ADDITIONAL EXPLANATORY MATERIALS ON THE CHOICE OF EDUCATIONAL DISCIPLINES FOR HIGHER EDUCATION STUDENTS AT THE FACULTY OF INFORMATION TECHNOLOGIES

When choosing disciplines (from the proposed list, which is posted on the university website https://www.khnu.km.ua/root/page.aspx?l=0&r=52), please pay attention to the following features:

1. The disciplines offered for selection by students are professionally-oriented for specialties that are assigned to the relevant graduate profile departments. For example, the list of disciplines in information systems and technologies is offered as a deepening of professional training for higher education students majoring in 126 information systems and technologies. Similarly, for all other specialties for which educational programs are initiated and operate, the relevant lists are offered by the specialty of those specialties.

2. Not all disciplines are related to professional training for higher education students studying at the Faculty of Information Technology. There are few such disciplines and they include, for example, English, French, Spanish, Polish, German and others. But for the teaching of such disciplines there are appropriate non-graduate departments, in particular, for example, the Department of Foreign Languages (this department offers students to study such disciplines). At the university for other subject areas, departments of faculties can be offered to applicants for disciplines, such as economics or humanities..

3. Each discipline is assigned to a specific department. There may be cases when the discipline is repeated many times, ie assigned to different departments. In this case, when determining the choice you need to carefully analyze its content, which can be viewed on the page of a particular department and, accordingly, the teacher who will teach this discipline.

4. The university catalog of elective disciplines is updated annually (academic disciplines are added and removed). Therefore, when choosing disciplines, it should be borne in mind that certain disciplines in the next year may be removed from the catalog, and if you want to choose them, you should not postpone the choice of their disciplines for subsequent years.

5. The study of foreign languages (if chosen for the year) will be carried out in two semesters with a division of at least 2 ECTS credits per semester, ie 4 ECTS credits per academic year, but may be more, depending on the number of ECTS credits to choose from in the semester and student desire).

6. All disciplines to be chosen by FIT students are completed by such a form of control as credit.

7. For applicants for higher education, all professional disciplines of free choice offered by the departments of the Faculty of Information Technology have a volume of 8 credits.

8. In order to understand the sequence of study of academic disciplines by courses and semesters, FIT departments have developed an appropriate recommendation presentation of academic disciplines with their presentation by departments, semesters and educational programs (see tables after the text). These recommendations from the departments are not mandatory. When forming student groups (quantitatively according to the university regulations on the recommended minimum number of students for group formation) taking into account the capabilities of departments (there may be fewer students than regulated by the university regulations on the minimum recommended number of students in a group, if the department can provide teaching for less number of students in the group) subjects from the list recommended by the departments may be taught in other courses and in other semesters.

9. Applicants for higher education can choose subjects from all levels of education (bachelor's, master's, doctoral) from the catalog of all faculties of the university. When making a choice it is necessary to take into account the need for minimum basic knowledge of the chosen discipline, if it is not from the list of professional educational components of its educational program of the specialty.

10. The choice of subjects after approval cannot be changed, and all selected subjects, which are approved according to the procedure, become part of the curriculum of the next academic year.

11. The choice of disciplines by applicants for the bachelor's degree is carried out only for one (next) academic year.

12. Students' proposals for the choice of disciplines are systematized by the dean's office to ensure the teaching of selected disciplines. The Dean's Office communicates with the departments to confirm the possibility of teaching selected disciplines and forming groups.

13. In addition, the content of elective courses for higher education students can get acquainted in the mode of guest access in a modular learning environment, which lists and work programs (syllabuses) of elective courses, structured in terms of departments for which they are assigned, as well as visiting departments for which disciplines of interest.

14. In addition to the disciplines from the university catalog, applicants for higher education can choose academic disciplines that belong to the compulsory educational components of other (different from their own) educational programs. Approval of such a choice is possible if the available number of students in the group allows you to include the applicant in it. If for a certain academic discipline a full group is formed from the obligatory educational components of (another) educational program, then such discipline is approved for the group and is included in the catalog of elective disciplines, as required by applicants for higher education.

15. General issues of choice of academic disciplines that are not included in these additional explanations are regulated by the Regulations on the procedure for implementation of higher education by applicants for free choice of academic disciplines.

