



School: COMPUTER SCIENCE FOR BUSINESS MANAGEMENT

Program: Computer Science for Economics (bachelor)

Academic year: 2021-2022

GUIDELINES FOR THE DRAFTING AND THE PRESENTATION OF THE BACHELOR PROJECT

Academic year 2021 – 2022

I. ALEGEREA TEMEI PENTRU LUCRAREA DE LICENȚĂ

1. About the Bachelor Exam

Upon completion of undergraduate studies, the 3-year cycle, students take the bachelor's exam, which must demonstrate the **degree of acquisition and deepening of theoretical knowledge** that **define specialization** in economic informatics, but also the ability to use them to solve real-life problems within companies, the ability to design and develop a software product that meets real requirements, formulated by the graduate together with the scientific coordinator of the bachelor's thesis. The bachelor's exam is therefore the final act of undergraduate studies.

The **bachelor's exam** organized by the School of Computer Science for Business Management includes, according to the methodology approved by the **Senate of the Romanian-American University**, two distinct parts, namely:

- **Exam 1** – Assessment of basic and specialized knowledge (examination, usually, written);
- **Exam 2** – Presentation and defense of the bachelor's thesis prepared by the graduate (oral examination).

The bachelor's thesis is carried out by the graduate under the guidance of a teacher, for a topic similar to those in the list of indicative topics (see "*Indicative topic of bachelor's thesis*") and accepted by the scientific coordinator. It will be held in front of a licensing commission, consisting of 3 members and a secretary.

The bachelor's thesis is a written, large-scale work, carried out by the graduate with a precise purpose and on the basis of a pre-established and rigorous plan, according to a framework structure (see "*The framework content of the bachelor's thesis*"). It must contain a software product made for that topic, in a programming language / development infrastructure chosen by the graduate.

The **application** requesting the approval of the topic and the coordinator of the bachelor's thesis **will be approved by the chosen scientific coordinator and will be approved by the Dean of the School. The respective procedure is carried out in electronic format, at the dates and with the specific details sent by the faculty to the institutional e-mail addresses of the students, during the first 2 months of the current academic year.**

The bachelor's thesis should not be seen as a formal act necessary for the completion of university studies, but as a culmination of the entire training activity carried out by the graduate. The **bachelor's thesis has an applicative character, presents and solves from the point of view of the IT specialist, a real problem of economic evidence**, proposing solutions for design, making, development and implementation of a software product. The program must be carried out according to the methodologies studied, being evaluated from the point of view of economic efficiency, of the possibilities of current exploitation and further development. All these give the measure of the quality and the level of theoretical and applied specialized training of the student, of his

professional probity. Starting from real problems, specific to the chosen field, and based on the scientific training acquired, the graduate analyzes the existing situation and requirements of the beneficiary, formulates problems, identifies opportunities, designs and implements techniques and tools for automatic data processing and verifies their veracity. Moreover, through his skills as an economist, the graduate estimates the investment costs related to the hardware and software platform he designs and proposes, calculates its economic efficiency as well as the subsequent maintenance / development costs. The purpose of the bachelor's thesis is to practically verify the acquired knowledge, discernment, practical skills of using computer tools, the inventiveness and creativity of the graduate, the work being a **realistic attestation** of the knowledge acquired and the performance of the graduate during university training.

2. Choosing the topic of the bachelor's thesis

Choosing the topic for the bachelor's thesis involves first choosing a company / institution, a field or sector of activity within it, as an object of study to be investigated for computerization, for automatic data processing on a hardware and / or software platform that will be proposed by the graduate, at the end of the research and design carried out by him.

A very important stage in the realization of the bachelor's thesis is the choice of topic, because it involves a certain knowledge of the chosen field and the concrete problems that may arise during research and study, the practical possibilities of using appropriate and well-mastered information technologies. Therefore, in order to lead to a correct solution and a successful completion of the bachelor's thesis, the **author's choice must be well motivated**, based on a minimum of information on the specifics of the field or issue addressed. The actual process of choosing the topic of the bachelor's thesis is specific to each person, according to the personality, goals, possibilities of documentation and skills of each.

Thus, one can choose a topic from the list of indicative topics (see the list "*Indicative topic of the bachelor's theses*"), after an exploratory summary documentation, or he can propose a topic for which the student shows a special interest or that he knows from his practice at a job; in both situations the **topic must be in accordance with the specialization of Economic Informatics**.

