National University of Science and Technology
POLITEHNICA Bucharest
Faculty of Electronics, Telecommunications and Information
Technology

Regulations on the preparation of the diploma / dissertation thesis

(english version)

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Chapter 1 - Introduction

Document scope

The scope of this regulation is to describe all necessary steps and requirements in the selection of the thesis topic, the realization and submission of the graduation / dissertation thesis, as well as to offer indications and recommendations for the thesis defense. It addresses to students of the license (undergradute) and master (graduate) study programs from the Electronics, Telecomunications and Information Technology (ETTI) Faculty of the National University of Science and Technology POLITEHNICA Bucharest. This document completes the „Regulation regarding the organization and development of the graduation exams" from University of Science and Technology POLITEHNICA Bucharest, by adding specific aspects for the ETTI faculty.

Application area

This document applies to graduation and dissertation thesis, starting with academic year 2015 / 2016.

Terms used

This document refers to both the graduation and dissertation thesis using the generic term **thesis** or **graduation thesis**.

Chapter 2 - Steps and timetable for the development of the graduation thesis

In the following we will detail chronologically the main steps to be taken and requirements associated with them. The deadlines for the current academic year are published on the Faculty web site.

These steps must be followed by all students who wish to register and defend their thesis during the current academic year, including students who were registered during a previous year, but didn't defend their thesis, or defended and failed. A thesis registration is only valid one academic year, for each additional year the new registration can have a different topic and even a different advisor.

1. Choosing the supervisor and the thesis topic

The student usually chooses the topic and thesis advisor (supervisor or coordinator) no later than the beginning of the last year of undergraduate studies. For master study programs, it is recommended that this choice be made at the beginning of the second semester of the first year of study.

The thesis advisor **must hold a doctoral degree** and be a member of one of the departments of the faculty. If the chosen supervisor is part of another faculty of the National University of Science and Technology POLITEHNICA Bucharest or he is not part of the academic staff, this supervisor will be seconded by a member of the academic staff of the Faculty of Electronics, Telecommunications and Information Technology. Exceptions to this rule are retired professors from the departments of the Faculty of Electronics, Telecommunications and Information Technology of the National University of Science and Technology POLITEHNICA Bucharest. Thus, there can be maximum two supervisors for a thesis.

The thesis topic as well as its basic requirements are set out in the registration form "Thesis description. A model of this form is presented in Annex 1 (for undergraduate study programs) and Annex 2 (master study programs). The full name of departments, heads of department etc. are listed in Annex 8 which is available on the faculty website. The collaboration between student and supervisor can also be regulated by additional documents (with regards to intellectual property rights, loan of documentary material, etc.) made by agreement of both parties.

Choosing the topic should be based on the following principles:

 - working on the graduation thesis is a *creative, original and personal* activity of the student, meant develop his/her engineering skills.

- the topic needs to be of reasonable complexity, which is determined knowing that the elaboration of the graduation thesis has 10 credit points, and one credit point is considered an equivalent to 27 hours of work. Also, the comparison can be made with a semester project, which has 2...3 credit points

- it is essential that the student's original work (hardware/software design and implementation, measurements, simulations and interpretation) to be of greater scope and complexity than the documentation (theoretical introduction).

- care must be taken when using the word "study" in a thesis title, because of the double meaning of this word; a "study" which is appropriate for a thesis topic must have the significance of research, of "study of the unknown", and is different from the "study" performed by the student in the process of learning.

Recommended topic categories:
1) Designing, building and testing a system / module / electronic layout (be it just hardware or combination of hardware + software, such as a programmable layout with microcontroller, FPGA etc.) of reasonable complexity;
2) Developing a software that meets a given requirement (of reasonable complexity);
3) Theoretical research, followed by carrying out simulations and drawing conclusions regarding physical phenomena, technology / technology components, electronic components or circuits, protocols, algorithms, analytical models of phenomena or processes etc.;
4) Theoretical research, followed by development of an experimental system or software on which measurements are made, or the functioning of illustrated theoretical principles is evaluated, and drawing of conclusions; examples of experimental systems: measurement platform with electronic devices, computer or computer network or router on which specific protocols are analysed, development board with uP, DSP, FPGA etc on which certain algorithms are implemented and results are verified etc.

