Appendix No. 1 to the Order of the Rector of the University College Of Enterprise And Administration In Lublin No. 99/R/WSPA/2023-2024 of September 30, 2024

RULES AND REGULATIONS OF THE DIPLOMA PROCESS IN THE FIELD OF COMPUTER SCIENCE AT THE UNIVERSITY COLLEGE OF ENTERPRISE AND ADMINISTRATION IN LUBLIN

§1.

1. Students of Computer Science participate in seminars, within which they prepare their engineering and master's theses. The student prepares the thesis under the supervision of a supervisor, selected from among academic teachers indicated by the Rector or a person authorized by him. Students participating in online registration choose only one diploma seminar.
2. The person conducting the diploma seminar is the supervisor of the diploma thesis.
3. The number of students participating in a diploma seminar conducted by one supervisor is determined in accordance with the Rector's regulation on the size of student groups in higher education.
4. A student may submit an application to change the supervisor of a diploma thesis. The application must be submitted to the Dean of the course, with justification and consent of the current and new supervisor within 14 days of the end of the registration period.
5. Diploma seminars are conducted by teaching and research staff who hold at least a master's degree for first-cycle studies, or at least a doctoral degree for second-cycle studies.
6. The topic of the thesis must be related to the field of study and should correspond to the chosen specialization and the thematic scope consistent with the scientific and/or professional profile of the supervisor, taking into account the student's interests and their capabilities to carry out the thesis.
7. The supervisor of the diploma thesis presents the topic of the student's thesis, along with the justification of the practical aspect of the work for the engineering thesis and the scientific and research aspect for the master's thesis, for approval by the Dean, within the deadline set by the University Authorities, no later than the end of the penultimate semester of studies. The Dean approves the thesis topic after prior verification and opinion by members of the Team for the Quality of Education in the field of Computer Science.
8. In the case of comments on the topics of diploma theses, the Dean prepares recommendations for changes and forwards them to the supervisors of diploma theses. The topics of theses not approved by the Dean should be corrected and then reconsidered by the Dean no later than within 45 days of the deadline referred to in paragraph 7.
9. In cases justified by the supervisor, the topic of the thesis may be changed after approval by the Dean.

10. A student may submit an application with justification for changing the subject of the engineering thesis to the Dean of the Computer Science program. The application must be supported by the consent of the thesis supervisor.
11. The supervisor is obliged to systematically monitor the progress of the work and support the student at subsequent stages of creating the engineering thesis.
12. The dates of defenses of engineering theses are set by the Dean of the Computer Science program in consultation with the Center for Higher Studies.
13. A work is considered independent if the leading probability score in the report from the Unified Anti-plagiarism System does not exceed 20%, including a probability score in detailed results that does not exceed 15% from Internet sources and does not exceed 15% from the ORPPD and BAP databases.
14. If, as a result of the repeated anti-plagiarism check , the supervisor considers the work to be plagiarism, he/she does not allow it to be defended and immediately informs the Dean of the Computer Science program in writing about the situation. The Dean of the program, taking into account the quality of education, submits to the Rector a request to initiate explanatory proceedings related to the student's disciplinary responsibility.
15. In order to document the anti-plagiarism control process , the JSA report approved by the supervisor is collected by an employee of the Centre for Higher Studies and attached to the student's files in a paper version no later than 7 days before the planned date of the thesis defense.
16. The form and content of the diploma thesis are regulated by the provisions of the document "Requirements for the diploma thesis for the first-cycle of education (engineering studies) in the field of Computer Science at the University College of Enterprise and Administration in Lublin", constituting Annex No. 1 to these Regulations for the diploma thesis for the first-cycle of studies and the document "Requirements for the diploma thesis for the second-cycle of education (master's studies) in the field of Computer Science at the University College of Enterprise and Administration in Lublin", constituting Annex No. 2 to these Regulations.
17. The criteria for the assessment of diploma theses are included in the diploma theses review forms, the templates of which constitute Annexes 3, 4, 5, 6 to these Regulations. The following in particular are subject to assessment:
    a) compliance of the thesis topic with its content,
    b) compliance of the content and structure of the work with the topic of the work,
    c) the merits of the work, including the correctness of the formulation of the problem,
    d) adequacy of selected analysis or research methods (for the master's thesis),
    e) adequacy of the applied formal, technical and aesthetic solutions,
    f) correctness ,
    g) selection of subject literature.