The significance of the "first step" for the work of drafting the license requires strict compliance with the following **rules**:

- a) the field chosen for research to have a **close connection with the graduate's specialization**;
- b) the delimitation, within the chosen field, of the segment of activity to which the graduate considers that he is **attracted** and which he can approach with the best results;
- c) the segment of activity for which the author opts and the problems chosen for solving from an IT point of view should target activities with **development perspectives**, in which the graduate will be able to



- integrate and work; the bachelor's thesis thus constitutes an opportunity for the professional completion of the graduate, meant to offer him an additional real-life experience;
- d) the graduate should be sure of the **existence of sources and practical possibilities** for documentation and information in the field and at the chosen company;
 - e) the choice of the topic of the bachelor's thesis may be made personally by the author, at the suggestion of the coordinating teacher or at the express request of certain economic agents or institutions.

The following criteria are recommended to facilitate the choice of the topic of the bachelor's thesis:

- special inclinations for a certain issue studied in the years of study, research skills, analysis, modeling skills, imagination, etc.
- easily accessible documentation, to which personal, specific or even conjunctural criteria can be added.

OBS: The process of choosing by the student of the topic of the bachelor thesis is indicated to be done starting with the end of the second year of studies (by exploring the various options, checking the list of indicative topics, contacting possible coordinating teachers, etc.). At the beginning of the third year of studies, the formal process takes place, through which the chosen topics and the coordinators with which each student will work are finalized. Students who do not submit the options by the deadlines set by the school will be assigned ex officio to coordinating teachers, within the number of vacancies for the coordination of undergraduate work. The procedure for choosing / allocating a topic and a coordinator takes place in the first 2 months of the final year.

3. Choosing the scientific coordinator of the bachelor's thesis

First of all, the scientific coordinator of the bachelor's thesis is chosen and then, together and in consensus with him, the topic that the student will develop is finalized.

The bachelor's theses can be coordinated only by teachers who have the teaching title of lecturer, associate professor, or university professor.

The assistant professor may direct undergraduate theses only under the coordination of a professor or associate professor. In the case of assistants with the right to guidance, the plan, follow-up of the student's work, final evaluation of the paper, preparation of the report and establishment of the grade will be done only after direct consultation of the coordinating teacher, who signs the report and official documents.

The coordinator can suggest that topic for which he provides maximum assistance and, knowingly, what are the most important and interesting issues to be addressed in the bachelor's thesis, so he can suggest a specific title to personalize the paper. Without establishing rigorous criteria for choosing the coordinator of the bachelor's thesis, we can appreciate that a good choice should consider the following aspects:



- the manner, degree and depth of the level of communication that the graduate has achieved during the years of study (or intuitively that he can achieve) with the coordinating teacher, so that he can freely express his personal opinions in the field addressed in the paper license.
- the field of the disciplines most liked or mastered to a greater extent during the university studies.
- previous experiences of collaboration with teachers in scientific circles.

OBS: Each teacher is assigned a specific number of undergraduate papers that he can coordinate.

4. Structure of the bachelor's thesis

The plan or structure represents concretely the “**content**” of the paper, the chapters and subchapters that should give content to the license paper and that should proceed logically. The plan of the bachelor's thesis is drawn up together with the coordinating professor, so that the graduate can present his research and design results as well as possible.

In general, regardless of the topic, the structure of a bachelor's thesis includes:

- an **introduction** of 1-2 pages, presenting the opportunity and importance of the topic of the bachelor's thesis, together with the motivation of the choice.
- a chapter in which the **entity (organization)** studied as a research base is presented (short history, object of activity, organizational structure, recorded results, information-decision system, directions of activity development, basic economic and financial analysis, etc.). Of particular importance in this chapter is the study of the information system, the modeling of data and processes, the critical analysis of the existing system and the establishment of directions for improving the existing information system.
- a chapter with **theoretical, methodological** content in which are presented definitions, notions, concepts, methodologies, regulations, points of view existing in the national and international literature, in connection with the information technologies used by the author. This chapter is mandatory and must cover all the basic theoretical elements of computer technologies that are used by the student for the development of the computer application.
- a chapter with **practical applicability** to the researched unit, which consists in designing the proposed application or computer system, describing all components (inputs, outputs, processing algorithms, coding, database, data validation and security, interface, etc.). Basically, this is the design solution proposed by the author. In this chapter, the establishment of the objectives of the computer application to be designed is of particular importance.
- a **final chapter** describing the software product made with all its functions, specifying the conditions and methods of implementation and current operation, estimating its economic efficiency. Also, here



can be added the author's conclusions and personal contribution to solving the problems raised by the research topic.