Remarks:
- Following the simulations, measurements, etc. it is essential to draw conclusions that may not have been obvious from the start. The fact that a program / protocol / component (pre-existing, which the student has only set up, not developed) works according to specifications is not a conclusion.
- Activities such as installation and configuration of pre-existing physical equipment or software (which are not developed / written by the student) are not generally appropriate as graduation thesis topics, but, eventually, for laboratory work. They may only be part (but not the main part) of a thesis topic in the above categories.

2. Registration of the topic with the department that coordinates the study program

The following steps must be taken in order to register a thesis topic and have it approved. The deadline for each step is specified in the Calendar which can be found on the Faculty web page.
- The student fills in the data according to Annexes 1/2 on the online form specified on the Faculty's web site, using his personal account.
- The thesis advisor approves (online) the Annex.
- The Department heads establish the approval procedure by specialized committees in each department.
- The approval status appears in the student's account. For not approved topics, the reason why the topic was not approved and any correction suggestions are given.
- According to the calendar, there is a time interval in which the non-approved thesis topics will be corrected or changed by agreement between supervisor and students, and will be re-submitted for a new approval. If by the final deadline a topic isn't approved, the student will not be able to defend his graduation thesis in any of the sessions in the current academic year. During this period, new topics from students who did not originally register in time can no longer be submitted.
- A validation code will be generated on the Annex 1/2, which confirms the data was successfully imported into the Faculty's database.
- The student submits to the secretariat of the Department the printed Annex 1/2 signed by the student and supervisor. Not submitting the form by the deadline leads to the impossibility of defending the thesis in July or September of the current academic year.

- Students will pick up from the secretariats the Annex 1/2 signed by the Department/Master program Director and the Dean. A copy of this signed Annex will be submitted to the faculty secretariat when registering for defense in one of the 2 sessions (summer or autumn), and the original is used as first page of the printed project.

3. Obtaining credit points during the semester

Students develop their diploma thesis within the framework stipulated in the curriculum from semester VIII of the disciplines "*Activities for Diploma Project Preparation*" and "*Practice for Diploma Project*", or their dissertation thesis in semester IV, discipline "*Practical Activities, research and preparation of Graduate Thesis*". The schedule of these activities is established together with the project supervisor.

At the end of the semester, the supervisor fills in Annex 7, where a score between 0 and 100% is given for the respective disciplines. Passing the disciplines (and thereby obtaining related credit points), is subject to a minimum of 50% for each of them. Annex 7 is filled:
- **exclusively online** for the Diploma thesis, in the graduating application on the ETTI website
- **in printed form** for the Dissertation Thesis: the Advisor fills, prints and signs the Annex, and the student submits it to the Master Program Director. This is because a written proof of practical work at a Company may be joined to the Annex, only for the Dissertation.

The scores must be filled in **until the deadline** on the ETTI website.

If a Passing score was not obtained by the summer deadline, the students can continue their work during the summer, and get a new score from the supervisor during the autumn, **in the first week of the autumn exam session**.
If a Passing score was obtained in summer, but the student does not defend the thesis during the summer session, the score remains valid for the autumn session – Annex 7 must not be filled/submitted a second time.

4. Carrying out the project itself and writing the thesis

The cover of the thesis shall have a fixed form, described in Annexes 3-4. Chapter 3 "Formatting and editing rules" include indications for editing the thesis. Names of departments and study programs, as well as their heads, are listed in Annex 8 (which is on the faculty website, separate from this document).
Compliance with the format described in these Rules is mandatory and is part of the grading scale.
Details of the project work itself are determined by each supervisor.

5. Registering at the faculty secretariat to defend the thesis, and turning it in

Registration at the faculty secretariat for thesis defense is made only after completion of the work and documentation according to these Regulations, and can be done either in the summer session or the autumn session.
The student will complete, from his personal account, on the centralized university website http://studenti.pub.ro, an application form, in which he will record data about the project, including the supervisor name and *thesis title* (identical to the one in Annex 1/2; any discrepancy between titles will invalidate the entry).
The student will print the resulting application form and obtain the approval (signature) of the supervisor for defending. Supervisors will approve by signing the application form, if they consider that the student has fulfilled, to a sufficient extent, the requirements undertaken when the topic was registered. The secretariat will not accept registration of students who do not have this approval.

The calendar of the two sessions and the list of documents required for registration will be displayed in the respective periods on the faculty website. Also the secretariat requests the submission of certain documents, copies of documents and photos.