18. After verifying the thesis in the Uniform Anti-plagiarism System and receiving a positive opinion from the reviewer, the thesis supervisor accepts the thesis for defense.

§2.

1. The diploma examination is oral and not public.
2. At the request of the student or supervisor, the diploma examination may be public. The application
   for a public diploma examination is submitted by the student or supervisor together with the engineering thesis.
3. The diploma examination consists of two parts:
   a) in the first part, the student presents the diploma thesis (by preparing a multimedia presentation, making an oral presentation or showing a working project) and answers questions formulated by the Committee Members in relation to the diploma thesis;
   b) in the second part, the student draws three issues from the catalogue of issues specified for the field of study and answers three questions formulated by the Committee Members on the basis of the issues drawn, where one of the issues comes from the catalogue of the specialisation (first-cycle studies) or module (second-cycle studies) chosen by the student, while the other two come from the catalogue of general issues concerning the field of study.
4. The catalogues of issues referred to in paragraph 3 point b are published on the University's website.
5. Students take their diploma exam before a committee of at least three people appointed by the Dean for the relevant field of study. The committee consists of:
   a) chairman of the committee,
   b) supervisor ,
   c) reviewer .
6. The chairman of the committee is responsible for the conduct of the diploma examination.
7. A record of the examination is prepared, signed by the members and chairmen of the commission.

Annex No. 1 to the Regulations on the Diploma Process in the Field of Computer Science

Requirements for the diploma thesis for the first cycle of education (engineering studies) in the field of Computer Science at the University College of Enterprise and Administration in Lublin

1. **A diploma thesis in the field of Computer Science should demonstrate the student's skills in solving problems based on theoretical knowledge or empirical experience, using known methods, analyses and computer programs, programming languages or microcontroller systems.**
2. **The diploma thesis should provide a solution to the indicated problem based on information found in the available literature.**
3. **The engineering work should be conceptual, design, analytical, research, diagnostic or expert in nature. The work must indicate a clearly distinguished engineering problem or issue that the author tries to solve or develop .**
4. **The work should use analytical, simulation and experimental methods, critically analyze the functioning of existing solutions. It should contain a solution to a problem, e.g. technical or technological, that has a real or potential practical application.**
5. **The work cannot be of a review nature.**
6. **The subject of the engineering thesis cannot be a review of literature solutions. The title and purpose of the engineering thesis should be practical , requiring an engineering approach or the use of engineering/technical means, may include, for example, the development of a desktop, web, mobile application, database, front-end part of the project, network security tests, computer game, creation of network infrastructure or a system based on microcontrollers. The student should demonstrate in the work knowledge of methods/tools/elements possible to solve the undertaken problem and the ability to select the appropriate ones and then apply them correctly.**

FORMAL REQUIREMENTS

The volume of an engineering thesis in Computer Science should be from 40 to 60 pages.

The following structure of an engineering thesis is recommended:

- **title page** (in Polish and English) – a template of the title page with declarations is published on the WSPA.pl website ;
- **abstract (** in Polish and English) – the abstract should not exceed one page; it should include basic information about the work - briefly describe: the aim, main theses of the work and the solution to the problem and summary;

- **table of contents** – it contains all the components of the diploma thesis (in the order in which they appear in the thesis) with a clear division into chapters and subchapters, with precise page numbers,
- **introduction** – it should include, in particular, a justification for the choice of the topic and the expected results **,**
- **purpose and scope of work,**
- **technologies used in the work** – a review of the technologies used to complete the project in the engineering work should be conducted, supported by current literature. The literature review should be based mainly on peer-reviewed sources (scientific articles, books), and only supplementary scripts or information from equipment manufacturers' websites, encyclopedias or unauthorized Internet sources may be used.
- **functional and non-functional requirements** – the student determines the functional and non-functional requirements that he sets as his goal when creating the practical part of the engineering work.
- **design assumptions** - the student determines the design assumptions that must be met in order for the goal to be achieved.
- **presentation of the project** – the student should present the project (application, database, IT system project, network system project, microcontroller system project, etc.) describing the individual parts of the project, presenting the interface, database diagrams, UML diagrams describing the project, electrical or logical circuit diagrams, network topologies, etc.
- **implementation presentation of the project** – the student presents key fragments of the project implementation in the form of code or configuration description.
- **summary - conclusions** - it is necessary to indicate the degree of realization of the work objectives, indicate the obtained effects and verify the problem posed and formulate possible conclusions resulting from the work, indicating further possible actions in the event of failure to solve the undertaken problem,
- **bibliography**
- **annex (annex).**

