OBUDA UNIVERSITY JOHN VON NEUMANN FACULTY OF INFORMATICS

Thesis (BSc, BProf, SZT)/ Thesis work (MSc) preparation guide

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1. Thesis (BSc, BProf, SZT) / Thesis work (MSc) subjects

1.1 Scheduling and Guidelines of the subjects

The responsible person for the Thesis / Thesis work / Project Laboratory subjects is the **program coordinator**, in cooperation with the **Vice Dean for Education** and the **specialization leaders**.

Program	Curri- culum	Subject	Semester
Computer Science Operational Engineering	C-F	Thesis I	5th semester
(BProf)		Thesis II	6th semester
Computer Science Engineering (BSc)	С-Е	Thesis I	6th semester
		Thesis II	7th semester
Computer Science Engineering (BSc)	F	Thesis	7th semester
Applied Mathematics (MSc)	C-F	Thesis work I	3rd semester
		Thesis work II	4th semester
Business Informatics (MSc), Computer Science Engineering (MSc)	E-F, C-E F	Thesis work I–	1st–4th semester
Data Science (MSc),		IV	2nd–4th semester
Cybersecurity Engineering (MSc),		Thesis work I–	2nd–4th semester
Hospital and Medical Engineering (MSc), Computer Science Engineering (MSc)		III	
Cybersecurity Incident Response Specialist	E-F	Project Lab 1–2,	1st–3rd semester
(Postgraduate Specialist Training - SZT)	phased out from	Final Pro-	
Cybersecurity Specialist (SZT)	2022/23	ject	
		Project Lab 1–3, Final Project	1st–4th semester
PRRC Specialist (SZT)	E	Thesis	4 th semester

Subjects can be registered in both autumn and spring semesters via the Neptun system.

Prerequisites for Subject Registration:

- Completion of the required prerequisite subjects. Thesis I must be registered according to the specialization, and it is recommended to choose a topic related to it. Topics not closely related to the specialization require approval from the specialization leader.;
- In justified cases, if the topic of the thesis so requires, the external partner may initiate the classification of the thesis as confidential **at the time of writing the topic**, in the form of a request addressed to the vice dean for education but submitted to the graduation group.;
- In accordance with Dean's Directive 4/2025 (08.29), selected projects to be included in the intellectual property protection procedure by the Faculty's Ad Hoc Innovation Committee will be classified as confidential..

Prerequisites for enrolling in Thesis II:

- Completion of Thesis I.
- Changing the topic of Thesis II in relation to Thesis I (new topic proposal) and/or changing the supervisor is only permitted in exceptional cases, with the consent and approval of the former and future supervisors and the director(s) of the institute. Otherwise, Thesis I must be retaken and completed.

Prerequisite for enrolling in Project Lab and Final Project courses:

- Cybersecurity SZT: Project Lab 1 has no prerequisites. Project Lab 2 requires completion of Project Lab 1, and so on. Topic changes are allowed only in Project Lab 2 and 3, not in the Final Project.
- Cybersecurity Incident Response SZT: Project Lab 1 has no prerequisites. Project Lab 2 requires completion of Project Lab 1.. Topic changes are allowed only in Project Lab 2, not in the Final Project.

2-semester thesis work: There are no prerequisites for Thesis work I, but Thesis work II requires completion of Thesis work I. Changing topics is possible at the end of Thesis work I if justified, but not in the case of Thesis work II.!

3-semester thesis work: There are no prerequisites for Thesis work I, but Thesis work II requires Thesis work II, while Thesis work III requires Thesis work II. Changing topics is possible in justified cases for Thesis work II and Thesis work III, but not for Thesis work IV.!

4-semester thesis work: There are no prerequisites for Thesis work I, but Thesis work II requires completion of Thesis work I, Thesis work III requires Thesis work II, while Thesis work IV requires Thesis work III. Changing the topic is possible in justified cases for Thesis work II and Thesis work III, but not for Thesis work IV.!

Only one topic change is allowed during the thesis/thesis work's process..

1.2 Requirements of the Subjects

- 1. Topic and Supervisor Selection
- 2. Topic registration
- 3. Preparation of the thesis work sheet
- 4. Development of a detailed table of contents and work plan.
- 5. Literature review and documentation, drawing conclusions.
- 6. Design and implementation of the plan, program, device, or environment serving as the basis of the thesis/master's thesis, system testing, and evaluation of results.
- 7. Full completion of the tasks listed in the thesis/master's thesis topic description.

Points 1-4 of the requirements apply to **Thesis I**, while points 5-7 apply to **Thesis II** (1 semester thesis and points 1-7 in the case of a change of topic). Any deviation from point 7 requires the special permission of the thesis supervisor and the director of the institute..