The thesis is turned in both *electronic* and *printed* form:

- In electronic form, the thesis is turned in according to the following rules:
- The student will create *a single* PDF document containing the full text of the thesis (from the cover to the last annex).
- The application form (Annex 1/2) with all the signatures, as well as the statement of academic honesty (Annex 5), signed, will be scanned and entered into the PDF, in order, at the specified positions.
- The file will be named: *FamilyName_Name1[_Name2...].pdf* and will be uploaded at the web address indicated on the faculty website, in the same period with submitting the application form and the other documents required by the secretariat. The deadline is specified on the website for each session, and which will correspond to a period that ends three days before the first day of the diploma / dissertation defense session
- The theses in PDF format will be made available to members of the committee to which the student is assigned, for reading and grading before the defense. After the current session, the file will be stored in a database, so the PDF file must correspond exactly to the hard copy *(the only exceptions are those specified in Chap. 4 "Confidential Projects")*.
- The PDF file will be written to a non-volatile memory storage device, such as a CD, DVD, memory stick, etc., in the root directory of the device; on the device (not on its envelope), the numeric code from the *"Teams"* platform will be written.
- On the same storage device, in separate directories, there will be: the project written in Word, LaTeX, or another equivalent format, the presentation, the source code, and other materials depending on the specific theme and requirements of the supervisor: files associated with the printed circuit board, photographs, etc. The storage device will be inserted into an envelope that will be attached (stapled, glued) to the inside front cover of the printed project and will be submitted together with it to the supervisor.

- In printed form, the paper is submitted to the supervisor in a single copy, including the storage device, by the date announced by him/her. The printed form of the paper must include Annex 1/2 and Annex 5 (Academic Honesty Declaration) in *their original form, not scanned.*

The student who has not submitted all the registration documents, including uploading the thesis on the website until the deadlines announced on the faculty website, or the one whose PDF document lacks the required forms or they do not match (e.g. the registration form is missing or is different from the approved one, the title is different, the statement of academic honesty is missing etc) will not be registered and will not be able to defend the thesis in the current session. The student will be able to submit a new application, approved by the supervisor, in the next session.

Remarks:
1) At the ETTI faculty, uploading the PDF file on the website replaces the provision of Art. 10 sec. c) of the "Regulation on the organization of the graduation exams (diploma, graduation and dissertation exams)" of University of Science and Technology POLITEHNICA Bucharest, which specifies that the thesis is turned in to the committee secretary.
2) The PDF file is uploaded on the ETTI website, not on the university website http://studenti.pub.ro

6. Defending the thesis in front of the Graduation Committee

Students defend their theses in front of a committee corresponding to their study program.

The defense (graduation) comittees from each department or master study program (as listed in Annex 8) set the date, hour and place of the individual defenses of the students. Failure to show up at the set date, hour and place may result in the student being eliminated from the current session.

The supervisor will accompany the student. In the case when, for legitimate reasons, the supervisor cannot accompany the student for his defense, he will give to the committee a signed personal appreciation letter about the student's activity and thesis.

    a. *Manner of presentation*:
- The student will develop a multimedia presentation of the project, designed in Microsoft PowerPoint or other equivalent program, and present it using a projector
- subsequently, if the project included developing an experimental system and / or software, the student will demonstrate its operation
- *Maximum time of presentation*:
  - Presentation using a projector: maximum 10 minutes
  - Practical demonstration of the system / program: maximum 5 minutes; the student will prepare in advance the system/program so as to minimize the time needed for setup and deployment.
- These times may be extended at the request of committee members

    b. *Questions*: Committee members may address any questions on the subject and content of the paper, methodology and resources used, as well as questions of general knowledge and specialty, associated with the domain. The maximum time allotted to questions and answers is up to the committee members.