The diploma thesis cannot be accepted by the supervisor if it does not meet the above formal requirements. Fulfillment of the above requirements is confirmed by the supervisor's signature.

<u>The complete set of documents submitted to the Dean's Office includes:</u>

1. Two copies of the diploma thesis prepared in accordance with the requirements for diploma theses in the field of Computer Science – both copies in soft cover, thermobinding , printed on both sides.
2. CD-ROMs for each copy of the work, in separate envelopes (attached to the text part).
3. Circulation card.
4. Proof of payment of the fee, titled “fee for issuing a diploma”.
5. Internship diary, internship certificates (to be submitted to the Careers Office).

ADDITIONAL INFORMATION RELATED TO THE THESIS

1. The diploma thesis is the independent work of the student in its entirety. The author of the diploma thesis is its sole creator in the meaning of copyright law [1]. In connection with the above, the student cannot require the supervisor to participate creatively in the performance of the work. Such participation would qualify the supervisor as a co-creator of the diploma thesis, which contradicts the principle that the diploma thesis is the independent work of the student in its entirety.
2. The supervisor's task is to supervise the timeliness and organization of the work process, provide advice, guidance, opinions, indicate appropriate ways of solving problems and methods of searching for creative solutions, assist in the selection of appropriate research methods and mastering the scientific workshop at the level required in the diploma thesis.
3. If the substantive participation of the thesis supervisor qualifies him or her as a co-author of the work

   within the meaning of copyright law, such work will not meet the conditions set for diploma theses and cannot be the subject of the defense.
4. Supervision of the diploma thesis takes place in the form of regular diploma consultations, to which both the diploma student and the diploma thesis supervisor are obliged to participate.
5. The student prepares the diploma thesis under the supervision of an authorized supervisor. The Dean may authorize a lecturer or specialist (with a professional title) from outside the University to supervise the diploma thesis.

1 The author of the work has full personal copyright to the diploma thesis. The issue of property copyright is regulated by the Law on Higher Education and Science.

Requirements for a diploma thesis for the second cycle of education (master's studies) in the field of Computer Science at the University College of Enterprise and Administration in Lublin

1. **A diploma thesis in the field of Computer Science should demonstrate the student's skills in solving problems based on theoretical knowledge or empirical experience, using known research methods, analyses and computer programs, programming languages or microcontroller systems.**
2. **The Master's thesis should contribute to solving a problem based on the scientific method and must contain significant empirical results. The Master's thesis should contribute to the development of the disciplines in which the field of Computer Science is embedded.**
3. **The master's thesis should be a practical work, attempting to solve a specific research problem of a practical nature, including design or analytical. The work should concern a specific problem, which is reflected in the title of the work.**
4. **The work should use research, analytical, simulation and experimental methods, perform a critical analysis of the functioning of existing solutions. It should contain a solution to a research problem, e.g. technical or technological, that has a real or potential practical application.**
5. **The work cannot be of a merely review nature.**
6. **The topic of the master's thesis cannot be limited to a literature review. The title and purpose of the master's thesis should be of a research and practical nature, covering the analysis of the problem and the application of appropriate research methods and technologies. The work may include, for example, a comparison of algorithms or technologies in terms of quality and efficiency, the implementation of appropriate code or the creation of test and research environments. The student should demonstrate knowledge of appropriate methods and tools, the ability to select adequate techniques for the implementation of the project and their correct application in the context of a practical solution to the selected problem.**

FORMAL REQUIREMENTS

The length of a Master's thesis in Computer Science should be from 40 to 80 pages.

