Table Learning Outcome Matrix – Modules to EP BA 60611000 – Telecommunication technologies (Telecommunications)

Learning Outcomes (critical units of competence)	Name module	
LO 2. Able to making decisions informed by philosophical and historical knowledge, techniques of discussion and debate. An ability to function effectively on a team whose members together provide leadership	HUM101	The latest History of Uzbekistan
LO 2. Able to making decisions informed by philosophical and historical knowledge, techniques of discussion and debate. An ability to function effectively on a team whose members together provide leadership	HUM102	Religious studies
LO 2. Able to making decisions informed by philosophical and historical knowledge, techniques of discussion and debate. An ability to function effectively on a team whose members together provide leadership	HUM103	Philosophy
LO 1. Able to communicate effectively with a range of audience and competently express oneself in Uzbek, Russian, and other foreign languages.	FRL101	Foreign language I
LO 1. Able to communicate effectively with a range of audience and competently express oneself in Uzbek, Russian, and other foreign languages.	FRL102	Foreign language II
LO 5. Able to apply foundational and advanced knowledge in the fields of mathematics, natural sciences, and technical sciences to complex engineering tasks, utilizing the latest scientific advancements to solve computational problems.	MTH101	Calculus
LO 5. Able to apply foundational and advanced knowledge in the fields of mathematics, natural sciences, and technical sciences to complex engineering tasks, utilizing the latest scientific advancements to solve computational problems.	PHY101	Physics I
LO 5. Able to apply foundational and advanced knowledge in the fields of mathematics, natural sciences, and technical sciences to complex engineering tasks, utilizing the latest scientific advancements to solve computational problems.	PHY102	Physics II
LO 5. Able to apply foundational and advanced knowledge in the fields of mathematics, natural sciences, and technical sciences to complex engineering tasks, utilizing the latest scientific advancements to solve computational problems.	MTH102	Differential equations
LO 5. Able to apply foundational and advanced knowledge in the fields of mathematics, natural sciences, and technical sciences to complex engineering tasks, utilizing the latest scientific advancements to solve computational problems.	MTH103	Discrete structures
LO 6. Able to design computer systems and their components using modern programming languages.	PRG101	Programming I
LO 6. Able to design computer systems and their components using modern programming languages.	PRG101	Programming II
LO 1. Able to communicate effectively with a range of audience and competently express oneself in Uzbek, Russian, and other foreign languages.	AWR101	Academic writing
LO 5. Able to apply foundational and advanced knowledge in the fields of mathematics, natural sciences, and technical sciences to complex engineering tasks, utilizing the latest scientific advancements to solve computational problems.	MTH204	Probability and statistics
LO 8. Able to implement cybersecurity measures and understand the principles of cryptography and network security.	CSF201	Fundamentals of Cyber Security
LO 9. Able to analyze and design efficient algorithms and data structures to solve computational problems.	DSA201	Data structure and algorithms
LO 10. Able to design, implement, and analyze and to understand the design and functioning of computer hardware, including processors, memory, and I/O devices, digital systems using hardware description languages and tools.	EAC201	Electronics and circuits I
LO 10. Able to design, implement, and analyze and to understand the design and functioning of computer hardware, including processors, memory, and I/O devices, digital systems using hardware description languages and tools.	EAC202	Electronics and circuits II
LO 5. Able to apply foundational and advanced knowledge in the fields of mathematics, natural sciences, and technical sciences to complex engineering tasks, utilizing the latest scientific advancements to solve computational problems.	EGP201	Engineering graphics