Recommendations for Multimedia Presentation:

The presentation will be done using a projector and a computer provided by the faculty, with the option for the student to use his/her own laptop. The presentation will contain minimal elements of theory used in the project and will show as much as possible of the student's personal contributions: research conducted, describing the system and / or software developed (if applicable), experiments and / or simulations made (with interpretation of results thereof), problems that occurred (and how they were handled) etc. The presentation time was explicitly chosen to be very short such as to lead the student to focus on these issues, and not turn the presentation into a theoretical lecture about his study;
The presentation wil contain at least 10 slides:
- title slide, containing at least the title of the project, student name and the name of the supervisor;
- slide with the content of the presentation;
- if the topic allows for it, an introductory slide, comprising an overview (high-level architecture, diagram etc) of the domain, to illustrate the project position within the domain;
- at least one slide clearly detailing the student's contributions, specifying what existing state-of-the-art he/she used, and what he/she created himself/herself (eg, I developed the program using libraries ... and I, myself, wrote the following code sections, *or*: I made a comparative study of techniques for developing integrated circuits from category .... and I simulated some structures in subcategories ...). This slide is necessary to highlight, at a detailed level, what was pre0existing and what was explicitly done by the student. This is necessary, since

those very specialized issues such as the pre-existence of some resources can not be a priori known by all committee members;
– slides with text, lists, tables, figures;
– 1-2 slides for final results and conclusions; it is recommended that the student focuses on the concrete conclusions derived from his work and not hypothetical future developments of the project.

Slides will not contain much text, but especially the main ideas, figures, tables, charts, graphs etc; the student will not read the information on the slide, but will explain and detail what the committee *already sees* on the slide. Slides for a presentation to a panel / audience ***are not done in the same manner*** as slides for a tutorial on the Internet, distance-learning, etc., which are not presented by a person. It makes no sense to read a text that is already written on the slides and the committee can read in advance!

Generally, the slides will be designed for the committee, not the supervisor, considering that committee members have different specializations.

7. Evaluation of the thesis and the defense

The committee assesses the work taking into account the following aspects:

- Assessment of the extent and quality of the project / research undertaken, volume of personal, original activity of the student, quality and quantity of the obtained results;
- The quality and clarity of project presentation, as well as timing.
- Compliance with the rules of structuring and drafting of the project under this Regulations, accuracy of expression.
- Answers to questions related to the project content;
- Answers to general knowledge questions within the scope of the project (*only for the diploma thesis*)

Situations of failure at a defense:

1) If a student defends his thesis and is declared to have failed it in the *summer sesions*, the student will be in one of the following situations:
- ***Rejection with topic maintained***: In this case, the student can defend once more in the autumn session. The committee will provide recommendations to improve the work (if applicable). For the registration in the fall, only a new application form with a new signature of the supervisor is necessary. The signed Annex 1/2 remains unchanged, as it is not possible to change the topic and / or the supervisor between the two sessions. The copy of the student will be moved to the new project. Annex 7 is not submitted again in the same academic year.
  The same situation occurs for students who registered in the summer, but the project did not meet some administrative requirements (lack of some forms, lack of uploaded PDF etc.) or was not defended, and defend in the autumn session.
- ***Rejection with topic changed***: in this case, the committee considers that the thesis topic does not meet minimum requirements, the student cannot defend during the current academic year. He can register again next year, with a new topic, going through all the stages outlined earlier.

2) If a student defends the thesis for the first time in the automn session, he can only pass or fail; in case of a failure, the registration procedure, with all its stages has to be done again in the next academic year. Annex 1/2 is valid *only for the academic year in which it was signed*, irrespective of the defense or lack of defense of the thesis.

Chapter 3 – Formatting rules

1. Thesis structure

The thesis is structured on chapters and includes the following **mandatory** elements:

a. *Title page* – informations that must apear on the title page are presented in Annex 3 / 4. Fields marked with stars (department*, domain*, program*) will be replaced by the corresponding ones from Annex 8. Annex 8 can be found on the faculty website, in the same location as the present document;

b. *Thesis topic registration form* (Annex 1/2, **in original form**) –signed by the student, the Advisor, the Department/Master Director and the Dean. The signed form will be scanned and inserted into the unique PDF document that represents the electronic form of the thesis;

c. *Copyright declaration* – ***mandatory only if the copyright belogs to the student or the company*** - (Annex 6/ 6 bis). Check the explanations in chapter 4: intellectual property;

d. *Academic declaration of honesty* – the thesis will contain a declaration on the student's own responsability, **dated and signed in original**. The declaration's content is presented in Annex 5. The signed declaration will be scanned and inserted into the unique PDF document that represents the electronic form of the thesis. This declaration differs from the declaration of originality which is submitted only to the secretariat and includes the student's personal data;

e. *Table of contents* – The thesis will include a table of contents which will contain at least the chapter titles along with the page numbers associted to each chapter starting point;

