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**«POSTGRADUATE EDUCATION»
DP KazNRTU 711**

Almaty, 2022

INTRODUCTION

1 DEVELOPED by the Postgraduate Education Department of the Science Department of NJSC “Kazakh National Research Technical University named after K.I. Satbayev”

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CONTENT

1	Abbreviations, terms and symbols	4
2	The educational process of a master's student	4
	2.1 Practice of a master's student	5
	2.2 Publications of a master's student	5
	2.3 Internship of a master's student	5
3	The educational process of a PhD student	6
	3.1 Pedagogical practice of a PhD student	8
	3.2 Scientific-research practice of a PhD student	9
	3.3 Publications of a PhD student in scientific journals included in the list of scientific journals	9
	3.4 Scientific-research internship of a PhD student	11
	Form List	12
	Appendices (Flowchart)	13
	Amendment Record Sheet	22

1 Abbreviations, terms and symbols

Abbreviations	Full title
GPA	Grade Point Average
ISP	Individual study plan
KazNRTU, the University	NJSC “Kazakh National Research Technical University named after K.I. Satbayev”
MES RK	Ministry of Education and Science of the Republic of Kazakhstan
Vice-Rector SIC	Vice-Rector for Science and International Cooperation
MIS	Master’s Independent Study
MIST	Master’s Independent Study under the guidance of a teacher
SD	Science Department
PED	Postgraduate Education Department
RO	Registrar’s Office
C	Curriculum
BD	Basic disciplines
MD	Major disciplines
SRWD	Scientific-research work of a PhD student
ERWD	Experimental research work of a PhD student
CCSES MES RK	Committee for Control in the Sphere of Education and Science of the Ministry of Education and Science of the Republic of Kazakhstan

2 The educational process of a master’s student

The University trains specialists under the program of postgraduate education (master’s degree) on credit technology of education, the main task of which is to develop the students’ abilities of practical use, acquired in the process of learning knowledge, skills and abilities in professional activities.

The training of staff in the master’s studies is carried out on the basis of educational programs of higher education in two areas:

1) scientific and pedagogical area with a period of study of at least two years;

2) profile area with a period of study of at least one year.

The educational program of the master’s studies contains (Appendix 1 - the educational process of a master’s student):

- theoretical training, including the study of cycles of core and major disciplines;

- practical training of master students: various types of practices, scientific or professional internships;

- scientific-research work, including the implementation of a master’s thesis, for a scientific and pedagogical master’s studies, or experimental research work, including the implementation of a master’s project, for a profile master’s studies;

- final attestation.

2.1 Practice of a master's student

Postgraduate practice is carried out in accordance with the approved academic calendar and the individual study plan of the master's student.

The educational program of the scientific and pedagogical master's studies includes two types of practices:

- Pedagogical practice is carried out in order to form practical skills and teaching methods. At the same time, master's students are involved in conducting undergraduate studies at the discretion of the university (Appendix 2);

- research practice is carried out in order to familiarize with the latest theoretical, methodological and technological achievements of national and foreign science, with modern methods of scientific research, processing and interpretation of experimental data (Appendix 3).

2.2 Publications of a master's student

The main results of the master's project/dissertations must be presented in at least one publication (Appendix 4) and/or one speech/presentation at a scientific and practical conference.

All publications indicate the affiliation of the University - NJSC "KazNRTU named after K.I.Satbayev". The list of publications is approved by the academic secretary of the university.

The final result of the research or experimental research work of a master student is a master's project / dissertation.

2.3 Internship of a master's student

Within the framework of research work (experimental research work), the individual study plan of the master's student for familiarization with innovative technologies and new types of production provides for a mandatory scientific internship in scientific organizations and / or organizations of the relevant industries or fields of activity.

Scientific-research internship is carried out in partner universities, scientific organizations and / or organizations of relevant industries or areas of activity under the Agreement (Memorandum) on cooperation.

The activities of the organization in which it is planned to undergo a scientific-research internship must correspond to the scientific direction of the specialty and the subject of the master's project / dissertation.

