	5
Managerial Accounting	3	5
Financial Accounting	3	5
Digital Economy	3	5
Digital Marketing	3	5
Economics of Competitiveness	3	5

Code	Course title	Level	Credits KAZ (ECTS)
CSCI1103	Programming Principles I	Bachelor	4(6)
CSCI2106	Object-Oriented Programming and Design	Bachelor	3(5)
INFT1101	Information Communication Technology	Bachelor	3(5)
INFT2205	Web Development	Bachelor	4(6)
INFT2204	Introduction to Business Management	Bachelor	3(5)
CSCI2107	Introduction to Computer Networks	Bachelor	3(4)
ECON2101	Principles of Economics	Bachelor	3(5)
STAT2201	Business Statistics	Bachelor	4(6)
ITMA3004	Cloud computing	Bachelor	4(6)
CEEN2215	Electronics and Digital Design	Bachelor	3(5)
INFT 2102	IT Infrastructure and Computer Networks	Bachelor	4(6)
CEEN2202	Foundations of Electrical Engineering II	Bachelor	3(4)
CEEN2102	Metrology and Measurements	Bachelor	2(3)
RMEE2202	Introduction to Robotics	Bachelor	4(6)
RMEE2209	Object recognition methods in robotic systems	Bachelor	3(4)
CSCI3112	Operating Systems and System Programming	Bachelor	4(6)
INFT 3210	Field Projects for Information Systems	Bachelor	3(5)
INFT3105	Cyber Security Fundamentals	Bachelor	3(5)
CEEN 3210	Theory of Non-Linear Control Systems	Bachelor	3(5)
CEEN 3107	Introduction to Microcontrollers and Microprocessor Systems	Bachelor	3(5)
INFE2213	Technological Enterpreunership and Startups	Bachelor	3(5)
INFT3132	Backend Framework. Spring	Bachelor	3(5)
INFT3230	IT Audit	Bachelor	3(5)
INFT4148	Enterprise Architecture	Bachelor	3(5)
INFT4245	Golang application development	Bachelor	3(5)
ACEN4142	PLC Programming II	Bachelor	3(5)
CSE1125	Intro to narrative design	Bachelor	3(5)
CSE1126	Intro to game design & development	Bachelor	3(5)
CSCI 4235	Data Storage and Analysis	Bachelor	3(5)
CSCI3237	Introduction to Machine learning	Bachelor	3(5)
CSCI3241	Deep Learning	Bachelor	3(5)
CSCI3240	Introduction to Computer Vision	Bachelor	3(5)
INFT3131	Backend Framework. Django	Bachelor	3(5)
INFT3134	Advanced Django	Bachelor	3(5)
INFT4244	UI/UX Design	Bachelor	3(5)
CSCI3110	Operating Systems	Bachelor	3(5)
INFS4145	DevOps II	Bachelor	3(5)
INFT3135	Android Development	Bachelor	3(5)
INFT3136	iOS Development	Bachelor	3(5)
INFS 3132	Security issue in WEB and Mobile Applications	Bachelor	3(5)
CSE1366	ICPC olympiad programming I	Bachelor	3(5)
CSE1204	Applied Cryptography	Bachelor	3(5)
INFS4137	Security of Operating Systems	Bachelor	3(5)
ACEN4145	Autonomous Mobile Robot	Bachelor	3(5)
ACEN4147	Robotics: Estimation and Learning	Bachelor	3(5)
ACEN3248	Distributed Control Systems	Bachelor	3(5)

ACEN3249	Digital twin design	Bachelor	3(5)
ACEN 3137	Networks and Telecommunications (Automation control)	Bachelor	3(5)
ACEN 3131	Industrial Networks and Fieldbuses	Bachelor	3(5)
CSE1131	Advanced Unity Game Engine	Bachelor	3(5)
CSE1132	Advanced Unreal Engine	Bachelor	3(5)
INFG2231	Object Modeling using Polygon Surface	Bachelor	3(5)
INFG 3233	VFX and 3D physics	Bachelor	3(5)
INFG 4134	Filmmaking and Motion Graphics	Bachelor	3(5)
INFT3212	Block chain technology and Applications	Bachelor	3(5)
RESM5101	Research Methods	Master	3(5)
NEW	Programming for data Science	Master	3(5)
CSDA 5102	Computer System Architecture	Master	3(5)
CSCS 5111	Database Systems	Master	3(5)
DSSC5107	Data Collection and Analysis (Hadoop)	Master	3(5)
DSSC5101/CNCR 5101	Natural language processing and pattern recognition methods	Master	3(5)
NEW	Computational Neuroscience	Master	3(5)
NEW	Accelerated Unreal Engine	Master	3(5)
NEW	Game engines architecture	Master	3(5)
CSCS 5112	Software Engineering	Master	3(5)
SYSENG 5104	Fundamentals of Modern Systems Engineering	Master	3(5)
SYSENG 5105	Systems Design and Analysis	Master	3(5)
CSE2323	Security of Operating Systems	Master	3(5)
CSE2324	Network security practices	Master	3(5)
MSITM 5132	Advanced Business Analytics	Master	3(5)
MSITM 5133	Optimization Modeling w/spreadsheets	Master	3(5)
HEMITM 5142	Case Studies in Higher Education Administration	Master	3(5)
HEMITM 5143	Learning Design, Innovation, and Technology	Master	3(5)
SMCWRHE 51	Water Resources System Planning and Management	Master	3(5)
SMCWRHE 51	Engineering Sediment and Intake Works	Master	3(5)