f. *List of figures and table list* – in case the thesis contains figures (images, graphs) and / or numerous tables, those will be presented, immediately following the table of contents, in a list of figures and a list of tables that contain the name of each element and the corresponding page number;

g. *List of abbreviations* – all used abbreviations will be listed alphabetically, along with their explanation (if necessary);

h. *Introduction* – it will contain the topic choice motivation, the novelty degree (if the case), the project's main objectives, the methodology used, and a summary of the student's contribution and final results;

i. *Chapters* – the thesis will contain chapters numbered in ascending order (the introduction will not be numered, first chapter is chapter 1);

j. *Project conclusions* – this part of the thesis includes the main conclusions from the entire project, the personal opinions regarding the obtained results, as well as (optional) the potential future directions of research related to the chosen topic. The project's conclusions will not be numbered as a chapter;

k. *Bibliography* – it will contain the list of all information sources used by the student into the project completion and *cited into the text*;

l.   *Annexes (optional)* – There can be any number of Annexes, numbered in ascending order starting with Annex 1 (no connection with the numbering of annexes from this Regulation). Each annex will be mentioned at least once in the text as a reference. In general, the annexes may contain complete electrical diagrams, PCBs, source code written by the student, photos of the set-up / PCBs/ experiments (if any), graphs (if too numerous to be inserted directly into the chapters), project Gantt diagram (optional), etc. Any material that is not authored by the student shall not be included into the annexes (i.e. source code for existing libraries, component data sheets, etc.) except in well-justified cases with the explicit mentioning of the fact those materials pre-existed.

2. Thesis editting and formatting rules

The thesis will be written in document processing program (i.e. Microsoft Word, LaTex, Open Office, etc). The paper format is A4, the number of pages (excluding annexes) should be between 40 and 80 pages (for the graduation thesis) and 60 to 100 pages (for the dissertation thesis), in agreement with the following elements:

- *Editing language:* It is *mandatory* to use the same language as the study program followed by the student. As an exception, the projects realized during stages / fellowships within foreign universities during the last semester and having as declared purpose the thesis preparation, can be editted in the respective foreign language, if different from the program's language, with the aproval of the project coordinator from ETTI and the head of department / master coordinator concerning the student.

- *Binding* – the thesis shall be binded using plastic spirals or plastic rings, front cover in transparent vinyl, back cover in thin carton or plastic. From archiving reasons, it is not allowed the binding using hard carton covers.

- *Printing* – the text shall be printed on **both sides** of the paper. Each element presented in part 1 of this document shal start on an odd page; it implies that, if needed, an empty page at the end of the chapter will be added.

- *Page margins* – the following values shall be used for the page margins:
  - left: 2 cm;
  - right: 2 cm
  - top: 2 cm
  - bottom: 2 cm

- *Spacing between lines* – the text shall have sigle spacing, or at most 1.2 lines spacing.

- *Paragraph text alignment* – text in normal paragraphs shall be aligned to both the left and right margins (justified). Chapter titles are an exception from this rule, they can be centered aligned, as well as table and figure captions (see the following explanations).

- *Fonts* – fonts used in editting (chapters and annexes as well):
  - The thesis text shall use proportional font types (i.e. *Times New Roman, Computer Modern*), and a font size of 11 – 12 points. It is recommended to use serif font types, as the ones offered as an exemple. Using a *sans serif* font type (i.e. Arial) is not recommended for printed documents, as it slows down the reading process.

- In order to add source code, a *fixed dimension* font will be used (i.e. `Courier New` etc), with a font size of 8 .. 12 points. It is recommended to reduce the font size in annexes. Code listing can be done on two columns.

- *Page numbering* – page numbering shall be done in a consecutive manner using arabic numerals (1,2,...) starting with the title page and ending with the last page of the thesis, including annexes. The page number shall appear only from the Introduction and will be inserted centered, in the page footer.

- *Page header – **optional** –* may appear starting with the Introduction and shall contain identification elements as the student's name, chapter title, etc.

- *Tables* – The tables shall be numbered using 2 numerals, the first representing the chapter number, and the second representing the table number in that chapter. Each table has numbering and title, placed under the table, centered. Each time the data are taken from an external source, that source will be specified under the table, as a reference (exemple: Source: [1] or Source: [AB1]).