The organization in which it is planned to undergo a scientific-research internship for master's students is determined by the department. For passing the scientific internship, the department forms groups from among the master's students in the EP.

The cost of the internship is reimbursed at the expense of the university. In case of overspending of planned expenses, the amount is repaid at the expense of the students' own funds.

To be sent for a scientific-research internship (Appendix 5), a master student must submit documents to an authorized structural unit no later than 4 weeks –

Kazakhstan and neighboring countries, 6 weeks - non-CIS countries - before the expected date of the business trip according to the following list:

- a personal application (F KazNRTU 711-02) addressed to the supervising Vice-rector with visas of the supervisor, head of the department, director of the institution;
- representation of the director of the institution for an internship (F KazNRTU 711-03) in the name of the supervising vice-rector;
- a copy of the letter of invitation for an internship from a university, scientific organization and / or organization in the specialty profile. The program of scientific internship is attached to the letter of invitation;
- a plan for passing a scientific internship (F KazNRTU 711-01) of a student, certified by a supervisor, head of department and director of the institution;
- cost estimate (formed by the planning department of the Finance and Accounting Department).

The results of research or scientific-experimental research work at the end of each period of their passage are drawn up by the master's student in the form of a report.

At the end of the scientific internship, the master's student must:

- within three working days from the date of arrival, submit a report to the Finance and Accounting Department with supporting documents attached;
- within a week from the date of arrival, submit to the relevant department a detailed report on the results of the internship in accordance with the approved internship plan, certified by the supervisor, head of the department and director of the institution.

The report is accompanied by:

- a copy of the certificate (a document confirming the development of the scientific internship program);
- an extract from the minutes of the meeting of the department on the results of the scientific internship of the master's student.

In case of failure to pass the research internship, the master's student is not allowed to the final certification.

3 The educational process of a PhD student

The objectives of the educational programs of PhD studies (Appendix 6 - the educational process of a PhD student) or PhD studies in the profile are:

- creation on the basis of the integration of education and science of an effective system for training scientific, scientific and pedagogical staff of a new formation, capable of solving issues of improving society, the economy, production, science and the development of new technologies;

- harmonization of national technologies for the training of highly qualified scientific and pedagogical staff with world standards, as well as advancing the solution of issues of their scientific, methodological, legal, financial, economic, staff and material-technical support;

- implementation of the educational process in accordance with the principles of international practice in the preparation of scientific and highest qualification of the competitive pedagogical staff in the modern labor market. To this end, the student takes a course of theoretical training and carries out an independent original scientific research, characterized by significant relevance and practical significance. The results of the research are formalized in the form of a doctoral dissertation, the defense of which takes place in the prescribed manner.

The structure of the educational program of PhD studies includes two components: educational and scientific, which determine the content of education. When planning the volume of academic work, it is assumed that one academic credit is equal to 30 academic hours for all its types.

The educational program of PhD studies contains:

1) theoretical training, including the study of a cycle of basic and major disciplines;

2) practical training of PhD students: various types of professional practices, scientific internships;

3) research (experimental research) work, including the completion of a doctoral dissertation;

4) intermediate and final attestations.

Theoretical training consists of a cycle of basic disciplines and a cycle of major disciplines.

- the cycle of basic disciplines (BD) includes the disciplines of the mandatory component and the optional component.

- the cycle of major disciplines (MD) consists only of the disciplines of the component of choice.

The scientific component of the educational program of PhD studies is formed from the scientific-research work of a PhD student (hereinafter referred to as SRWD) or experimental research work of a PhD student (hereinafter referred to as ERWD) of a PhD student, scientific publications, writing and defending a doctoral dissertation.

The volume of research (experimental research) work of a PhD student is 123 academic credits in the total volume of the educational program of PhD studies.

The main criterion for the completion of the educational process for the preparation of Doctor of Philosophy (PhD) (doctor of the profile) is the development by a PhD student of at least 180 academic credits, including all types of educational and scientific activities.

In cases of early mastering of the educational program of PhD studies and successful defense of the thesis, the PhD student is awarded the degree of Doctor of Philosophy (PhD) or Doctor of the profile, regardless of the period of study.