In the case of **Project Laboratory subjects,** points 1-2 apply to Project Laboratory 1, while the actual work (points 3-7) is carried out within the framework of Project Laboratory 2, or Project Laboratory 3 in the case of 4-semester projects, and the Final Project.

2-semester thesis work: points 1-5 apply to **Thesis work 1**, while the actual work (points 6-7) is carried out within the framework of **Thesis work 2**..

3-semester thesis work: points 1-2 apply to Thesis work 1, while the actual work (points 3-7) is carried out within the framework of Thesis work 2 and 3.

4-semester thesis work: points 1-2 apply to Thesis work 1, while the actual work (points 3-7) is carried out within the framework of Thesis work 2, 3, and 4.

1.3 Tasks, Responsibilities, and Deadlines

Responsible for organizing and supervising tasks related to theses/thesis works:

Graduation Group (with the information of the subject responsible and supervisors The topic summary is kept by the Graduation Group, and the tasks related to reporting are organized by the specialization coordinator with the help of the BSc and MSc coordinators.

Overview of Key Tasks and Deadlines (in more detail in the following tables)

			-			
Program	Number of Thesis Se- mesters	Topic & Su- pervisor Selec- tion	Topic Registra- tion on IP SCAN Portal	Work sheet Submission	Submission for Progress Report	Final Submission for Defense
BSc in Computer Science Engineering	1	Last working day of registration week	End of week 3 of the semester	End of week 7	_	December 15 / May 15
BSc in Computer Science Engineering	2	Last working day of registration week	End of week 3	End of week 7	End of week 14, Friday 23:59	December 15 / May 15
Computer Science Operational Engineering (BProf)	2	Last working day of registration week	End of week 3	End of week 7	End of week 14, Friday 23:59	December 15 / May 15
MSc in Applied Mathematics	2	End of week 3	End of week 9	End of week 13	End of week 14, Friday 23:59	December 15 / May 15
MSc in Data Science	2	End of week 3	End of week 9	End of week 13	End of week 14, Friday 23:59	December 15 / May 15
MSc in Business Informatics	4	End of week 7	End of week 9	End of week 13	End of week 14, Friday 23:59	December 15 / May 15
MSc in Cybersecurity Engineering	3	End of week 7	End of week 9	End of week 13	End of week 14, Friday 23:59	December 15 / May 15
MSc in Hospital and Medical Engineering	3	End of week 7	End of week 9	End of week 13	End of week 14, Friday 23:59	December 15 / May 15
MSc in Computer Science Engineering	3	End of week 7	End of week 9	End of week 13	End of week 14, Friday 23:59	December 15 / May 15
SZT Cybersecurity Incident Response Specialist	3	End of week 7	End of week 9	End of week 13	End of week 14, Friday 23:59	December 15 / May 15
SZT PRRC Specialist	1	Last working day of reregistration week	-	End of week 7	-	December 15 / May 15

1. 1. Task: Select a topic and supervisor, and submit it on the https://nik.uni-obuda.hu/temaleadas/website after prior consultation with the prospective supervisor.

Program	Related subject	Deadline	Responsible	Comments
Computer Science Operational Engineering (BProf)	Thesis I.	Last working		
Computer Science Engineering BSc (F curriculum)	Thesis	day of registration		Deviation
Computer Science Engineering BSc (until E3 curriculum)	Thesis I.	week ¹	Student	max. 1 week, upon
PRRC specialist SZT	Thesis		Internal su-	separate
Applied Mathematics MSc		Last working	pervisor:	request;
Data Science MSc		day of week	feedback within 3	cancellation
Business Informatics MSc	Thesis work I.	3	working	of course in
Cybersecurity engineering MSc		last working	days	case of
Hospital and medical engineering MSc		day of week		failure
Compurter Science Engineering MSc		7 of the se-		
Cybersecurity specialist SZT	Projectlab 1.	mester		
Cybersecurity Incident Response Specialist SZT	Frojectian I.			