Each chapter will be structured in subchapters, paragraphs and subparagraphs, the title of which must be in accordance with their content and be mentioned in the table of contents.

The student will have to pay maximum attention to the chapters in which the study and analysis of the existing system is carried out and then the design of the new system, which **highlight his personal contribution, his own findings and observations, proposals and solutions.**

The pre-established plan for the work must highlight the theoretical and methodological training, the ability to interpret the results of the investigation, the ability to formulate proposals for improving the field and, last but not least, the ability to make a practical, concrete, field-specific application for the field of research approached in the paper.

The structure of the plan must ensure the homogeneity and coherence of the work, the logical sequence of chapters, ultimately leading to the achievement of the objective set by the topic chosen for the bachelor's thesis.

An **example of a framework content** for the realization of the bachelor's thesis in the specialization of Economic Informatics, is the following:

FRAMEWORK CONTENT OF THE BACHELOR THESIS

(This structure is NOT MANDATORY - it can be subject to the individual topic chosen by the student)

INTRODUCTION

- The objectives and usefulness of the proposed theme
- The current status of the theme in the scientific literature and highlighting the personal contribution in addressing the issue.

Chap. 1. THE STUDY AND ANALYSIS OF THE EXISTING SYSTEM

1.1. The brief presentation of the socio-economic unit

1.2. The activities of the economic unit (the general characteristics of the economic system of the unit)

1.3. The study of the management system

1.4. The study of the led system

1.5. The study of the information system

1.5.1. Identifying the information flows within the system



1.5.2. Designing the information flow diagram

1.5.3. Identifying the documents that are used within the system

1.5.4. Identifying the procedures that are used within the system

1.5.5. The analysis of the current system and the identification of its weaknesses (critical points)

1.5.6. Directions for improving the current system

Chap. 2. THE OVERALL DESIGN OF THE COMPUTER BASED INFORMATION SYSTEM (This chapter exists only when developing complex software applications or computer-based information systems)

2.1. Defining the objectives and opportunity of the system/software application

2.2. Defining the output reports

2.3. Defining the encoding system

2.4. Data modeling and process modeling (conceptual, logical and physical models)

2.5. The entity-association diagram

2.6. Defining the data collections

2.7. Choosing the processing technology (the hardware, software and communications platform)

2.8. Estimating the necessary resources and the development timeframe

Chap. 3. THE DETAILED DESIGN OF THE SOFTWARE APPLICATION **3.1.** Details regarding the software application

3.2. The logical and physical design of the inputs

3.2.1. The list of the input documents

3.2.2. The layout of the interface for data acquisition

3.3. The logical and physical design of the outputs

3.3.1. The output reports list

3.3.2. The layout of the output reports

3.4. The detailing of the codes' structure (code type, length, the significance of the code)

3.5. The logical and physical design of the database

3.6. Designing the user interface

3.7. The information flow diagram of the new system

3.8. Estimating the economic efficiency of the new system



Chap. 4. PRESENTING THE SOFTWARE APPLICATION, ITS IMPLEMENTATION AND EXPLOITATION

4.1. The system requirements of the software application

4.2. The installation and launching of the software application

4.3. The description of the application's functions

4.3.1. Presenting the main menu

4.3.2. The input data interface

4.3.3. The reports menu

4.3.4. The error handling messages

4.4. The operation of the software application

4.5. The efficiency and usefulness of the software application

Appendixes

- Appendix 1: The source code listing
- Appendix 2: The layout of the user interface
- Appendix 3: The list of the input test data

- Appendix 4: Output reports based on test data

5. Preparation of the schedule for the elaboration of the bachelor's thesis

After establishing the plan of the bachelor's paper - according to the chosen topic, a schedule will be elaborated specifying the deadlines for the accomplishment of the different component parts (chapters) of the paper. This development of the activities carried out by the graduate and the stages of their validation by the scientific coordinator, allows the rhythmic elaboration of the bachelor's thesis, the intervention of the coordinator in real time and the avoidance of stress in connection with the completion of the paper. These activities are recorded inside the "*Bachelor's thesis Progress Report*".