A PhD student who has mastered the full course of theoretical study of the PhD educational program, but has not completed scientific-research work of a PhD student (ERWD), is given the opportunity to re-master the academic credits of scientific-research work of a PhD student (ERWD) and defend a dissertation in subsequent years on a paid basis.

A PhD student who has mastered the full course of theoretical training of the doctoral educational program, who has completed scientific-research work of a PhD student (ERWD), but has not defended a doctoral dissertation, is awarded learning results and academic credits and is given the opportunity to defend a dissertation within one year after graduation on a free basis, and in subsequent years on a paid basis in the amount of at least 4 academic credits.

At the same time, after 3 years' graduation, a PhD student is allowed to defend only after the re-approval of the scientific justification of the dissertation research (research proposal).

A person who has mastered the educational program of PhD studies and defended a doctoral dissertation, with a positive decision of the dissertation council of KazNRTU, is awarded the degree of Doctor of Philosophy (PhD) and is issued a diploma of its own sample as a university with a special status.

3.1 Pedagogical practice of a PhD student

A PhD student who has completed a profile PhD program can engage in scientific and pedagogical activities only if he/she masters a cycle of disciplines of a pedagogical profile and undergoes pedagogical practice.

During the period of teaching practice, PhD students, if necessary, are involved in conducting classes in undergraduate and postgraduate programs (bachelor's and master's programs). The duration of teaching practice for 1 credit is 1 week.

During the period of pedagogical practice, the PhD student keeps a Practice Diary (F KazNRTU 709-06. Practice Diary.doc), in which he/she makes notes about the work performed in practice; indicates the skills acquired during the practice, the conclusion on the results of the practice and his/her proposals for its improvement (Appendix 7). The head of the practice, as well as the head of the relevant department, enter their comments and recommendations into the Diary.

Upon completion of the teaching practice, the PhD student submits a detailed report on the internship at the relevant department. In the report, the PhD candidate fully describes his/her work during the internship. The PhD student reports to a commission formed from members of the relevant department. The grade for the report on teaching practice is set in the sheet (F KazNRTU 706-32. Practice Report Protection Sheet.doc).

3.2 Scientific-research practice of a PhD student

In order to form practical skills of scientific, professional activity in a particular branch of science, a PhD student undergoes an internship, which is implemented in accordance with an individual plan, within the time frame determined by the curriculum. The practice is carried out in order to form practical skills of scientific, scientific-pedagogical and professional activities.

Requirements for scientific-research work (Appendix 8) of a PhD student should include:

- 1) correspond to the main problems of the research field (science) on which the doctoral dissertation is defended;
- 2) be relevant, contain scientific novelty and practical significance;
- 3) be based on modern theoretical, methodological and technological achievements of science and practice;
- 4) be based on modern methods of processing and interpreting data using computer technology;
- 5) be carried out using modern methods of scientific research;
- 6) contain research (methodological, practical) sections on the main protected provisions.

Every year, at the end of the academic year, a PhD student undergoes an academic attestation for the implementation of an individual work plan.

The results of research or experimental research work at the end of each period of their passage are drawn up by the PhD candidate in the form of a short report. The final result of the scientific-research or experimental research work of a PhD student is a doctoral dissertation.

3.3 Publications of a PhD in scientific journals included in the list of scientific journals

The dissertation is submitted in one of the following forms:

- 1) dissertation work;
- 2) a series of at least two articles and one review published in publications included in the first and / or second quartile according to Clarivate Analytics Journal Citation Reports of Clarivate Analytics. In one of the articles, the PhD student is the first author or first correspondent.

The main scientific results of the dissertation for the degree of Doctor of Philosophy (PhD), doctor of profile is published before the defense of the dissertation in scientific publications included in the List of scientific publications (Appendix 9) recommended for the publication of the main results of scientific activity, approved by the authorized body.