2. Task: Submit your chosen topic via https://nik.uni-obuda.hu/ipscan/.

Képzés	Kapcsolódó tantárgy	Határidő	Felelős	Megjegyzés
Computer Science Operational Engineering (BProf)	Thesis I-II.	last working day of the third		
Computer Science Engineering BSc (F curriculum)	Thesis	week of the se- mester		
Computer Science Engineering BSc (until E3 curriculum)	Thesis I-II.	Check: last working day of week 4 of the fiscal period	The student is res-	From the 2025/26/1 semes- ter, Dean's Di- rective 4/2025 (08.29) on the int-
Applied Mathematics MSc Data Science MSc	Thesis work I-II.		ponsible for reporting.	roduction of the IP SCAN Portal makes
Business Informatics MSc	Thesis work I-IV.],,,,,,	Th	it a mandatory task
Cybersecurity engineering MSc Hospital and medical engineering MSc Compurter Science Engineering MSc	Thesis work I-III.	last working day of the 9th week of the academic year Check: last working day of	The supervi- sor is res- ponsible for checking.	for EVERYONE. Details on using the IP SCAN Portal are provided in Appen-
Cybersecurity specialist SZT	Projectlab 1-3. Final project	week 11 of the fiscal period		dix 9.
Cybersecurity Incident Response Specialist SZT	Projectlab 1-2. Final project	niscui periou		
PRRC specialist SZT	Thesis			

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¹ In the case of thesis work 2 and 3, in justified cases and with approved changes to the topic, the deadline is also the last working day of the registration week.!

3. Feladat: Az 5. melléklet szerint elkészült Feladatlap leadása a Diplomáztatási csoportnak.

Képzés	Kapcsolódó tan- tárgy	Határidő	Felelős	Megjegyzés
Computer Science Operational Engineering (BProf) Computer Science Engineering BSc (F curriculum) Computer Science Engineering	Thesis I. Thesis Thesis I.	last work- ing day of week 7 of		The work sheet is prepared by the supervisor(s) together with the student in accordance with Appendix 5.
BSc (until E3 curriculum) PRRC specialist SZT	Thesis	the semes- ter		The worksheet is submitted
Applied Mathematics MSc Data Science MSc	THESIS	tei	student,	by the supervisor to the Gra- duation Group. In exceptional cases, it is pos-
Business Informatics MSc			supervi-	sible to deviate from the spe-
Cybersecurity engineering MSc Hospital and medical engineering MSc	Thesis work I.	last work- ing day of	sor(s)	cified deadline (maximum 1 week) upon individual request.
Compurter Science Engineering MSc		week 13 of the semes-		Failure to complete the assignment by week 7/13 will
Cybersecurity specialist SZT	Projectlab 1.	ter		result in the subject being
Cybersecurity Incident Response Specialist SZT	Projectlab 1.			blocked.

Data provision:

- Head of the Institute (signs the worksheet)
- Graduation Group (collects, records, makes available to students, and stores the signed assignment sheets)

4. Task: Report on the work completed during the semester

Képzés	Kapcsolódó tantárgy	Határidő	Felelős	Megjegyzés			
Computer Science Operational Engineering (BProf				Upload: • written summary of the work			
Computer Science Engi- neering BSc (until E3 curri- culum)	Thesis I.	Unload to the		(minimum 15-20 pages, not including the cover page, worksheet, and consultation			
Cybersecurity engineering MSc		Upload to the Moodle assignment created for this purpose by 11:59 p.m. on	Moodle as-	Moodle as-	Moodle as-		log) in accordance with the formal requirements for wri-
Hospital and medical engineering MSc	Thesis work II. ated for this purpose by		student	 ting a thesis (see appendices), consultation log, with the su- 			
Compurter Science Engineering MSc				pervisor's recommendation as to whether to recommend the			
Business Informatics MSc	Thesis work II- III.	14.		student for the report (see Appendix 8), presentation of the work.			
Cybersecurity specialist	Projectlab			presentation of the work.			
SZT	2-3.			Further details on uploading can			
Cybersecurity Incident Response Specialist SZT	Projectlab 2.			be found in the Moodle course.			

A) Student completion

The student works on the topic until the end of the semester under the guidance of the (internal and external) supervisor.

The student uploads the following to the Moodle assignment created for this purpose by 11:59 p.m. on Friday of week 14:

- a written summary of their work (min. 15-20 pages in length, not including the cover page, worksheet, and consultation log) in accordance with the formal requirements for writing a thesis (see appendices),
- the consultation log, with the evaluation, recommendation, and signature of the supervisor(s) indicating whether they recommend the student for the report (see Appendix 8)
- a presentation of their work.

Responsible: student

b) Lecturers performance

The (internal and external) supervisor(s) jointly evaluate(s) and decide(s) whether the student can be registered for the report. The opinion is recorded in the student's consultation log.

Deadline:

last week of the semester

Responsible: internal supervisor

Note: Failure to meet the requirements will result in the course being blocked.

Organization of reports2

The Graduation Group is notified of students who have fulfilled the prerequisites. The BSc and MSc coordinators, together with the heads of the specializations, prepare the schedule for the reports.