There are deadlines set according to the curriculum, thus:

- The work in its entirety, with the software product finalized, during the second semester, in the summer exam session, at the colloquium for the discipline *Elaboration of the bachelor thesis*. The student must have the evaluation of the bachelor's thesis by the scientific coordinator, expressed by the grade recorded on the "*Bachelor's thesis Progress Report*".

II. DOCUMENTATION FOR THE COMPLETION OF THE BACHELOR'S THESIS

1. Theoretical documentation

This type of documentation considers the consultation of the literature, of the legislation regarding the subject approached in the paper, for a good theoretical substantiation, in order to "guarantee" the feasibility of the study.

Theoretical documentation involves first identifying and tracing sources of documentation and then collecting, selecting and systematizing of information.

The scope of the theoretical documentation also includes the **study of the specialized bibliography**, i.e., of those materials and publications that deal directly, concretely with the researched problems. The specialized bibliography is represented by courses, specialized textbooks, monographs, surveys, analyzes, collections of studies, case studies, newsletters.

The documentation must be done in a global manner, capitalizing on as much information as possible on the topic, using any source at hand (bibliography indicated by the coordinator, specialized journals, Internet, analyzes performed in the field of specialized companies, etc.), with a **maximum age of 10 years. Within the bibliographic sources there must be at least 5 articles / materials in electronic format accessed through international databases to which the university provides access on a subscription basis. All bibliographic resources must be specifically mentioned in the text by direct link to the Bibliography section.**

The highlighting of documentary sources will be done centrally, at the end of the bachelor's thesis, in the subchapter "Bibliography" (before the section of annexes).

The way of working for the documentary study is specific to each one, emphasizing both the graduate's capacity for analysis and synthesis, as well as the ability to retain that information that are useful for solving the problem proposed by the topic of the bachelor's thesis.

2. Practical documentation (applicative)

Practical documentation aims to investigate the phenomena as they are presented in real life. In this phase the student comes in direct contact with the reality (entity) that he intends to research. It is one of the "strengths" in the development of the bachelor's thesis, as the quality and depth of practical documentation depend on the main content of the paper, the degree of substantiation of the conclusions, proposals and solutions issued.

The practical documentation is made mainly at the headquarters of the company chosen as the object of study and must include the technical aspects, management, information circuit, financial, legal side, including interpersonal relations, communication.

The **bachelor's thesis must demonstrate the graduate's ability and ability to develop concrete solutions** - in an operational field, based on the interpretation of collected data, the use of theoretical and methodological knowledge and practical work experience in a programming environment.

Documentation at a company, non-profit organization, bank, budgetary institution, notary or law firm, financial audit firm, state institution, etc., it is done differently, depending on the topic of the bachelor's thesis. The studied design methodologies, and their technical tools, make available to future technical graduates several investigation methods appropriate to the complexity of the real problems encountered in the economic environment.

The concrete (effective) presentation of the scientific apparatus can be done in at least two ways:

- by using footnotes (referring to the note in the text).
- by inserting within the text the serial number of the bibliographic source listed at the end of the paper.

It is recommended to use numbers for bibliographic references (e.g. [7]) and the symbol (x) for personal notes, keeping in mind, however, that the scientific apparatus of the bachelor's thesis should not be an end in itself, but only an **instrument that emphasizes the note of methodological accuracy**.

III. RECOMMENDATIONS REGARDING THE WRITING OF THE BACHELOR THESIS

1. General aspects

The final writing of the bachelor's thesis will be done with a word processing program (Microsoft Word or similar), respecting the following characteristics:

- The text will be written in **1.5 lines** for the entire paper (distance between lines).
- The page margins (**A4**) will be set as follows: **2.5 cm up, down, and right**. The **left edge will be 3 cm**, to allow later binding of the work.
- You can choose a font from: **Times New Roman** or **Calibri**, the font size being mandatory 12 (the most used is the Times New Roman font of 12).
- Punctuation marks (".", ";", ":", "?", "!") are not preceded by a space and are necessarily followed by a space.
- The text alignment will be at both edges of the page ("**justify**").
- For titles, subtitles of chapters and tables, footnotes, list of figures and bibliography other formats can be used.
- Abbreviations of words are not accepted; in the case of the use of acronyms, the first appearance in the text specifies both the term in the original language and the one in English.