Articles in international peer-reviewed scientific journals are taken into account depending on the direction of preparation, namely:

- 1) in the areas of training 8D05 Natural sciences, mathematics and statistics, 8D06 Information and communication technologies, 8D07 Engineering, manufacturing and construction industries, 8D11 Services - in publications included in a certain quartile according to Journal Citation Reports (hereinafter –

JCR of Clarivate Analytics, or in publications that have a Cite Score percentile indicator in the Scopus database;

If there is one article in an international peer-reviewed scientific journal that has an impact factor according to JCR data (or indexed in the Web of Science Core Collection database (sections Arts and Humanities Citation Index, Science Citation Index Expanded), Social Sciences Citation Index or Cite Score percentile indicator of at least 25 (twenty-five) in the Scopus database, the number of articles in journals from the List of publications of CCSES MES RK amounts to 3.

If there is one article in a journal that has an impact factor according to JCR or a percentile index according to Cite Score) of at least 25 (twenty-five) in the Scopus database (Appendix 10) and one article in a journal that is included in the first three quartiles of the JCR database or has a Cite Score percentile indicator in the Scopus database of at least 50, publish articles in scientific journals included in the List of publications CCSES MES RK, is not required.

If there is one scientific article in a journal included in the first quartile of the JCR database, no other publications are required.

Articles in international peer-reviewed scientific journals correspond to the thematic focus of the journal, stated in the specified bases, and are published in current issues. At the same time, at the time of publication of the article or thesis defense, the journal has a Cite Score percentile in the Scopus database or an impact factor (or indexed) in the Web of Science Core Collection database at least in one of the scientific areas corresponding to the content of the dissertation.

If there are scientific articles in excess of the required number in international peer-reviewed scientific journals, they are counted as articles in scientific publications included in the List of Publications.

Foreign patents included in the Clarivate Analytics Web of Science database are counted as publications in international peer-reviewed scientific journals.

When defending dissertations containing state secrets or information for official use, the main results of the dissertation are published in at least 7 (seven) publications on the topic of the dissertation, including at least 4 (four) articles in scientific publications, included in the List of publications.

Patents received by PhD students are considered as publications in scientific publications included in the List recommended for the publication of the main results of scientific activity, approved by the authorized body of the Republic of Kazakhstan.

All publications must indicate the affiliation of the University - KazNRTU named after K.I. Satbayev/Satbayev University. The list of publications is approved by the Vice-Rector for Science and International Cooperation.

3.4 Scientific-research internship of a PhD student

Within the framework of scientific-research work of a PhD student (ERWD), an individual work plan for a PhD student to get acquainted with innovative technologies and new types of production provides for a mandatory scientific internship in scientific organizations and (or) organizations of relevant industries or fields of activity, including abroad (Appendix 10).

The term of a foreign scientific-research internship for a PhD student is from 10 to 90 days.

The costs of the internship are reimbursed:

- students on a state educational grant, at the expense of the state order (if the planned expenses are exceeded, the remaining amount is repaid at the expense of the PhD candidate's own funds);
- students in a paid department, at the expense of the PhD students' personal funds.

The cost of the internship is allocated in accordance with the calculation of the cost of PhD studies.

To be sent to a foreign scientific-research internship, a PhD student must submit documents to an authorized structural unit no later than 4 weeks – CIS countries, 6 weeks – non-CIS countries - before the expected date of the business trip according to the following list:

- application addressed to the Vice-Rector for Science and International Cooperation (F KazNRTU 711-07);
- representation of the Director of the Institution for a scientific internship in the name of the Vice-Rector for Science and International Cooperation (F KazNRTU 711-08), with visas of the scientific supervisor, head of the department, director of the institution;
- a copy of the letter of invitation for an internship from a university, scientific organization and / or organization in the specialty profile. The program of scientific internship is attached to the letter of invitation;
- a plan for passing a scientific internship (F KazNRTU 711-06) of a student (detailed), certified by a supervisor, head of the department and director of the institution;
- cost estimates (formed by the planning department of the Department of Finance and Accounting);

At the end of the scientific internship, the PhD candidate must:

- within 7 (seven) working days from the date of arrival, submit a report to the Department of Finance and Accounting with documents confirming expenses;
- within a week from the date of arrival, submit to the relevant department a detailed report on the results of the internship in accordance with the approved internship program, certified by the supervisor, head of the department and director of the institution.

