**APPLIED INFORMATICS** is My Future Speciality

*1.* *Practise reading the following words.* *Give Russian equivalents. Memorise them.*

To apply, to process data, to perform, statistical calculation, to regard, to consist of, to serve, to offer, opportunity, to pay attention to, complicated, to do one’s best, simulation modelling, probability theory, particular emphasis, enterprise, skills and competencies, to graduate, software implementation, installation and maintenance of software, information technology, to make up one’s mind, hardware, software, to make a profit on, tool, computer competent, to require, to be instructed in, coding theory of algorithms, data communication.

*2.* *Make up word combinations with the following words.*

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| --- | --- |
| to process, field of, to offer, simulation, to follow, to pay, differential, to make up, statistical, information, software | attention, one’s mind, data, equation, knowledge, changes, modelling, implementation, calculation, opportunities, system |

*3.* *Match the words having similar meaning.*

To apply, significant, to make, computation, research, velocity, sign, to use, important, data, calculation, investigation, symbol, to study, various, to calculate, installation, to start, in the sphere of, to compute, information, to learn, probation, to begin, speed, in the field of, to produce, different, practical training, setting up.

*4. Read the text “****Applied Informatics****” and find English equivalents to the words below.*

вычислительный механизм

хранение

обработка

основной предмет (направление)

информатик

передача данных

теория чисел

шифровальный

распределенный

разработка

проектирование

основы

понятие

умение

Actually, I’ve always been interested in computers. And now I am a student of Applied Informatics degree course. The course focuses on collecting, storing, processing, and transmitting data with the help of computing machinery and communication systems. To put it simply, my major – *computer systems software* – is about applying big data to computer systems in meaningful ways. That’s why we are instructed in general subjects as well as special ones.

We study ***mathematical analysis, algebraic number theory, analytic geometry, differential equations, probability theory and mathematical statistics, discrete mathematics and mathematical logic; computer architecture, operating systems, programming technologies, computer networks, data models and database management systems, operations research (operational research); graph theory, algorithms and data structures, system(s) programming, software testing and quality assessment, software systems design, cryptographic methods, calculation methods, software management, distributed and parallel systems, computer graphics, information systems security***.

As specialists in this field, we are expected to 1) *know* fundamental math concepts referring to computer science, 2) *understand* and apply a wide range of tools required for software development – design methodology, algorithms, programming languages, and man-machine interaction techniques, 3) *understand* the essentials of computer architecture, computer networks, and data communications. We’ll acquire skills and competences needed for 1) solving problems related to the analysis, design, implementation, control, maintenance, and security of computer systems for business or non-business organizations, 2) designing and managing web projects, operating systems, databases, computer networks software in different programming languages.

After graduating we become ***information specialists, experts on software development***. We can take up a variety of positions (*informational analyst, system analyst, analyst of computer communications, computer systems and data banks; information system developer, applied programmer, programmer-analyst, application developer, web-master, web-programmer, consultant on information technologies*, and so on) at IT-companies, computing centers, at the Board of Statistics, research laboratories and institutes, industrial enterprises, research-and-development centers, in both industrial and government sectors.

*5.* *Find in the text words of Latin and Greek origin.*

*6. Look through the text “Applied Informatics” again, find the derivatives of these words in the text and define their parts of speech.*

industry

to develop

to compute

meaning

to consult

different

to analyze

probable

to maintain

competent

method

to graduate

*7.* *Concept check. Work in pairs or groups. Ask your partners questions about their future profession.*

1) What will your future profession be connected with?

2) Our department provides progressive education, doesn’t it?

3) What does your course focus on?

4) What special subjects do the students of your course study?

5) Which is your favorite one?

6) What will you become after graduating?

7) What positions can you take up?

8) Where can you work?

9) Which company would you like to work for after graduating?

*8. Ask your partner.*

1. Why he/she has chosen this profession. 2. Who influenced the choice of his/her profession. 3. Whether he/she knows much of his/her profession. 4. What his/her favourite subjects are. 5. If computers can solve problems which require great amount of calculation. 6. What opportunities for studies the Faculty of Mathematics and Technologies of Programming offers.

*9. Work in pairs. Ask all types of questions to the text.*