2. Details regarding the writing style

- The style must be clear and concise.
- Assume from the beginning that you are writing the paper to send it to a scientific journal.
- A lot of formatting details can be learned by following the word processing used by publishers in courses, university treatises and specialized books.
- Avoid excessive use of the terms "I", "me", "mine". Avoid phrases like "From my point of view ...", "In my opinion ..." if you do not argue that opinion.
- Have friends or family read the paper before the coordinator reads it. If they do not understand, it means that, more than likely, the style of expression suffers, and the work needs to be revised.

3. References in the text

- If you use an author's words or ideas, you should quote that author. It is very important because of the moral issues as well as because the punishments for plagiarism are very severe.
- There are many ways to formalize a reference in the text. For example: "text ... (*last name, year*).", "*Last name (year)* note that ..." or "in the year ..., *last name*, said that ...".



- The first time a text reference is cited, write all the authors' last names. For example: "Radu, Miclea, Nemes, Albu, Modovan & Dxsmokoxi (1993) claim that ...". If the article has three or more authors, use the abbreviation *et al.* When the reference is cited a second or third time, only the first author and the year of publication of the article will be entered.
- Multiple quotes in parentheses are arranged alphabetically and separated by ";" followed by a space, as in the following example: "text ... (Alexandrescu, 1970; Miclea, 1968; Zamfirescu, 1980)".
- For direct quotes you must specify the page number. For example: Popescu (1970) notes that "... (p.12)".
- If you have written more than three or four quotes in 10 pages in the text, you should know that you have exceeded the allowed upper limit.
- Place the quote that has more than 40 words as a separate block of text, five spaces away from the left edge. In this case, omit the quotation marks and include the page number in parentheses after the last point. If the quote extends over several paragraphs, then from the second paragraph use the 5-space paragraph.

Exemple de redactare referințe:

Ionescu, B.; Popescu, A. & Dumitrescu, J. (2017). Title, Publishing House, ISBN, City

Ionescu, B.; Popescu, A. & Dumitrescu, J. (2015). Title, Proceedings of xxx xxx, pag. 14-17, ISBN, conference venue, timeframe, Editor, City

Kusiak, A. (2016). Paper Title. Journal Title, Vol., No., (month and year of volume), page numbers (first-last), ISSN

Ionescu, B.; Popescu, A. & Dumitrescu, J. (2020). Paper Title, in: Volume Title, page numbers (first-last), Editor, ISBN, City

Ionescu, B.; Popescu, A. & Dumitrescu, J. (2021). Paper Title, available la: <http://www.exactlocation.ex>, last accessed at: YYYY-MM-DD

4. Title page

- It is a separate unnumbered page.
- At the top of the page will be written in capital letters ROMANIAN-AMERICAN UNIVERSITY and, on the next line, the SCHOOL OF COMPUTER SCIENCE FOR BUSINESS MANAGEMENT.
- The title of the paper must be placed in the center of the first page and printed in uppercase; it should contain about 10-12 words.
- The title must provide information about the content of the paper. It should be short, the most common being that concisely states dependent and independent variables.
- The name and didactic degree of the coordinator must be written under the title of the paper, on the left side of the page.



- The author's name must be written under the coordinator's name, on the right side of the page.
- At the bottom of the page is written the year of writing the paper and the city (e.g., BUCHAREST 22XX)
- The same information must be printed on the cover when tying. The title of the paper does not appear on the cover, it is replaced by the phrase BACHELOR'S THESIS.

5. Summary

- It is written on a separate page, numbered with page number 2. It specifies the names of the chapters, subchapters, of all the components of the license paper and their corresponding page.
- Chapters and subchapters are identified distinctly and unitarily (e.g., CHAPTER 1. *Title*; 1.1 *Subchapter 1 title*; 1.2. *Subchapter 2 title*).

6. The content of the paper

- Starts on page 3 or immediately after the end of the table of contents.
- The page starts by printing the title of the chapter, centered, then continues with the title of the subchapter (on the next line, 1.5 lines), using normal and aligned 5-character paragraphs.
- At the beginning, inform the reader about the researched problem, explain why the approached topic is important and opportune, how the analysis performed stands out (Introduction).
- The work continues with the other chapters, according to the established content.
- In cases where the reader expects significant results and these cannot be highlighted, then you need to discuss this.
- Do not present raw data unless, for some reason, you are analyzing a single individualized topic. Otherwise, they will be listed in the ANNEXES.