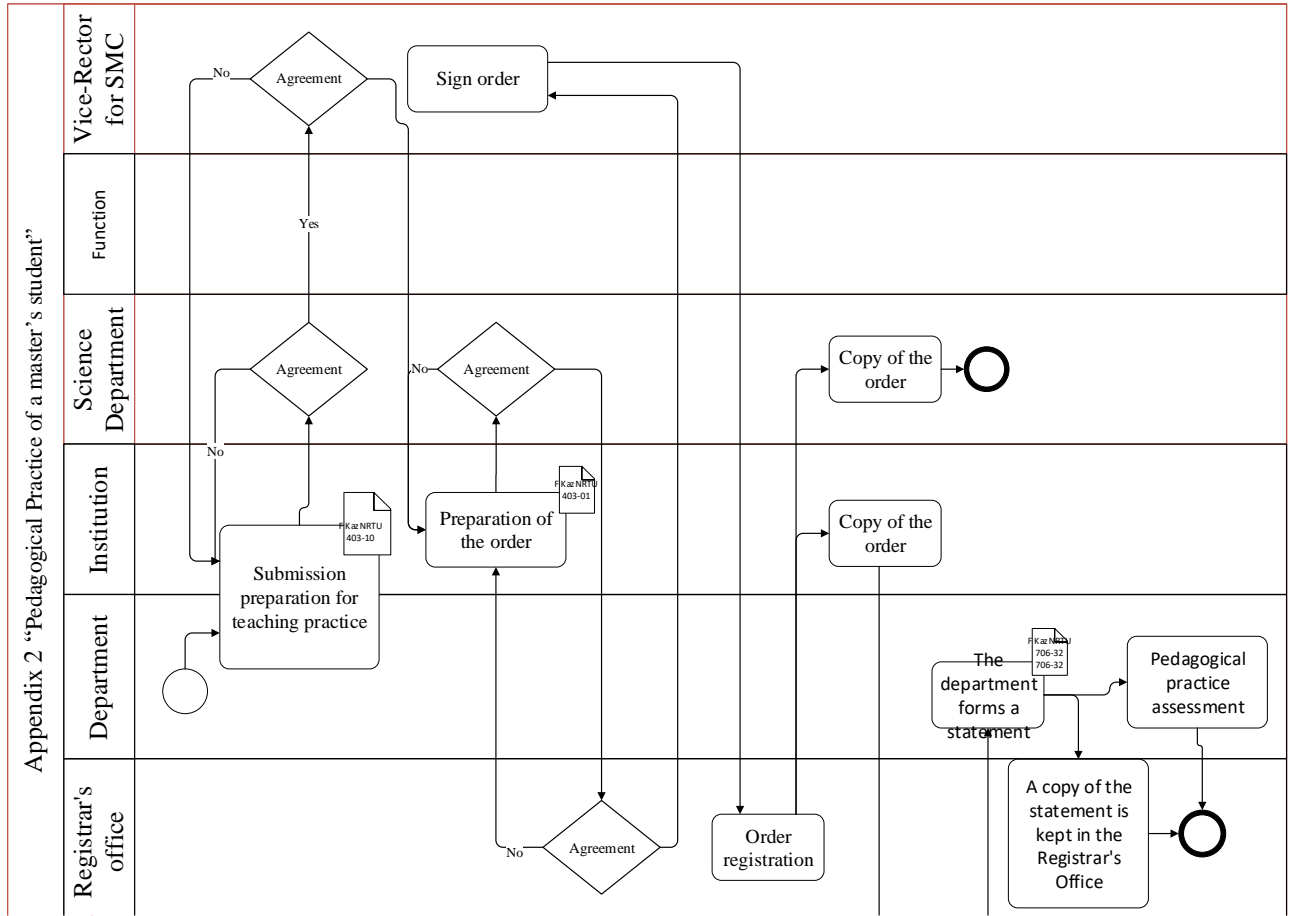
The report is accompanied by:

- a copy of the certificate (a document confirming the development of the scientific internship program);
- an extract from the minutes of the meeting of the department on the results of the PhD student's scientific internship.

