# Syllabus

# LINGUISTIC PROMOTION OF AUTOMATED MANAGEMENT SYSTEMS

**KAФЕДРА**
ІНЖЕНЕРІЇ ПРОГРАМНОГО
ЗАБЕЗПЕЧЕННЯ

**training of higher education applicants second (master's level)**
**educational and professional program «Software Engineering»**
**field of knowledge 12 Information Technologies**
**Specialty 121 Software Engineering**
**Days of classes and consultations: according to the current schedule**
**Year of study: I, Semester: II**
**Number of credits: 5**
**Course language: English**

**Course leader**
Ph.D, docent
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# Description of the discipline

This discipline presents a general discussion of goals to strive for in designing software for use in linguistic analysis. It is intended primarily for researchers who require software for a research project, and programmers creating such software.

The discipline "Linguistic Promotion of Automated Management Systems" is an attempt to promote engaged discussion of just how linguistic software should be expected to perform, and how this can be achieved.

Main tasks of «**Linguistic Promotion of Automated Management Systems**»:

- To know and use main conceptions and modeling methodologies of information processes.

- To be able to analyze, evaluate and choose methods, modern software, instrumental and computing tools, technologies, algorithmic and programming decisions for effective implementation of special industrial tasks in software engineering.

- To be able to develop and evaluate creation strategies of program tools; explain, analyze and evaluate management decisions which are made in terms of the quality of developed software product.

- To know and use main conceptions and modeling methodologies of information processes.

- To be able to choose paradigms and programming languages for decision applied tasks; apply system and special tools, component technologies (platforms) and integrated environment of software creation in the practice.

- To know of the professional lexicon, business language for professional communication; main structure and language functions, which are important for oral and written communication in foreign language learning.

The educational material of the discipline is structured by the module principle and consists of two educational modules:

– educational module № 1 «*Methodologies of  users communication with Automated Management Systems*»;

– educational module № 2 «*Language tools of AMS and their management*».

# Course System

| Hours (lect. / lab.) | Themes | Results of Studying | Tasks |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| 2 /4 | **Theme N 1.** *Information languages for the describing of the unite structure in the information base of AMS* | To know and use main conceptions and modeling methodologies of information processes. To analyze, evaluate and choose methods, modern software, instrumental and computing tools, technologies, algorithmic and programming decisions for effective implementation of special industrial tasks in software engineering. | Tests, practical tasks, questions |
| 2 / 4 | **Theme N 2.** *Management and data manipulation languages (DML) of the AMS information base* | To develop and evaluate creation strategies of program tools; explain, analyze and evaluate management decision which are made in terms of the quality of developed software product. | Tests, practical tasks, questions |
| 2 / 4 | **Theme N 3.** *Language tools of information retrieval systems* | To analyze, evaluate and choose methods, modern software, instrumental and computing tools, technologies, algorithmic and programming decisions for effective implementation of special industrial tasks in software engineering. | Tests, practical tasks, questions |
| 2 / 4 | **Theme N 4.** *Language tools of AMS design automation* | To know and use main conceptions and modeling methodologies of information processes. | Tests, practical tasks, questions |
| 2 / 4 | **Theme N 5.** *Special purpose programming languages and other languages* | To choose paradigms and programming languages for decision applied tasks; apply system and special tools, component technologies (platforms) and integrated environment of software creation in the practice. | Tests, practical tasks, questions |
| 2 / 4 | **Theme N 6.** *Change management during the technical communication* | To know and use main conceptions and modeling methodologies of information processes. To develop and evaluate creation strategies of program tools; explain, analyze and evaluate management decision which are made in terms of the quality of developed software product. To make organize and management decision in conditions of uncertainty. | Tests, practical tasks, questions |

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| 2 / 4 | **Theme N 7.** *Automated complex systems creation of management activities* | To know and use main conceptions and modeling methodologies of information processes. To develop and evaluate creation strategies of program tools; explain, analyze and evaluate management decision which are made in terms of the quality of developed software product. | Tests, practical tasks, questions |
| 1 / 2 | **Theme N 8.** *Glossary of Computer System Software Development and Automated Management Systems* | To know of the professional lexicon, business language for professional communication; main structure and language functions, which are important for oral and written communication in foreign language learning. | Tests, practical tasks, questions |

# References

1. Barceló-Coblijn L, Serna Salazar D, Isaza G, Castillo Ossa LF, Bedia MG (2017) *Netlang*: A software for the linguistic analysis of corpora by means of complex networks. PLoS ONE 12(8): e0181341. https://doi.org/10.1371/journal.pone.0181341.

2. Bastian M, Heymann S, Jacomy M (2009) Gephi: an open source software for exploring and manipulating networks. Proceedings of the Third International ICWSM Conference (2009): 361–362.

3. Ellen Gottesdiener. *The Software Requirements Memory Jogger: A Pocket Guide to Help Software and Business Teams Develop and Manage Requirements*, Goal Q P C Inc, 2005.

4. Hafedh Mili et al. *Reuse-Based Software Engineering: Techniques, Organizations, and Controls*. John Wiley & Sons; 1st edition (December 15, 2001; ©2002).

5. Karl E. Wiegers. *More About Software Requirements: Thorny Issues and Practical Advice* . Microsoft Press, 2005.

6. MacWhinney B (2000) The CHILDES Project: Tools for Analyzing Talk. The database. Lawrence Erlbaum.

7. Mark J. Christensen, Richard H. Thayer. *The Project Manager's Guide to Software Engineering's Best Practices*. Wiley-IEEE Press; 1st edition (©2002).

8. Michael Jackson. *Problem Frames: Analyzing and Structuring Software Development Problems*. Addison-Wesley Pub Co; 1st edition (December 15, 2000; ©2001).

# Evaluation policy

**– Deadline and Recompilation**:

All works with the violation of deadlines without good reason are evaluated with low marks  (-20 marks). Rearrangement  of modules takes place with the permission of the dean's office if there are good reasons (for example, the document from the hospital).

**– Academic Integrity Policy**:

All written works are checked for plagiarism and are allowed to be defended with correct text borrowings of no more than 20%.

Write-offs during tests and exams are prohibited.

**– Attendance Policy**:

Attendance is a mandatory component of the assessment, for which points are awarded. For objective reasons (for example, illness, international internship) training can take place online (mixed form of training) in consultation with the course leader.

## Evaluation

Final assessment is calculated as:

| Types of evaluation | % of the final assessment |
|---|---|
| Interviews during classes – orally | 40 |
| Module  1 (themes 1-4) – evaluation test | 30 |
| Module  1 (themes 5-8) – evaluation test | 30 |
| Test (themes 1-8) – tests, tasks | 40 |

Students assessment scale:

| ECTS | Marks | Content |
|---|---|---|
| A | 90-100 | EXCELLENT |
| B | 82-89 | Very GOOD |
| C | 74-81 | GOOD |
| D | 65-73 | SATISFACTORY |
| E | 60-63 | SUFFICIENT |
| FX | 35-59 | FAIL- some more work required before the credit can be awarded |
| F | 1-34 | FAIL- considerable further work is required |