7. Tables

- The large tables, containing the raw information, will be placed at the end of the paper, as annexes; the others can be inserted in the text of the paper.
- Each table should appear, as far as possible, on a separate page and will be numbered consecutively.
- The numbering and naming of each table are completed at the top of the table and aligned to the right.
- Choose relatively short but consistent titles. There is no full stop after the table number or name.
- When using columns with decimal numbers, align the decimal point.
- If you make references from the text, you can indicate this as "the data in Table No. 3 ..." and not "The table above, on page 2, ...".

8. Figures



- Each figure should be positioned as far as possible on a separate page, unless its size does not require it, in which case several figures may be grouped on one page, together with the accompanying explanations.
- The word "Figure" is a technical term by which we mean a set of iconographic materials used by the author, as follows: graphics, maps, drawings, and illustrations / photographs.
- Figures can be reproduced by specific means in black and white or color.
- The resolution and size of the representation must be sufficient to be able to convey the message contained.
- Center each figure on the page.
- Type the number of the chart and then its name. There is no full stop after the number or name of the graphic.
- If you make references from the text, you can indicate this as "data in Chart 3 ..." and not "Chart above, on page 2, ...".

9. Annexes

- They contain raw data and relevant tools that cannot be presented inside the paper, but that determine and support its conclusions.

10. Bibliography

- The bibliography is typed at the end of the paper, on separate pages.
- All references and footnotes must have a correspondent in the bibliography.
- For each author give the last name followed by a comma, then the initials and first name followed by periods. Example: "Johnson, I. Daniel".
- Separate authors with commas, and the last author is entered after the & sign if the text is written in English.
- After entering the author's name, enter the title of the work, the publisher, the year of publication, the town, and the country, all separated with commas.
- To quote a magazine, specify: the title of the magazine, the volume number, the number of the magazine. Write the title in capital letters, in English, or in the original language.
- The bibliography is usually prepared in alphabetical order of the FAMILY NAME of the authors (e.g., BARBU, Ion; MARIN, Vasile; POPESCU, Andrei, etc.).
- Bibliographic sources with collective author as well as web addresses are placed at the end of the list.



IV. RECOMANDĂRI PRIVIND SUSȚINEREA LUCRĂRII DE LICENȚĂ

The presentation of the bachelor's thesis consists in presenting it to the bachelor's examination commission to which the graduate was assigned.

In the presentation of the paper, the author demonstrates to the members of the commission his skills and qualities as a researcher, his ability to support his ideas, opinions, and proposals.

The scientific coordinator may also participate in the defense of the bachelor's thesis, if he / she is not a member of the examination board.

The final result of the commission's defense, expressed by the commission, depends on several factors, namely:

- the content of the written paper, validated by the coordinator and appreciated by the grade placed in the report.
- the quality of the graduate's presentation, which demonstrates the extent to which the author knows and masters the entire content of the paper and can support the solution proposed by the software produced.

As it is desirable for the bachelor's thesis to be presented freely to the committee, the graduate must make an inventory of the basic ideas, logically and chronologically ordered, which will allow him to present the essence of the bachelor's thesis.

Although the presentation part differs depending on the type of paper, the personality of the graduate, some conjectural conditions, it is recommended that the graduate appear before the committee, specify the title and objectives of the bachelor's thesis, its structure, briefly listing the specific objectives inside each chapter (with a very short comment).

It is possible that the members of the examination board request the waiver of details, being rather interested in the nature of the designed solutions, the software produced, the personal contribution of the graduate, the evaluation of the economic effort, the implementation of the proposed solutions and the estimation of economic effects.

For the presentation part, it is recommended to present in electronic format the presented problems, the objectives of the paper and the characteristics of the proposed computerization solution, in about 8-10 slides.

Then follows the presentation of the software application produced by the graduate, the practical demonstration of its operation with test data, the visualization of the execution results.



ROMANIAN-AMERICAN UNIVERSITY

School of Computer Science for Business Management

BACHELOR'S THESIS

Scientific Coordinator(s):

Academic title, last name, first name

Graduate: Last name, the
initial of the father's first
name, first name

Bucharest

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ROMANIAN-AMERICAN UNIVERSITY

School of Computer Science for Business Management

The Title of the BACHELOR'S THESIS

Scientific Coordinator(s):

Academic title, last name, first name

Graduate: Last name, the
initial of the father's first
name, first name

Bucharest

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