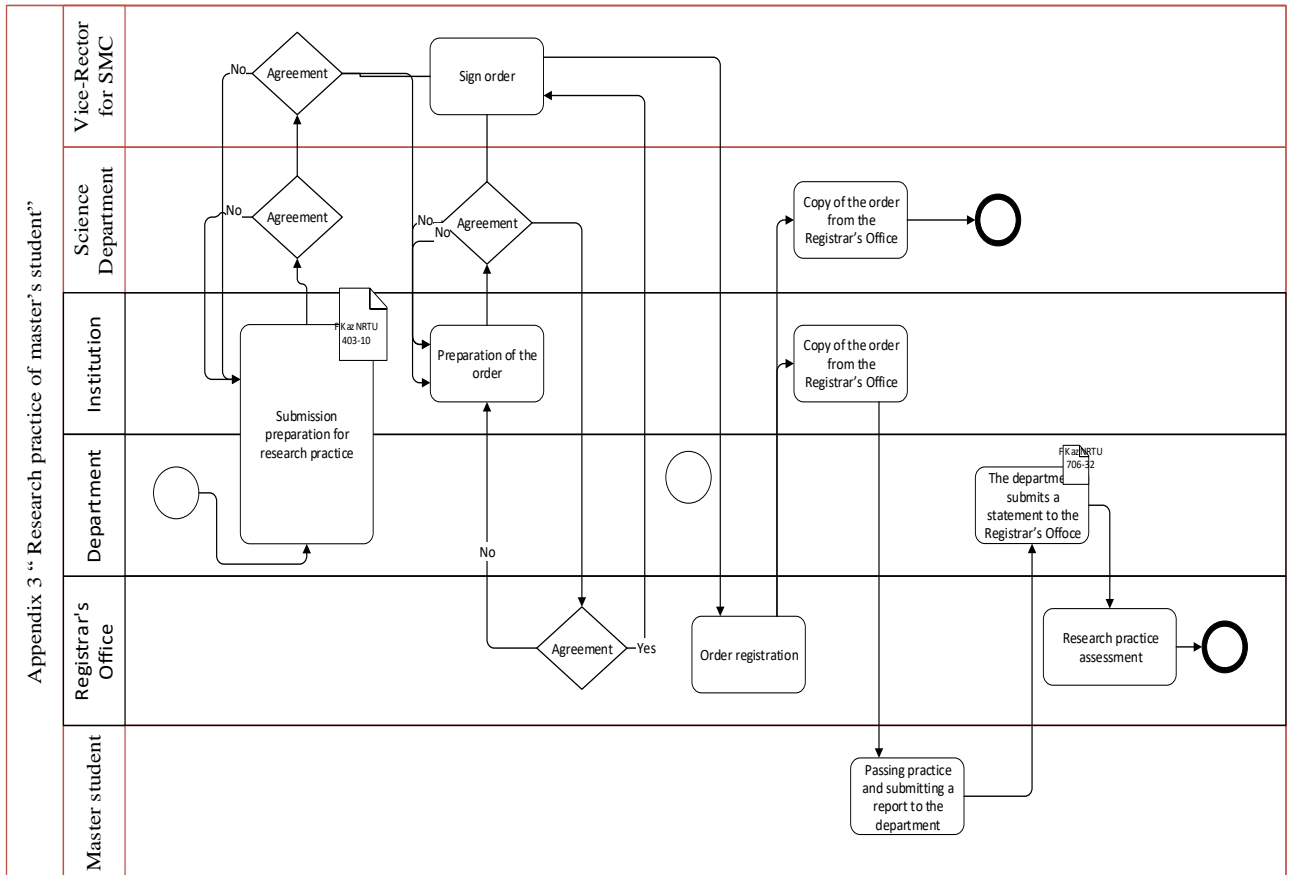
Forms List

№	Form name	Document code	Where is kept
1	Plan for the scientific internship of a master's student	FKazNRTU 711-01	at the Registrar's Office
2	Internship application of a master's student	FKazNRTU 711-02	at the Registrar's Office
3	Internship submission of a master's student	FKazNRTU 711-03	at the Registrar's Office
4	Plan for the scientific internship of a PhD student	FKazNRTU 711-06	at the Registrar's Office
5	Scientific internship application of a PhD student	FKazNRTU 711-07	at the Registrar's Office
6	Scientific internship submission of a PhD student	FKazNRTU 711-08	at the Registrar's Office