The following structure for a Master's thesis is recommended:

- **page (in Polish and English) -** a template of the title page with declarations is published on the WSPA.pl website ;
- **abstract (in Polish and English)** – the abstract should not exceed one page; it should include basic information about the work - briefly describe: the purpose, main theses of the work and the solution to the problem and summary;

- **table of contents** – it contains all the components of the diploma thesis (in the order in which they appear in the thesis) with a clear division into chapters and subchapters, with precise page numbers,
- **introduction** – it should include, in particular, a justification for the choice of the topic and the expected results **,**
- **purpose and scope of work,**
- **technologies used in the work** – a review of the technologies that were used in the implementation of the research and practical project in the master's thesis should be carried out, supported by current literature. As part of the reference to the technology, scripts or, for example, information from the websites of equipment manufacturers, encyclopedias or unauthorized Internet sources can be used.
- **functional and non-functional requirements** – the student determines the functional and non-functional requirements that he sets as his goal when creating the practical part of the engineering work.
- **design assumptions** - the student determines the design assumptions that must be met in order for the goal to be achieved.
- **presentation of the project together with the research plan and methodology** – the student should present the project (application, database, IT system project, network system project, microcontroller system project, etc.) describing the individual parts of the project, presenting the interface, database diagrams, UML diagrams describing the project, electrical or logical circuit diagrams, network topologies, etc. This part should also include the plan of the research part together with its selected methodology.
- **implementation presentation of the project** – the student presents key fragments of the project implementation in the form of code or configuration description.
- **analysis of research results** – presents the collected data in the form of appropriate tables, graphs, diagrams or other forms of visualization, and then describes the results. The results should be described in a clear and understandable way, without interpreting them in a subjective way.
- **interpretation of research results** - refers to the hypotheses or research questions posed at the beginning of the work and draws conclusions on their basis. The author interprets the results in the context of previously discussed literature and theory, indicating to what extent they confirm or contradict previous findings. There may also be comments on the practical implications of the research and its significance in a broader scientific context.
- **summary - conclusions** - it is necessary to indicate the degree of realization of the work objectives, indicate the obtained effects and verify the problem posed and formulate possible conclusions resulting from the work, indicating further possible actions in the event of failure to solve the undertaken problem,
- **bibliography**
- **annex (annex).**

The diploma thesis cannot be accepted by the supervisor if it does not meet the above formal requirements. Fulfillment of the above requirements is confirmed by the supervisor's signature.

The complete set of documents submitted to the Dean's Office includes:

1. Two copies of the diploma thesis prepared in accordance with the requirements for diploma theses in the field of Computer Science – both copies in soft cover, thermobinding , printed on both sides.
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2. The supervisor’s task is to supervise the timeliness and organization of the work process, provide advice, guidance, opinions, indicate appropriate ways of solving problems and methods of searching for creative solutions, assist in the selection of appropriate research methods and mastering the scientific workshop at the level required in the diploma thesis.
3. If the substantive participation of the thesis supervisor qualifies him or her as a co-author of the work
   within the meaning of copyright law, such work will not meet the conditions set for diploma theses and cannot be the subject of the defense.
4. Supervision of the diploma thesis takes place in the form of regular diploma consultations, to which both the diploma student and the diploma thesis supervisor are obliged to participate.
5. The student prepares the diploma thesis under the supervision of an authorized supervisor. The Dean may authorize a lecturer or specialist (with a professional title) from outside the University to supervise the diploma thesis.

2 The author of the work has full personal copyright to the diploma thesis. The issue of property copyright is regulated by the Law on Higher Education and Science.

Annex No. 3 to the Regulations on the Diploma Process in Computer Science

Lublin , on

Thesis supervisor – Mr/Mr

I would like to ask for your opinion and assessment of the attached diploma thesis of a WSPA student.

DIPLOMA THESIS – 1st degree

Name and surname:

Direction:

Specialty:

Album number **:**

Work topic:

PROMOTER'S EVALUATION

1. Does the content of the work correspond to the topic stated in the title?

2. Evaluation of the work's layout, content division structure, order of chapters, completeness of theses, etc.

3. Content-related evaluation of the work (identification of the engineering problem, formulation of the goal, selection and use of tools, critical analysis of the results achieved in relation to the state of knowledge, possibility of further research directions)

4. Is the engineering thesis a practical study that attempts to solve a specific research problem of a practical nature, including design / conceptual / research / diagnostic / analytical or expert opinion (please briefly justify)?