- *Figures* – the figures (images, graphs, screen shots) will be numbered using 2 numerals, the first representing the chapter number, and the second representing the figure number in that chapter; each figure has a title and a number, mentioned under the figure, centered. When the figure represents a graph plot, the coordinate axes will be mandatory labeled. Each time the figure is taken from an external source, that source will be specified under the figure, as a reference (exemple: Source: [1] or Source: [AB1]).

  Remark: in case a table or a figure is taken from an industrial electronic component datasheet, it is acceptable to write the source (exemple: Source: *National Semiconductor*) in that table/figure's caption instead of creating a special entry in the bibliography list.

- *Bibliography citations in the text* – cited materials shall be printed documents (books and book chapters, printed articles and printed conference papers), electronic sources (articles and conference papers available on-line, websites) and standards / recommendations; references inserted in the text will be identical to the bibliography entry and shall correspond to one of the following reference styles:
  - ascending order numbering, respecting the citing order into the text [1], [2], ...
  - author name / first author, or the name of the standard / recommendation, followed by the year of publication [Bernoulli, 1750], [National Instruments Application note 150, 1999]
  - a unique abreviation formed by letters and numbers, for exemple: in case of books or articles, the initials of the first author followed by the year of publication: [AB86], [MW06], ...; in standards, the abbreviated name of the standard: [RFC4531], ...; in case of industrial documents, datasheets or other documents with no precise information about the authors – an abbreviation at choise [TEK01], [NAT01], [WWW1], ...

- *Bibliography* – consists of a list of references cited into the text. For the numbering option [1][2]..., the references will be listed in ascending order; otherwise, they will be in alphabetical order acording to the name or the abbreviation used. The following editing rules shall be respected:

1. Book:
   Example:

[1] Neanderthal, H., *MOS transistors with stone gate,* Published by Papyrus Press, Stonehenge, 20000 b.C.

2. Article from a journal or a conference paper:
   Example:
[2] Ivanovici, I. I. , "Electronic Nothingness", in *Journal of Emo Electronics*, nr. 5/2012, pp.12-30.

3. Standards, industry documents:
   Example:
[3] RFC90210, *A standard for waterless communications between whales*, International Standards Organization, Section XVIII, 2030

4. Documents available exclusively *online*:
   Example:
[4] *Transistors considered harmful for the future of vacuum tubes*, http://www.lee-de-forest.org/Transistor, accessed on August 23, 1944

Observations:
- Page/pages number will be specified if the citation referes to only one page or a group of pages, in case of an article published in a conference proceedings – the scope beeing to find more easily the respective location.
- In case of an on-line source, the complete web link will be mentioned with „accessed at the date ..."
- A source not cited into the text shall not be inserted into the Bibliography
- A slightly different citing styles will be accepted, providing to keep a consistent style throughout the thesis.
- Student who use LaTeX can also use BibTeX
- It is recommended to have a balanced bibliography, including all usual categories of documentation: printed books, journals, conference papers, on-line documents.
- Generally, it is recommended to avoid citing from Wikipedia or other online encyclopedias (that can be edited by anyone and do not represent scientific verified informations). If you use Wikipedia, look foor the original links which were used in the corresponding article, and cite those.

Chapter 4: Intellectual property; confidential projects

Particular importance is paid to respecting intellectual property rights. Their violation is punishable under the Romanian laws and regulations. In this regard:

- citations will be made according to the rules described in Chap. 3 and will comply with the procedure described in the *Statement of academic honesty* (Annex 5)
- all the sources cited in the text shall be numbered; numbers (or abbreviations) will have a correspondent entry in the Bibliography
- the rules of citation will be observed for every table that is taken (or information from it is taken even if the table is reformatted) from any other source, and for all the figures that are not drawn by the student, including photos that are not made by the student, respectively.

Assuming copyright by the student or the company

By default, if no other mention is made, *intellectual property on the work belongs to* University of Science and Technology POLITEHNICA Bucharest. If desired, the student can claim intellectual property rights (*copyright*) on the work; similarly, if the work is carried out in collaboration with a commercial company, it can claim intellectual property rights. In these particular cases:
- a page with the *copyright* information (Annex 6) will be inserted; lack of this page means the default situation, namely *copyright* belongs to University of Science and Technology POLITEHNICA Bucharest
- even if the student / company owns the intellectual property, it is mandatory that University of Science and Technology POLITEHNICA Bucharest is granted the right to reproduce, distribute and publish the work at no additional cost. The content of Annex 6 provides this right and must be kept unaltered. *This is a mandatory requirement for graduation.*
- assuming copyright and inserting Annex 6 is subject to *the consent of the supervisor*. These issues have to be discussed between student and supervisor, and the approval (signature) on the application form (Annex 1/2) and on the registration at the secretariat prior to the thesis defence depends on his consent. For example, if the supervisor helps the student during his work with some results of his/her research, he/she may refuse the student to claim *copyright,* by not providing the required signatures, and making impossible for the student to register the thesis for defense.