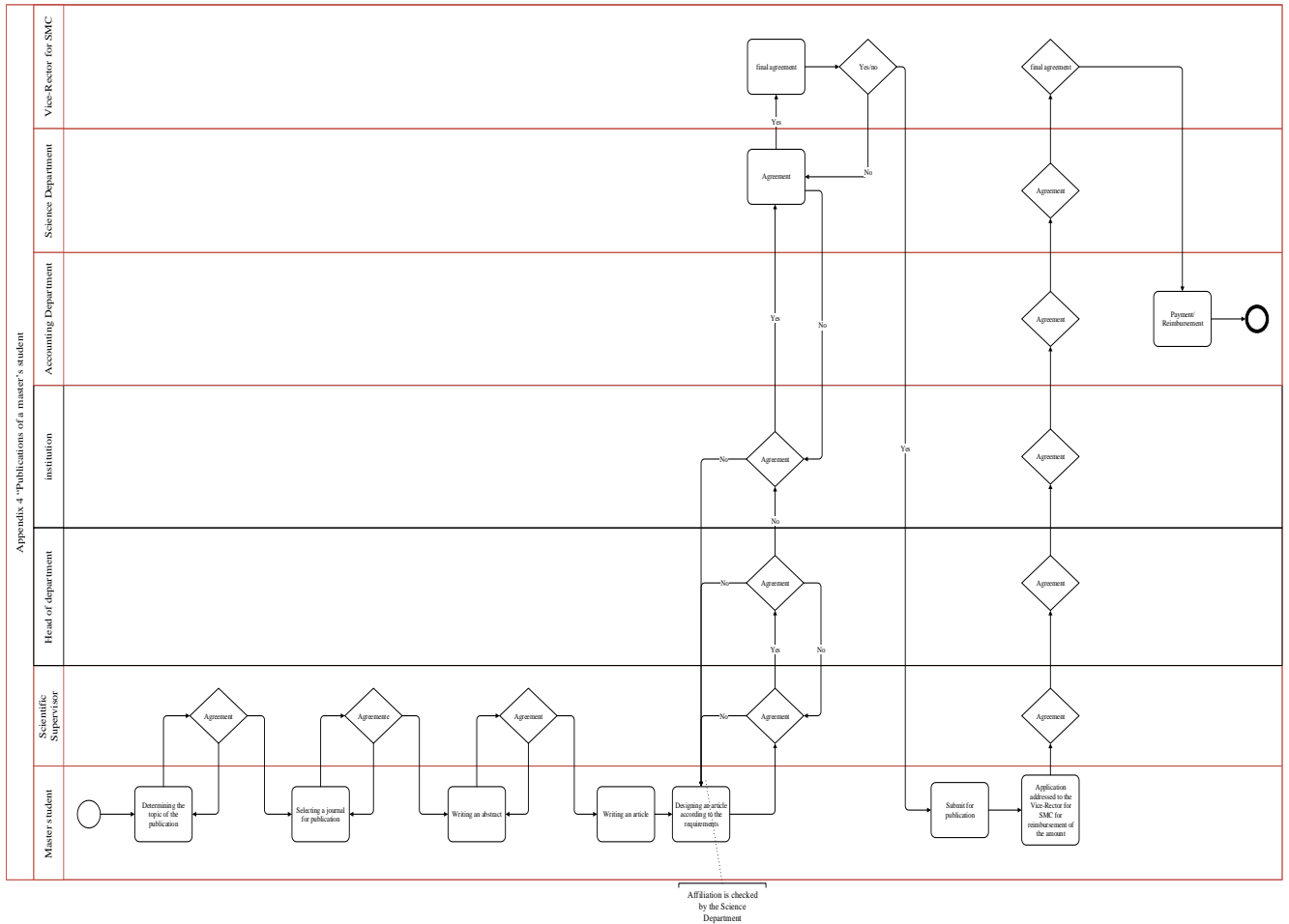
Pedagogical Practice of a master's student