5. Other comments

6. Characteristics of the selection and use of sources

7. Assessment of the formal aspect of the work (correctness of the language, mastery of the writing technique, table of contents, references)

8. WORK EVALUATION

Date Signature

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Annex No. 4 to the Regulations on the Diploma Process in the Field of Computer Science

Lublin, r .

Thesis reviewer – Mr/Mr

I would like to ask for your opinion and assessment of the attached diploma thesis of a WSPA student.

DIPLOMA THESIS – 1st degree

Name and surname:

Direction:

Specialty:

Album number :

Work topic:

REVIEWER'S RATING

1. Does the content of the work correspond to the topic stated in the title?

2. Evaluation of the work's layout, content division structure, order of chapters, completeness of theses, etc.

3. Content-related evaluation of the work (identification of the engineering problem, formulation of the goal, selection and use of tools, critical analysis of the results achieved in relation to the state of knowledge, possibility of further research directions)

4. Is the engineering thesis a practical study that attempts to solve a specific research problem of a practical nature, including design / conceptual / research / diagnostic / analytical or expert opinion (please briefly justify)?

5. Other comments

6. Characteristics of the selection and use of sources

7. Assessment of the formal aspect of the work (correctness of the language, mastery of the writing technique, table of contents, references)

8. WORK EVALUATION

Date Signature

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Annex No. 5 to the Regulations on the Diploma Process in the Field of Computer Science

Lublin , on

Thesis supervisor – Mr/Mr

I would like to ask for your opinion and assessment of the attached diploma thesis of a WSPA student.

DIPLOMA THESIS – 2nd degree

Name and surname:

Direction:

Specialty:

Album number **:**

Work topic:

PROMOTER'S EVALUATION

1. Does the content of the work correspond to the topic stated in the title?

2. Evaluation of the work's layout, content division structure, order of chapters, completeness of theses, etc.

3. Content-related evaluation of the work (identification of the research, formulation of the goal, selection and use of tools, description of the state of knowledge and critical analysis of the results achieved in relation to it, possibility of further research directions)

4. Is the master's thesis a practical work that addresses a specific research problem of a practical nature, including design/conceptual/research/diagnostic/analytical or expert opinion (please briefly justify)?

5. Does the work address current issues and is the topic original? Does the work contribute something new to existing knowledge or practice, or is it merely a review of existing solutions?

6. How does the author interpret the results obtained in the context of the hypotheses or research questions posed? Are the conclusions logical, justified, and do they relate to the literature and previous research?

7. Other comments

8. Characteristics of the selection and use of sources

9. Assessment of the formal aspect of the work (correctness of the language, mastery of the writing technique, table of contents, references)

10. WORK EVALUATION

Date Signature

Annex No. 6 to the Regulations on the Diploma Process in the Field of Computer Science

Lublin, r .

Thesis reviewer – Mr/Mr

I would like to ask for your opinion and assessment of the attached diploma thesis of a WSPA student.

DIPLOMA THESIS – 2nd degree

Name and surname:

Direction:

Specialty:

Album number :

Work topic:

REVIEWER'S RATING

1. Does the content of the work correspond to the topic stated in the title?

2. Evaluation of the work's layout, content division structure, order of chapters, completeness of theses, etc.

3. Content-related evaluation of the work (identification of the research, formulation of the goal, selection and use of tools, description of the state of knowledge and critical analysis of the results achieved in relation to it, possibility of further research directions)

4. Is the master's thesis a practical work that addresses a specific research problem of a practical nature, including design/conceptual/research/diagnostic/analytical or expert opinion (please briefly justify)?

5. Does the work address current issues and is the topic original? Does the work contribute something new to existing knowledge or practice, or is it merely a review of existing solutions?

6. How does the author interpret the results obtained in the context of the hypotheses or research questions posed? Are the conclusions logical, justified, and do they relate to the literature and previous research?

7. Other comments

8. Characteristics of the selection and use of sources

9. Assessment of the formal aspect of the work (correctness of the language, mastery of the writing technique, table of contents, references)

10. WORK EVALUATION

Date Signature