

Table– Learning Outcome Matrix – Modules to EP BA 60612000 – Info–communication engineering

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 1
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 2
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 1
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 2
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 1
LO 6. Able to design computer systems and their components using modern programming languages.	PRG102	Programming 2
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.	EGS201	Engineering graphics
LO 8. Able to implement cybersecurity measures and understand the principles of cryptography and network security.	CSF201	Cybersecurity fundamentals
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.	EAC 201	Electronics and circuits 1
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.	EAC 202	Electronics and circuits 2
LO 5. Able to apply foundational and advanced knowledge in the fields of mathematics, natural sciences, and technical sciences to complex	MTH204	Probability and statistics

Learning Outcomes (critical units of competence)	Name module	
engineering tasks, utilizing the latest scientific advancements to solve computational problems.		
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 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 11. Able to apply knowledge of information and coding theory in modern information infrastructure.	ICT301	Information coding theory
LO 12. Able to use basic characteristics of analog and digital signals and systems, signal discretization, quantization and coding, modern signal processing systems.	SAS301	Signals and systems
LO 16. 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 15. Able to configure the software and configuration of technologies found in information and communication networks and Able to use network principles defined by Software.	PRI401	Programming in info-communication
LO 9. Able to analyze and design efficient algorithms and data structures to solve computational problems.	IMP301	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 19. Able to use new technologies in management systems of info-communication networks.	EMS301	Embedded management systems
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 3. Able to making decisions informed by principles of engineering psychology, pedagogy and ecology.	GEN301	Ecology
LO 3. Able to making decisions informed by principles of engineering psychology, pedagogy and ecology.	GEN302	Pedagogy. Psychology
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.	GEN303	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.	GEN304	Life safety
LO 16. Able to understand the main characteristics of modern information and communication networks and systems and Able to adapt to technology updates	ITS201	Fundamentals of building info-communication systems and networks
LO 16. Able to understand the main characteristics of modern information and communication networks and systems and Able to adapt to technology updates	ITS202	Info-communication technologies
LO 15. Able to configure the software and configuration of technologies found in information and communication networks and Able to use network principles defined by Software.	ITS303	Fundamentals of network programming
LO 15. Able to configure the software and configuration of technologies found in information and communication networks and Able to use network principles defined by Software.	ITS304	Programmable digital devices

Learning Outcomes (critical units of competence)	Name module	
LO 18. Able to design and apply modern methods of maintenance and repair using modern information technologies and graphical capabilities of applied mathematical packages at various stages.	ITS305	Modeling of Info-communication systems
LO 18. Able to design and apply modern methods of maintenance and repair using modern information technologies and graphical capabilities of applied mathematical packages at various stages.	ITS306	Methods of modeling data transmission networks
LO 14. Able to analyze modern methods of data collection, sorting, processing and transmission in information communications	ITS407	Data communications
LO 15. Able to configure the software and configuration of technologies found in information and communication networks and Able to use network principles defined by Software.	ITS408	Programming structure in telecommunications
LO 18. Able to design and apply modern methods of maintenance and repair using modern information technologies and graphical capabilities of applied mathematical packages at various stages.	ITS409	Design of digital devices in signal processors
LO 18. Able to design and apply modern methods of maintenance and repair using modern information technologies and graphical capabilities of applied mathematical packages at various stages.	ITS410	Design of digital devices in programmable logic integrated circuits
LO 20. Able to understand different machine learning paradigms and use emerging technologies to develop software for smart devices	ITS411	Machine learning technologies in info-communication systems
LO 20. Able to understand different machine learning paradigms and use emerging technologies to develop software for smart devices	ITS412	Application of machine learning in info-communications
LO 19. Able to use new technologies in management systems of info-communication networks.	ITS413	Telecommunications Network Management
LO 16. Able to understand the main characteristics of modern information and communication networks and systems and able to adapt to technology updates	ITS414	Info-communication systems and networks
LO 18. Able to design and apply modern methods of maintenance and repair using modern information technologies and graphical capabilities of applied mathematical packages at various stages.	ITS415	Virtualization of network functions and services
LO 15. Able to configure the software and configuration of technologies found in information and communication networks and Able to use network principles defined by Software.	ITS416	Software configurable network
LO 20. Able to understand different machine learning paradigms and use emerging technologies to develop software for smart devices	ITS417	Network Smart Devices Software
LO 19. Able to use new technologies in management systems of info-communication networks.	ITS418	Info-communication intelligent management systems
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