Date of reports: Friday of the second week of the exam period (in justified cases, a make-up opportunity is available on Friday of the third week of the exam period).

In the case of Thesis work and Project labs, the deadline for submitting reports is Friday of the third week of the exam period (in justified cases, a replacement deadline is Friday of the fourth week of the exam period).

The report is presented in person before a three-member committee and with the invitation of (internal and external) supervisors. The committee decides on the grade the student will receive for the given subject.

Deadline: second and third week of the exam period

Responsible: BSc and MSc coordinators and heads of specializations

a) Completion administration

Specialization responsible with BSc and MSc coordinators:

- summarizes the electronically submitted work (papers, consultation log, presentation, supervisor's signature).
- The preliminary schedule for Thesis I / Project Lab 2, 3 / Thesis work II, III will be prepared for the second week of the exam period.:
 - o room designation;
 - o organizes the reporting committee;
- summarizes the evaluations.
- sends the results of the students to the Graduation Group, who enter the results into NEPTUN.

Thesis / Thesis II / Final project / Final semester of Thesis work

1) Writing a thesis/thesis work.

Deadline: 15th of May (spring semester), 15th of December (autumn

semester).

Responsible: student and supervisor(s). The internal and external super-

visors recommend the thesis/dissertation for submission

with their signatures and evaluations.

2) Plagiarism detection of completed theses/thesis works and appointment of reviewers

Uploading the thesis to the plagiarism detection software system.

If the plagiarism detection software evaluates the thesis as "Ready for review," the supervisor signs and forwards it to the Graduation Group, simultaneously proposing a reviewer.

The reviewer recommended by the supervisor is asked by the head of the relevant institute to evaluate the thesis.

Deadline: five weeks before the scheduled date of the final exam. (*Stu-*

dents who submit their thesis at a later date may only take the

final exam in the following semester.)

Responsible: head of institute or internal supervisor

3) Filling out the Thesis/Thesis work Consultation Log (see Appendix 8)

Deadline: end of semester, at the same time as submitting the thesis

Responsible: student, internal supervisor

4) Thesis / Thesis work review

Deadline: the tenth working day before the final exam

Responsible: internal supervisor and reviewer

Completion of the final semester course Thesis / Thesis II / Final Project / Thesis work:

a) Student completion:

Deadline: deadline for submitting the thesis

Responsible: student

b) Lecturer completion

The internal supervisor certifies and evaluates the student's work on the thesis/thesis work by signing the consultation log (see Appendix 8).

Deadline: the deadline for submitting the thesis for the current semester

Responsible: internal supervisor

c) Completion administration

The internal supervisor enters the results of the final semester course Thesis / Thesis II / Final Project / Thesis work into the NEPTUN study system.

Deadline: the last week of the current study period

Responsible: internal supervisor

1.4 Procedures for submitting and accepting theses/thesis works

- The **internal (faculty) supervisor** first checks whether the student has fulfilled the requirements of the thesis/thesis work and **confirms this by signing the work sheet**. If not, the student is not eligible to submit the thesis.
- Completed **THESES** that have been approved by internal (faculty) supervisors must be submitted exclusively via the Thesis work Portal (https://diploma.uni-obuda.hu/) operated by the *UNIVERSITY* (hereinafter: PORTAL).
- Thesis series created in Neptun are uploaded to the PORTAL before the PORTAL opening date specified in the "Semester Closing and Starting Regulations" published by OFIG each semester and approved by EOB.
- After opening the PORTAL, all students who have completed their thesis and received approval from their supervisor are eligible to upload their THESIS there.
- The deadline for submitting the THESIS is 15th December for winter final exams and 15th May for summer final exams.
- **Uploading can only be done once**, during which one PDF file that can be edited as text is allowed to be uploaded.
- The uploaded file must contain the entire *thesis*, structured as specified in Appendix 3.
- The internal (faculty) supervisor will automatically receive an email notification about the upload.
- The internal (faculty) supervisor logs into the PORTAL to check that the uploaded THESIS is complete and has been uploaded in its final form. If they find any deficiencies or problems, they contact the student and may require them to supplement or correct the thesis, but within the submission deadline. Beyond that, it will only be possible to supplement or correct deficiencies during the next final exam period.
- If the supervisor finds it acceptable, uploads the thesis to the plagiarism checking program..
- The internal (faculty) supervisor will be notified by email when the plagiarism check has been completed, and the analysis can be viewed on the *PORTAL*.
- The internal (faculty) supervisor
 - Up to 20% text similarity within its own competence;

(in the case of so-called "self-plagiarism") in the event of a plagiarism check result exceeding 20%, the dean may accept the plagiarism check result within the scope of his or her authority, i.e., after consultation with the dean or a person designated by the dean.

