**PRG. Subprogramme “Software Engineering” (qualification: Programmer) Outcomes**

**PRG1. Basic Knowledge and Skills**

Graduates of the Programme with Qualification “Programmer” should be able to:

*PRG11*: use operating systems

*PRG12*: use text and graphic editors, and other office software

*PRG13*: configure working place and working tools

*PRG14*: use tools for software development

*PRG15*: use information technology industry standards

**PRG2. Analysis and Design**

Graduates of the Programme with Qualification “Programmer” should be able to:

*PRG21*: analyse input and output data

*PRG22*: read and understand software requirements specification

*PRG23*: select relevant means for problem solving

*PRG24*: read and understand software design documentation

*PRG25*: read and understand documentation and source code for a maintainable system

*PRG26*: read and understand conceptual data model, and design physical database

*PRG27*: model, generate software design through creating the implementation model (hierarchy of classes and functions) and building and describing algorithms

**PRG3. Coding, Testing and Deployment**

Graduates of the Programme with Qualification “Programmer” should be able to:

*PRG31*: generate, write source code in conformity with design and coding guidelines, and responding to change requests and issue reports

*PRG32*: code within source codes written by other persons

*PRG33*: debug and unit-test programs

*PRG34*: prepare un run test cases for a program

*PRG35*: maintain software by analysing change impact, realizing changes, performing configuration management, systemizing support information collected during maintenance

**PRG4. Work Organization and Planning**

Graduates of the Programme with Qualification “Programmer” should be able to:

*PRG41*: evaluate effort and time of a software development task

*PRG42*: plan and control individual work

*PRG43*: work in teams

*PRG44*: communicate in the official language and one foreign language

*PRG45*: follow employment relationship norms

*PRG46*: follow legal requirements of OHS, fire safety, and environment protection

**ADM. Subprogramme “Information Technology” (qualification: Administrator of Computers Systems and Computer Networks) Outcomes**

**ADM1. General Basic Knowledge and Skills**

Graduates of the Programme with Qualification “Administrator of computer systems and computer networks” should be able to:

*ADM11*: use operating systems

*ADM12*: use text and graphic editors, spread-sheet editors, and other office software

*ADM13*: configure working place and working tools

*ADM14*: use information technology industry standards and technical documentation

ADM15: use tools for information search and selection

*ADM16*: create documentation in conformity to legal requirements of record-keeping, prepare and conduct presentations and tutorials

**ADM2. Special Basic Knowledge and Skills**

Graduates of the Programme with Qualification “Administrator of computer systems and computer networks” should be able to:

*ADM21*: use antivirus software and firewall

*ADM22*: use diagnostic software

*ADM23*: use peripheral devices and various data mediums

*ADM24*: make use of software updates

*ADM25*: use measuring equipment for small computer repairing works

*ADM26*: create data backups

*ADM27*: use database technologies

*ADM28*: use programming tools for scripting

**ADM3. Operational Assurance of Computer Systems**

Graduates of the Programme with Qualification “Administrator of computer systems and computer networks” should be able to:

*ADM31*: create and manage user accounts, grant user permissions to systems

*ADM32*: ensure physical security of computers

*ADM33*: administer computer network services and file system

*ADM34*: ensure information protection and security

*ADM35*: install and configure software

*ADM36*: install and configure hardware

*ADM37*: diagnose and solve problems of using software and hardware

*ADM38*: improve hardware performance and software through updates

*ADM39*: perform activities on data protection and security

**ADM4. Analysis, Design, and Planning**

Graduates of the Programme with Qualification “Administrator of computer systems and computer networks” should be able to:

*ADM41*: select relevant approach for task solving

*ADM42*: perform inventories of hardware, software and computer networks

*ADM43*: design computer systems and computer networks

*ADM44*: create and carry out security policy for an information system

*ADM45*: follow employment relationship norms

*ADM46*: follow legal requirements of OHS, fire safety, and environment protection