Learning Outcomes (critical units of competence)	Name module	
LO 13. Able to apply fundamental AI principles and techniques, design and implement multi-agent systems, and utilize data mining methods to extract meaningful patterns and insights from large datasets for solving complex engineering problems.	AIF201	Fundamentals of Artificial Intelligence
LO 10. Able to design, implement, and analyze and to understand the design and functioning of computer hardware, including processors, memory, and I/O devices, digital systems using hardware description languages and tools.	MPS201	Microprocessors
LO 7. Able to calculate the basic parameters of power lines and microwave devices, parameters of analog and digital signals using the basic equations of electrodynamics.	EFW201	Electromagnetic fields and waves
LO 11. Able to understand the main characteristics of modern information and communication networks and systems and Able to adapt to technology updates	WNW301	Wireless networks
LO 12. Able to apply knowledge of information and coding theory in modern information infrastructure.	ICT301	Information coding theory
LO 13. Able to apply type of access network, topologies, architectures, fiber optic cable and communication lines, optical cable welding.	OCS301	Optical communication systems
LO 14. Able to work with new technologies used in telecommunication network management systems	EMS301	Embedded management systems
LO 9. Able to analyze and design efficient algorithms and data structures to solve computational problems.	IPS301	Image processing
LO 17. Able to apply knowledge in the field of engineering in practice and effectively use engineering knowledge when conducting qualifying training and processing the results of experiments and drawing valid conclusions based on them.	IDP361	Individual project
LO 15. Able to apply the principles of using Internet of Things objects in various fields, to learn multimedia traffic transmission and analyze models of packet information flows in multimedia networks.	MCN401	Multimedia communication networks
LO 4. Able to making decisions informed by health, safety, and workplace dynamics, utilizing methods to ensure the safety of social systems to preserve, develop, and enhance the effective functioning of individuals and society.	PHT101	Physical Training
LO 4. Capable of making decisions informed by health, safety, and workplace dynamics, utilizing methods to ensure the safety of social systems to preserve, develop, and enhance the effective functioning of individuals and society.	GEN30	Power supply of information communication systems
LO 4. Capable of making decisions informed by health, safety, and workplace dynamics, utilizing methods to ensure the safety of social systems to preserve, develop, and enhance the effective functioning of individuals and society.	GEN302	Life safety
LO 3. Able to making decisions informed by principles of engineering psychology, pedagogy and ecology.	GEN303	Pedagogy. Psychology
LO 3. Able to making decisions informed by principles of engineering psychology, pedagogy and ecology.	GEN304	Ecology
LO 13. Able to apply type of access network, topologies, architectures, fiber optic cable and communication lines, optical cable welding.	ITS401	Subscriber Access Networks
LO 13. Able to apply type of access network, topologies, architectures, fiber optic cable and communication lines, optical cable welding.	ITS402	Fiber optic communication lines
LO 16. Able to analyze modern methods of data collection, sorting, processing and transmission in information communications	ITS403	Data communications
LO 18. Able to operate software and setup configuration of technologies located in telecommunication network devices	ITS404	Fundamentals of network programming
LO 16. Able to analyze modern methods of data collection, sorting, processing and transmission in information communications	ITS405	Info-communication systems and networks
LO 14. Able to work with new technologies used in telecommunication networks management systems	ITS406	Telecommunications Network Management

Learning Outcomes (critical units of competence)	Name module	
LO. 19. Able to analyze managing, monitoring traffic, architectures and applications, modeling and simulation in telecommunication network	ITS407	Virtual network technologies
LO. 19. Able to analyze managing, monitoring traffic, architectures and applications, modeling and simulation, switching and routing in telecommunication network	ITS408	Modeling and Simulation of Networks
LO. 20. Able to analyze working with Cisco Packet Tracer, Elastix programs, programs for setting up SIP terminals, modems, IAD, DSLAM	ITS409	Introduction to IMS
LO. 20. Able to analyze working with Cisco Packet Tracer, Elastix programs, programs for setting up SIP terminals, modems, IAD, DSLAM	ITS410	Next generation convergence networks
LO 18. Able to operate software and setup configuration of technologies located in telecommunication network devices	ITS411	Network Smart Devices Software
LO 18. Able to operate software and setup configuration of technologies located in telecommunication network devices	ITS412	Programming structure in telecommunications
LO. 19. Able to analyze managing, monitoring traffic, architectures and applications, modeling and simulation, switching and routing in telecommunication network	ITS413	Switching and routing
LO 15. Able to apply the principles of using Internet of Things objects in various fields, to learn multimedia traffic transmission and analyze models of packet information flows in multimedia networks.	ITS414	Future Networks
LO. 19. Able to analyze managing, monitoring traffic, architectures and applications, modeling and simulation, switching and routing in telecommunication network	ITS415	Exploitation and services of telecommunication networks
LO. 19. Able to analyze managing, monitoring traffic, architectures and applications, modeling and simulation in telecommunication network	ITS416	Multimedia transmission in IT networks
LO 15. Able to apply the principles of using Internet of Things objects in various fields, to learn multimedia traffic transmission and analyze models of packet information flows in multimedia networks.	ITS417	IoT in Telecommunication networks
LO 15. Able to apply the principles of using Internet of Things objects in various fields, to learn multimedia traffic transmission and analyze models of packet information flows in multimedia networks.	ITS418	Theory of Teletraffic
LO 17. Able to apply knowledge in the field of engineering in practice and effectively use engineering knowledge when conducting qualifying training and processing the results of experiments and drawing valid conclusions based on them.	QPR301	Practical Training
LO 17. Able to apply knowledge in the field of engineering in practice and effectively use engineering knowledge when conducting qualifying training and processing the results of experiments and drawing valid conclusions based on them.	QPR 402	Pre-graduation work practice
LO 17. Able to apply knowledge in the field of engineering in practice and effectively use engineering knowledge when conducting qualifying training and processing the results of experiments and drawing valid conclusions based on them.	GQW401	Graduation Qualification Work