- The internal (faculty) supervisor prints out the summary page of the analysis, authenticates it with their signature, and writes their decision on it.:

"The THESIS can be submitted for review."

"The THESIS cannot be submitted for review."

The internal (faculty) supervisor shall notify the student of their decision in all cases and shall submit the printed and signed summary page of the plagiarism analysis to the departmental/institutional educational administrator, who shall forward it to the Graduation Group.

THESES shall be submitted by the end of the first month of the semester following the final exam to the repository software provided by the Library (Óbuda University Digital Archive), which is suitable for managing digital content, enabling the storage and archiving of theses in electronic form and making them searchable, taking into account confidentiality requests.

1.5 Evaluation of uploaded thesis/thesis work

- If the internal (faculty) supervisor decides positively based on the results of the plagiarism check, he or she will request a reviewer to review the thesis via the PORTAL (after prior consultation and with the approval of the institute).
- The reviewer must be a professional with a higher education degree and expertise in the subject. The reviewer will automatically receive an email generated by the system containing the data necessary to log in to the PORTAL.
- Upon logging into the PORTAL, the reviewer can view the thesis and the review criteria, and must also record their review on the PORTAL.
- In addition to the evaluation, the reviewer must ask at least three questions about the THESIS, which the student taking the final exam will answer during the THESIS defense. The questions must be asked in such a way that their answers help the final exam committee assess the candidate's professional competence.
- The deadline for recording the assessment on the PORTAL is no later than the tenth working day prior to the final exam.
- The internal (faculty) supervisor is entitled to view the entire content of the review.

Students can see the review and the questions asked by the reviewer, but not the grade given by the reviewer for the THESIS/THESIS WORK.

2. Formal and content requirements for the thesis/thesis work

2.1 General requirements

Purpose of completing a thesis / thesis ork:

:

The aim of the thesis/ thesis work is for students to independently solve a complex engineering IT task at the end of their studies, usually in line with the nature of their specialization, thereby demonstrating that they have the professional knowledge and skills required by the training objectives and are well-informed about the relevant literature.

The thesis/thesis work assignment gives students the opportunity to engage in independent creative work and to demonstrate their knowledge of the essential connections between different parts of their field of study and the related practical technical and economic requirements.

- The topic of the thesis/thesis work may be:
- External origin. In this case, an external institution or private individual proposes a topic for the thesis/thesis work and the student who will work on the topic. An internal supervisor from the faculty must be assigned to the topic! External topics are also posted on the website. Students can choose from the topics that have been published.
- University (internal) origin. In this case, a lecturer from one of the faculty's institutes makes a proposal for the task to be solved based on their industrial knowledge and individual professional interests. University-originated topics can be found on the faculty's website. Students can choose from the topics published.

Acceptance of thesis/thesis work:

Students must defend their thesis/thesis work in front of the Final Examination Committee. The final grade for the thesis/thesis work is determined by the Final Examination Committee.

2.2 Structure of a thesis/thesis work

The thesis must be at least 40 pages long and contain at least 60,000 characters (including spaces) / the thesis work must be at least 60 pages long and contain at least 80,000 characters (including spaces) (with appendices, max. 80 pages).

Careful attention must be paid to the correct use of Hungarian technical terminology in the wording of the thesis/thesis work. Technical jargon and unnecessary abbreviations should be avoided (abbreviations should be listed at the beginning or end of the thesis). Efforts should be made to use professional but readable and fluent wording. Spelling mistakes greatly reduce the quality of the thesis. The drawing symbols used in the THESIS must comply with the relevant national standard.

Only those formulas appearing in the THESIS that are referred to in other parts of the text need to be numbered. Numbering must be restarted for each chapter (e.g., 3.2.).

The THESIS is an independent work that requires knowledge and use of professional literature. All references to literature must be accurately indicated, making it clear that they are not the author's own work. The supervisor, the reviewer, and the members of the final examination committee pay special attention to recognizing and preventing the misuse of other people's intellectual property.

Literal quotations must be enclosed in quotation marks, with the source indicated in the text or in a footnote; otherwise, the sources used must be indicated in the bibliography in the standard format.

The sources of the figures, images, and data used must also be indicated.

When referring to the literature used, it is advisable to indicate the serial number in the bibliography in square brackets (e.g., [4]).

The method to be followed when referring to the literature used is set out in Annex 1.

The requirements for the structure of the thesis/dissertation are listed in Appendix 3. Compliance with these requirements is mandatory, but individual theses/thesis works may deviate from them in justified cases.