Confidential projects

By default, it is assumed that the work has learning or research purposes, and the entire work (in printed form or as a PDF document) can be stored by University of Science and Technology POLITEHNICA Bucharest / ETTI in public archives where it can be consulted.

In special cases, it is possible that certain passages of the work to be characterized as confidential and to be excluded from the publication. Examples: parts of the source code, some hardware specifications/schematics, certain algorithms, or certain results, in the case of projects carried out in collaboration with a commercial company, or special research projects in which the student or supervisor is involved. Note that, in the spirit of academic openness University of Science and Technology POLITEHNICA Bucharest / ETTI does not encourage this practice, and its approval is not guaranteed. *The approval must be obtained before starting work on the project.*

In *well justified* cases where this is desired:
- it is mandatory to submit to the head of the department / master programme a request which specifies which parts of the work to be confidential, together with the justification of the

request. Approval for this request must be obtained before the deadline for turning in the paper in PDF format, otherwise its censoring is not allowed and the work must be delivered in full form, under penalty of failing the diploma / dissertation thesis defense.

- two versions of the project will be made. The first one, in print + storage device, will be complete, uncensored, and will be available on the day of the defense, in order for the student to be fully questioned by the committee. This version will be kept by the Advisor after the defense. The second version with confidential passages deleted, will be uploaded (as PDF) on the faculty website, respecting the normal deadlines. This version, *which is not printed*, will include, after Annex 1/2, the (scanned) confidentiality request approved by the head of the department / master programme.

University of Science and Technology POLITEHNICA Bucharest
Faculty of Electronics, Telecommunications and Information Technology
Department _____

DIPLOMA THESIS
of student _____ _ _____ group _____

1. Thesis title: _____

2. The student's original contributions (not including the documentation part) and design specifications: *describe in 10..15 rows:*
- design of a system with the functionality... followed by construction and evaluation / design and implementation of a software program with the requirements... / formulation of an analytical or computational model of a system or process, simulation of the model, and comparison with actual data / experimental study of physical phenomena, followed by comparison with simulation results and the drawing of conclusions etc...

This annex will not be printed directly by the student, instead it must be filled online on the ETTI website (according to the calendar). The online form will generate the printable annex, which must be printed and submitted to be signed.

3. Pre-existent materials and resources used for the project's development: *(electronic modules, development boards, network equipment such as routers etc, software libraries, frameworks, APIs, simulation programs, CAD software packages, known algorithms etc).*
_____
_____
_____
_____

4. The project is based on knowledge mainly from the following 3-4 courses:
_____

5. The Intellectual Property upon the project belongs to: *University of Science and Technology POLITEHNICA Bucharest, student OR company ...*

6. Thesis registration date: _____

Thesis advisor(s),   Student,
_____   signature:..............

signature: ....

_____ (Company) _____   Dean,

signature: ....   _____

Departament director,   signature: ....

_____

signature:..............

Validation Code: XXXXXXXXXXX

University of Science and Technology POLITEHNICA Bucharest
Faculty of Electronics, Telecommunications and Information Technology
Master Program: _____

DISSERTATION THESIS

of student _____ _ _____ group _____

1. Thesis title: _____

2. The student's original contributions (not including the documentation part) and design specifications: *describe in 10..15 rows:*
- design of a system with the functionality... followed by construction and evaluation / design and implementation of a software program with the requirements... / formulation of an analytical or computational model of a system or process, simulation of the model, and comparison with actual data / experimental study of physical phenomena, followed by comparison with simulation results and the drawing of conclusions etc...

This annex will not be printed directly by the student, instead it must be filled online on the ETTI website (according to the calendar). The online form will generate the printable annex, which must be printed and submitted to be signed.

