STUDY MODULE DESCRIPTION FORM

Name of the module/subject **Technologies of information (ECDL)**		Code **1010342641010344913**
Field of study **Mathematics**	Profile of study (general academic, practical) **(brak)**	Year /Semester **2 / 4**
Elective path/specialty **-**	Subject offered in: **Polish**	Course (compulsory, elective) **obligatory**
Cycle of study: **Second-cycle studies**	Form of study (full-time,part-time) **full-time**	

No. of hours				No. of credits **4**
Lecture: **-** Classes: **-** Laboratory: **45** Project/seminars: **-**				

Status of the course in the study program (Basic, major, other) **(brak)**	(university-wide, from another field) **(brak)**

Education areas and fields of science and art	ECTS distribution (number and %**)**

Responsible for subject / lecturer:

dr inż. Karol Gajda
email: karol.gajda@put.poznan.pl
tel. 2805
Faculty of Electrical Engineering
ul. Piotrowo 3A 60-965 Poznań

Prerequisites in terms of knowledge, skills and social competencies:

1	**Knowledge**	Basic knowledge of computer science.
2	**Skills**	Computer skills. The ability to effectively self-education in a field related to the chosen field of study.
3	**Social competencies**	Knowledge of the limits of their knowledge and understanding of the need for further education.

Assumptions and objectives of the course:

Obtaining the knowledge, skills and competences in the field of information technologies with special emphasis on the requirements of the European Computer Driving Licence Advanced in the field of advanced word processing, presentation graphics and spreadsheets.

Study outcomes and reference to the educational results for a field of study

Knowledge:

1. Knowledge of the basics computational techniques and programming, supporting the work of mathematician and understand their limitations. - [K_W05]

2. Knowledge of the ways of the application of mathematical methods in selected areas of science. - [K_W09]

Skills:

1. Can interpret and explain the functional dependencies, included in the form of formulas, tables, graphs, charts and apply them to practical problems. - [K_U05]

2. Apply the rules of safety and health at work. - [K_U27]

Social competencies:

1. Knowledge of the limitations own knowledge and understands the need for further education. - [K_K01]

Assessment methods of study outcomes

Checking the skills and competences in the form of tests.

Continuous evaluation for each class (awarding bonuses to activity and quality perception).

Get extra points for the activity in the classroom, and in particular for:

- propose to discuss additional aspects of the subject;

- effectiveness of the application of knowledge when solving a given problem;

- the ability to work within a team;

- comments relating to the improvement of teaching materials;

- aesthetic accuracy reports and tasks of the self-study.

Course description

Standards in computer science.

Word processing:

- Use advanced text formatting, paragraph, column and table formatting. Converting text into tables and tables in the text.

- Working with references such as footnotes, endnotes, and signatures. Creating a table of contents, links and references.

- Increasing labor productivity through the use of building blocks, templates and forms.

- Efficient use of macros and advanced mail merge options.

- The use and application options in the text linking, connecting and inserting objects to data integration.

- Working with documents main and subordinate. The use of security features document.

- Work with watermarks, sections, headers and footers.

Spreadsheets:

- Use advanced formatting options such as conditional formatting or define your own numerical formats.

- Using the related operations logical, statistical and financial.

- Create charts and the use of advanced formatting charts.

- Use pivot tables to analyze the data, sorting and filtering data.

- Define scenarios.

- Operations in the worksheet using the names assigned to cell ranges, macros and templates.

- Defining the criteria for validation of data entered into the worksheet.

- The use of links, import the data into the worksheet, change tracking.

- Compare and Merge Workbooks.

- Protecting sheets.

Basic bibliography:

1. Alicja Żarowska-Mazur, Waldemar Węglarz, ECDL Advanced na skróty, PWN

Additional bibliography:

1. Mirosława Kopertowska, Witold Sikorski, Przetwarzanie tekstu. Poziom zaawansowany

2. Mirosława Kopertowska, Witold Sikorski, Arkusze kalkulacyjne. Poziom zaawansowany

Result of average student's workload

Activity	Time (working hours)
1. participation in laboratory classes	45
2. participation in the consultations related to the implementation of the education process, in particular laboratory / project	5
	10
3. completion (within own work) reports on laboratory exercises.	10
4. familiarization with the indicated literature / teaching materials	

Student's workload

Source of workload	hours	ECTS
Total workload	70	4
Contact hours	50	2
Practical activities	60	2