2.3 Typographical requirements

(Sample, template)

The thesis/thesis work must be prepared in A4 format. Page margin settings: 40 mm at the bottom, 25 mm at the bottom and outer edges, 35 mm on the binding side (due to binding), line spacing 1.5 lines. Page numbering at the top, in the middle of the page, 20 mm from the edge of the page.

The font used in the body text is Times New Roman, size 12, with justified alignment. The text should be divided into paragraphs as appropriate.

Chapter titles should be numbered with Arabic numerals, consisting of 14-point capital letters, centered at the top of the page. Subchapter titles should be numbered to a maximum depth of three numbers, in 12-point bold characters, aligned to the left.

The formal requirements described above also apply when using other text editors (e.g., LaTeX).

The following front pages are mandatory:

- Inside cover page (Appendix 4)
- Worksheet (Appendix 5)
- Student declaration (Appendix 6)
- Consultation log for the thesis / final project / thesis work (Appendix 8)

2.4 Submission requirements

The thesis/thesis work must be submitted by uploading it to the Thesis Portal (https://diploma.uni-obuda.hu/).

Statement to be submitted

Student statement (Annex 6)

Uploading to the Thesis Portal:

As described there, uploading the entire thesis/thesis work is mandatory (the title page, the worksheet signed by the supervisor, the legal statement, the confidentiality agreement (this is only included if the confidentiality of the thesis has been agreed upon in advance), the consultation log, the summary of the thesis in Hungarian and a foreign language (abstract), the table of contents, the full text with images and figures, the bibliography, and the appendices) in a single PDF file that can be edited.

The worksheet and legal statement pages must be signed and inserted into the thesis/dissertation as images.

The source material, test data, results, and other attachments not included in the thesis, as well as the presentation (in ppt or pptx format) must be uploaded in a single zip file.

2.5 Duties of supervisors and reviewers

- The internal supervisor is **responsible for formulating the thesis/thesis work** assignment and requirements (completing the worksheet), as well as providing professional assistance and monitoring the progress of the assignment and compliance with formal requirements.
- The external supervisor is responsible for assisting with the professional aspects of the work. The external supervisor is approved by the head of the institute, upon the recommendation of the internal supervisor, at the latest upon signing the assignment sheet.
- The reviewer's task is to evaluate the thesis/thesis work and make a recommendation for a grade. The reviewer is appointed by the head of the institute, based on the recommendation and with the cooperation of the university supervisor, and is provided with guidelines for evaluating the thesis/thesis work..

3. Appendices

Literary references

The literary reference

Respect for copyright and accurate literary citation are mandatory.

Failure to cite sources constitutes plagiarism, which is a serious offense classified as intellectual property theft (Study and Examination Regulations (Section 32) and Study Rules (Part V, Section 6.1)).

Strict adherence to citation rules is very important, as inaccurate or incomplete citations make it difficult or impossible to locate the book or journal cited.

Recommended citation format:

According to the first author, a bibliography arranged in alphabetical order should be numbered. References within the text should be given immediately before or after the quotation, with the number of the article or book referred to in the bibliography enclosed in square brackets ([n]). Verbatim quotations should be enclosed in quotation marks.

Book reference:

Author(s): Title of the work. Publisher, Year of publication

A comma should be placed after the author's surname, followed by a full stop after the initial(s) of their first name(s). If there are multiple authors, a comma should be placed between their names. The title of the book is followed by a full stop. The name of the publisher is given in italics, followed by a comma. The name of the publisher is followed by the year of publication.

Examples:

- [1] Mérő, L.: Észjárások (Ways of Thinking). The limits of rational thinking and artificial intelligence. Akadémiai Kiadó, Optimum Kiadó, 1989
- [2] Narendra, K. S., Thathachar, M. A. L.: Learning Automata: An Introduction. *Prentice Hall*, 1989
- [3] Pearl, J.: Heuristics: Intelligent Search Strategies for Computer Problem Solving. *Addison Wesley*, 1984

Reference to journal:

Author(s): Title of the article. Title of the journal, Volume number (and issue number) of the journal, Year of publication, Starting and ending page numbers of the article separated by a hyphen.

Examples:

- [4] Bencze, G., Garami, P.: An overview of Japan's fifth-generation computer system. Information Electronics, Vol. 2, 1983, pp. 65–70.
- [5] Sántáné-Tóth, E.: Survey of Hungarian KBS tools and applications in the engineering field. *Engineering Applications of Artifical Intelligence*, Vol. 46. 1991, pp. 409–416.
- [6] Sutton, R. S., Barto, A. G.: Toward a modern theory of adaptive networks: Expectations and predictions. *Psychological Review*, Vol. 88., 1987, pp. 135–171.