3. Pre-existent materials and resources used for the project's development: *(electronic modules, development boards, network equipment such as routers etc, software libraries, frameworks, APIs, simulation programs, CAD software packages, known algorithms etc).*
_____
_____
_____
_____

4. The project is based on knowledge mainly from the following 3-4 courses:
_____

5. The Intellectual Property upon the project belongs to: *University of Science and Technology POLITEHNICA Bucharest, student OR company ...*

6. Thesis registration date: _____

Thesis advisor(s),   Student,
_____   signature:..............

signature: ....

_____ (Company) _____   Dean,

signature: ....   _____

Master program director,   signature: ....

_____

signature:..............

Validation Code: XXXXXXXXXXXX

University of Science and Technology POLITEHNICA Bucharest

Faculty of Electronics, Telecommunications and Information Technology

Thesis Title
(corresponds to Annex 1, with an optional sub-title)

Diploma Thesis

submitted in partial fulfillment of the requirements for the Degree of

Engineer in the domain *domain**,* study program *Study_Program****

Thesis Advisor(s)   Student

Title First_Name LAST_NAME   *First_Name LAST_NAME*

Year

University of Science and Technology POLITEHNICA Bucharest

Faculty of Electronics, Telecommunications and Information Technology

Thesis Title
(corresponds to Annex 2, with an optional sub-title)

Dissertation Thesis

submitted in partial fulfillment of the requirements for the Degree of

Master of Science in the domain *domain**,* study program

Study_Program***

Thesis Advisor(s)   Student

Title First_Name LAST_NAME   *First_Name LAST_NAME*

Year

Statement of Academic Honesty

I hereby declare that the thesis "*Thesis Title*", submitted to the Faculty of Electronics, Telecommunications and Information Technology in partial fulfillment of the requirements for the degree of Engineer/Master of Science in the domain *Domain***, study program *study_program****, is written by myself and was never before submitted to any other faculty or higher learning institution in Romania or any other country.

I declare that all information sources sources I used, including the ones I found on the Internet, are properly cited in the thesis as bibliographical references. Text fragments cited "as is" or translated from other languages are written between quotes and are referenced to the source. Reformulation using different words of a certain text is also properly referenced. I understand plagiarism constitutes an offence punishable by law.

I declare that all the results I present as coming from simulations or measurements I performed, together with the procedures used to obtain them, are real and indeed come from the respective simulations or measurements. I understand that data faking is an offence punishable according to the University regulations.

Bucharest, *date*

First_Name LAST_NAME

_____
(student's signature)

University of Science and Technology POLITEHNICA Bucharest
Faculty of Electronics, Telecommunications and Information Technology
Department: _____

Grading form for the activities related to the undergraduate thesis (semester 8)

Thesis Title:

_____

> This annex will not be printed, instead the scores will be filled online by the student's coordinator in the graduation application on the ETTI website (according to the calendar).
>
> The Annex is listed here for reference only (justification of the scores).

Student's Family Name, Father's Initial, Surname, group :

_____

Grade for the *„diploma thesis preparation activity"* –[0-100%]:   _____
(evaluates to what extent the student performed the documentation work and other precursor activities)

Grade for the *„diploma thesis practical activity"* [0-100%]:   _____
(evaluates to what extent the student performed and finalized the actual research and practical activities associated to the thesis)

Notice: A „Pass" score implies at least 50% grades for each criteria.

THESIS ADVISOR,

Title First_name LAST_NAME

(signature) _____

Date : _____

University of Science and Technology POLITEHNICA Bucharest
Faculty of Electronics, Telecommunications and Information Technology
Master Program*: _____

Grading form for the activities related to the graduate thesis (semester 4)

Thesis Title:
_____

Student's Family Name, Father's Initial, Surname, group :
_____

I. Grade for *Research and graduate thesis preparation* [0-80]: _____
(evaluates to what extent the student performed and finalized the actual documentation and research associated to the thesis)

II. Grade for *Practical Activities for the Graduation Thesis* [0 or 20] _____
(20 points if the student performed and finalized the practical activities specified in Annex 2, by checking either „1" or „2" below; if „3" is checked, this score will be 0)

☐ 1. Practical activities at a Company (*a written proof must be annexed*)

☐ 2. Practical activities in the Faculty, in the laboratory: _____

☐ 3. No practical activity

III. Total Score (sum of I and II) for *Practical Activities, research and preparation of Graduate Thesis* [0-100] ____

Notice: A „Pass" score must be at least 50.

THESIS ADVISOR,
Title First_name LAST_NAME

(*signature*) _____

Date : _____