16. Recommendations of departments:

1. Department of Computer Engineering and Information Systems

№	Subjects	Level of higher education	Educational program	Recommendation
1	Data structures and algorithms	bachelor	Information systems and technologies	Recommended to study in the 3rd semester
2	Web design and graphic design	bachelor	Information systems and technologies	Recommended to study in the 3rd semester
3	Programming of microcontroller systems	bachelor	Computer engineering and programming	Recommended to study in the 3rd semester
4	Standards and tools of information security	bachelor	Computer engineering and programming	Recommended to study in the 3rd semester
5	Object-oriented design	bachelor	Information systems and technologies	Recommended to study in the 4th semester
6	Content management systems for web services	bachelor	Information systems and technologies	Recommended to study in the 4th semester
7	Programming of robotic systems	bachelor	Computer engineering and programming	Recommended to study in the 4th semester
8	Cryptology	bachelor	Computer engineering and programming	Recommended to study in the 4th semester
9	Web services programming	bachelor	Information systems and technologies	Recommended to study in the 5th semester
10	Internet of Things design and programming	bachelor	Computer engineering and programming	Recommended to study in the 5th semester

11	Intrusion detection systems	bachelor	Computer engineering and programming	Recommended to study in the 5th semester
12	Web-based software development	bachelor	Information systems and technologies	Recommended to study in the 6th semester
13	Artificial intelligence	bachelor	Information systems and technologies	Recommended to study in the 6th semester
14	Cloud technologies	bachelor	Computer engineering and programming	Recommended to study in the 6th semester
15	Information security in computer networks	bachelor	Computer engineering and programming	Recommended to study in the 6th semester
16	Cross-platform programming	bachelor	Information systems and technologies	Recommended to study in the 7th semester
17	Functional programming	bachelor	Information systems and technologies	Recommended to study in the 7th semester
18	Security and quality of computer systems software	bachelor	Computer engineering and programming	Recommended to study in the 7th semester
19	Security of web systems, web resources and mobile applications	bachelor	Computer engineering and programming	Recommended to study in the 7th semester
20	Mobile-oriented software development	bachelor	Information systems and technologies	Recommended to study in the 8th semester
21	OLAP technologies and data warehouses	bachelor	Information systems and technologies	Recommended to study in the 8th semester
22	Administration, diagnosis and protection of computer systems and networks	bachelor	Computer engineering and programming	Recommended to study in the 8th semester
23	Computer virus detection and analysis tools	bachelor	Computer engineering and programming	Recommended to study in the 8th semester
24	Mathematical linguistics	master	Computer engineering and programming	Recommended to study in the 2nd semester
25	Object-oriented programming technologies	master	Computer engineering and programming	Recommended to study in the 2nd semester
26	Computer game programming technologies	master	Computer engineering and programming	Recommended to study in the 2nd semester
27	Mathematical methods of computer systems research	master	Computer engineering and programming	Recommended to study in the 2nd semester
28	Design of software systems for information protection	master		Recommended to study in the 3rd semester

29	Areas of research and development of computer engineering	master	Computer engineering and programming	Recommended to study in the 3rd semester
30	Artificial immune systems and neural networks	master	Computer engineering and programming	Recommended to study in the 3rd semester
31	Artificial intelligence systems	master	Computer engineering and programming	Recommended to study in the 3rd semester
32	CASE-evaluation of critical software systems: quality, reliability, security	PhD	Computer engineering	Recommended to study in the 2nd semester
33	Fault-tolerant embedded systems on programmable logic	PhD	Computer engineering	Recommended to study in the 2nd semester
34	Quality assessment and examination of the software	PhD	Computer engineering	Recommended to study in the 2nd semester
35	Working diagnostics of secure information and control systems	PhD	Computer engineering	Recommended to study in the 2nd semester

2. Department of Foreign Languages & Department of Ukrainian Philology

№	Subjects	Level of higher education	Educational program
1	English	bachelor	Recommended to study in the 3rd-8th semesters
2	Polish	bachelor	Recommended to study in the 3rd-8th semesters
3	Spanish	bachelor	Recommended to study in the 3rd-8th semesters
4	French	bachelor	Recommended to study in the 3rd-8th semesters
5	Italian	bachelor	Recommended to study in the 3rd-8th semesters
6.	German	bachelor	Recommended to study in the 3rd-8th semesters
7.	Ukrainian	bachelor	Recommended to study in the 3rd-8th semesters