Reference to internet source:

In addition to the URL, the download time must also be specified.

Example:

[7] Csink, L.: Graph algorithms,

(http://nik.uni-obuda.hu/csink/ga.ppt), last accessed: January 12, 2011.

Figures and graphs

It is advisable to number figures and tables by chapter, starting with 1 (e.g., Figure 6.1, Table 5.2). References to figures and tables must be made in the text.

All figures and tables should have a concise title.

The design of figures, graphs, and tables may be

- edited on a computer, inserted into the text using a word processing program, printed;
- computer protocol (separate or attached to paper)
- high-quality photocopy (as an attachment).

Standard placement of figures and tables

- in text, with space left blank on both sides next to an illustration that does not take up the entire page width,
- text typed alongside an illustration that does not occupy the entire width of the page;
- inserted between text pages, covering the entire page,
- collected and bound at the end of the thesis/thesis work,
- A3 or larger diagrams, programs, and other documentation should be folded and placed in the envelope provided in the back cover (in this case, the illustration should be framed and provided with a text field indicating the title of the thesis, the name of the illustration, its serial number, the student's name, and the serial number of their thesis/dissertation).

Any design that differs from the above but does not conflict with standards, is clear and aesthetically pleasing, and is considered appropriate by the consultants is acceptable.

Expected structure of the thesis/thesis work

Inside cover page (mandatory)

Worksheet (mandatory)

Student declaration (mandatory)

Consultation log (mandatory)

Confidentiality document, if confidentiality of the thesis has been approved

Abstract in Hungarian and English

Table of contents (page numbering starts here) (mandatory)

- **1.** Formulation and introduction of the problem to be solved, the aim and structure of the thesis/thesis work (Introduction)
- 2. Problem analysis, specification development
- 3. Review and analysis of possible approaches and solutions based on the literature
- **4.** Selection of the solution method, justification of the choice
- **5.** Description of detailed specifications
- **6.** Description of the work phases carried out during the planning process and your experiences
- **7.** Description of implementation
- 8. Testing
- 9. Presentation and evaluation of results, comparison with the results of similar systems
- **10.** Analysis of implementation, assessment of application and further development possibilities
- **11.** Determining the length of the thesis summary and conclusions in Hungarian (mandatory) (1500-2500 characters)
- **12.** Summary of the thesis content and conclusions in English (mandatory)
- **13.**Bibliography (mandatory)
- 14. Appendices

	4.	appendi
	THESIS	
	or	
	THESIS WORK	
érem, válasszon!	Student's name: Student's name	
Kérem, válasszon!	Student's registration number: T-xxxxxx/FI12904/	

Obuda Univesrity John von Neumann Faculty of Informatics Institute

THESIS or THESIS WORK DESCRIPTION

Name of the student: Registration number: Neptun's code:		./FI12904/N H		
Title of the thesis:				
:				
Internal supervisor				
External supervisor:				
Deadline:	202			
Subjects of the final e	examination:			

The task		
The thesis must contain:		
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		head of institute
This specification is valid until: 202. OE HKR Section 54, paragraph (10)	•	

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internal supervisor

I consider the thesis suitable for submission:

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external supervisor





Declaration						
I, the undersigned student, declare that this thesis is the result of my own work and that I have clearly dentified the literature and tools used. The results contained in this thesis may be used by Obuda University and the institution that commissioned the work for their own purposes without compensation, subject to any restrictions regarding confidentiality.						
Issued: (place), (date)						
	student					

Information regarding confidentiality agreements

In justified cases, if the topic of the thesis/thesis work requires it, the external partner may initiate the classification of the thesis/thesis work as confidential at the time of writing the topic, by submitting a request addressed to the Vice Dean for Education and submitted to the Graduation Group, detailing the reasons for requesting the classification of the thesis/thesis work as confidential.

In the above case, to be submitted together to the Graduation Group:

- the student's request, in which they ask for the thesis/thesis work to be classified as confidential, taking into account the opinion of the external partner, and
- the external partner's request, bearing a company signature, which includes the reasons and information justifying the request for the thesis/theis work to be classified.

Until the application has been assessed by the Vice Dean for Education and the Dean, the thesis/thesis work cannot be considered confidential..

OBU OBU	DAI EGYETEM DA UNIVERSITY			Kérem, válasszon!			
THESIS/THESIS PROJECT/THESIS WORK							
		Consulta	tion log				
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Neptu	ın ID:						
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Title	of the thesis/thes	is work in Hungarian:					
Title	of the thesis/thes	is work in English:					
Name	of the internal (faculty) supervisor:					
Name	of the external s	supervisor:					
Place	of work of exter	rnal consultant:					
осс.	DATE	TOPIC AND CONTENT O	F THE CONSULTATION	SIGNATURE OF SU- PERVISOR			
1.	Dátum						
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The C	Consultation Log	must be signed by any super-	visor at least four times during	ng each consultation.			
The supervisor may confirm participation if the student arrives prepared, i.e., a substantive consultation has taken place.							
The student has fulfilled the requirements of the Thesis/Diploma Project/Thesis work course(s).							
Issued	Issued: (place), (date)						
	internal (faculty) supervisor						

st The appropriate underlined.

The IP SCAN Portal

Obuda University and its János Neumann Faculty of Informatics are committed to protecting and effectively managing their intellectual property, with a focus on supporting creators and encouraging innovation. To this end, the IP SCAN Portal has been developed, which, in accordance with the University's Intellectual Property Management Regulations, assists in the identification, registration, and management of intellectual works.

The protection of intellectual property is not only essential for securing the rights of creators, but also because it allows the University and the scientific community as a whole to benefit from innovation. The IP SCAN Portal is a transparent, efficient, and user-friendly tool for the University's researchers, teachers, and students, which helps to properly document and protect intellectual property.

Portal availability: https://nik.uni-obuda.hu/ipscan/

The Portal is accessible after logging in to 0365. The login details are the same as the username and password used in the Microsoft system (e.g. Outlook, Teams). A detailed user guide is available after logging in.

The Portal operates in accordance with Óbuda University's Intellectual Property Management Regulations, which set out detailed rules for the management, ownership and use of intellectual works created at the University.

Availability of the regulations: https://uni-obuda.hu/szabalyzatok/kutatasi-vallalko-zasi-szabalyzatok/1-az-obudai-egyetem-szellemitulajdon-kezelesi-szabalyzata/

Tasks related to the introduction of the Portal:

- Use of the Portal **is mandatory for all programs** offered by the Faculty (bachelor's and master's programs, specialized continuing education courses);
- Use of the Portal is mandatory for all project work and independent laboratory-type projects, as well as for thesis, thesis work, and final project subjects, and for project-based MSc programs;
- One of the requirements for completing the thesis, thesis work, or final project is to register the selected topics on the IP SCAN Portal by the deadline;
- Deadlines for registration students:
 - For BSc and BProf programs: the last working day of the third week of the semester;
 - For MSc and SZT programs: the last working day of the 9th week of the semester;
- Review deadlines supervisors, mentors: projects submitted on the IP SCAN
 Portal are reviewed by the supervisors and mentors assigned to the projects,

who modify them if necessary, approve them, or return them for modification.

- For BSc and BProf programs: the last working day of the fourth week of the semester;
- For MSc and SZT programs: the last working day of the 11th week of the semester;
- If the supervisors or mentors return the topic for revision, the student is required to revise the content of the project in cooperation with the supervisor or mentor within 10 working days of the request for revision, and the supervisor or mentor is required to approve or reject the topic (rejection also results in the student being blocked from the course). mentor must approve or reject the topic (rejection also entails exclusion from the course) within 10 working days of the student's implementation of the changes..

Responsibility for and deadline for checking the IP SCAN Portal notification process:

- In the case of thesis, diploma thesis, and final project subjects, checks are carried out by the Faculty Graduation Group no later than the last working day of the 12th week of the semester.;
- In the case of project work and independent laboratory subjects, assessments are carried out by the course leaders within the subjects by the last working day of the 12th week of the semester.

The IP SCAN Portal can be used by faculty students and staff to submit periodic project reports throughout the calendar year. In addition to mandatory reporting, it is also possible to submit project reports..

The reported projects shall be reviewed by the Vice Dean for Research or the employee(s) designated by him/her, the Innovation Office and/or employees of Initium Venture Labs Zrt. (hereinafter collectively referred to as the Faculty Innovation Ad Hoc Committee) in coordination with the Vice Dean for Research, by the last working day of the 13th week of the semester.

The projects selected by the Faculty Innovation Ad Hoc Committee for inclusion in the intellectual property protection procedure will be classified as confidential and will be reviewed and presented in accordance with confidential procedures in end-of-semester project work, theses, final projects, and thesis works.

In the case of such classified projects, the coordinator or specialist designated by the relevant institutional managers is responsible for organizing the classified reports. In the case of classified reports, the procedures related to confidentiality statements for the given project are carried out by the Graduation Group, which follows the same procedures and uses the same documentation as for the handling of classified theses.