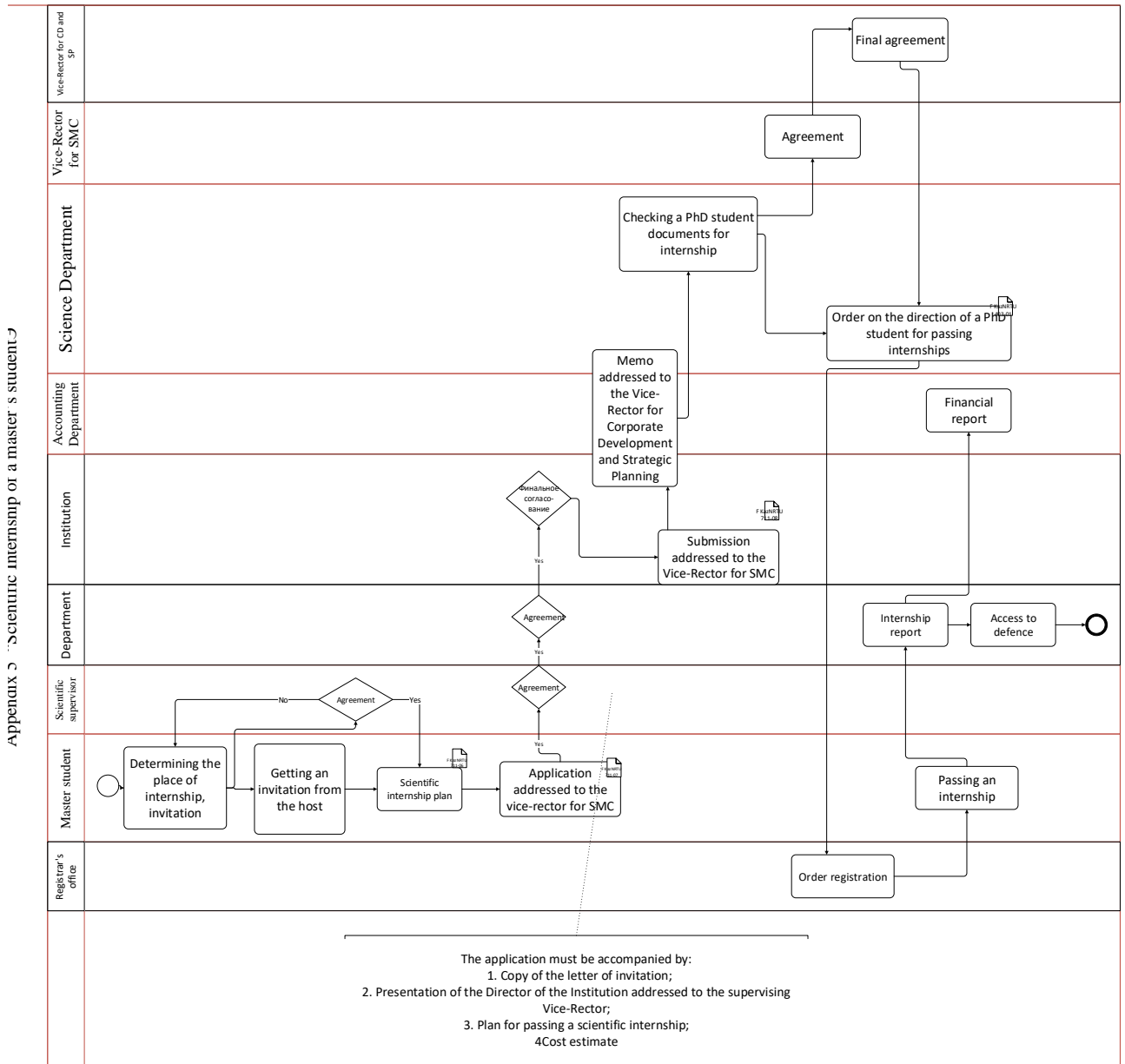
Research Practice of a master's student



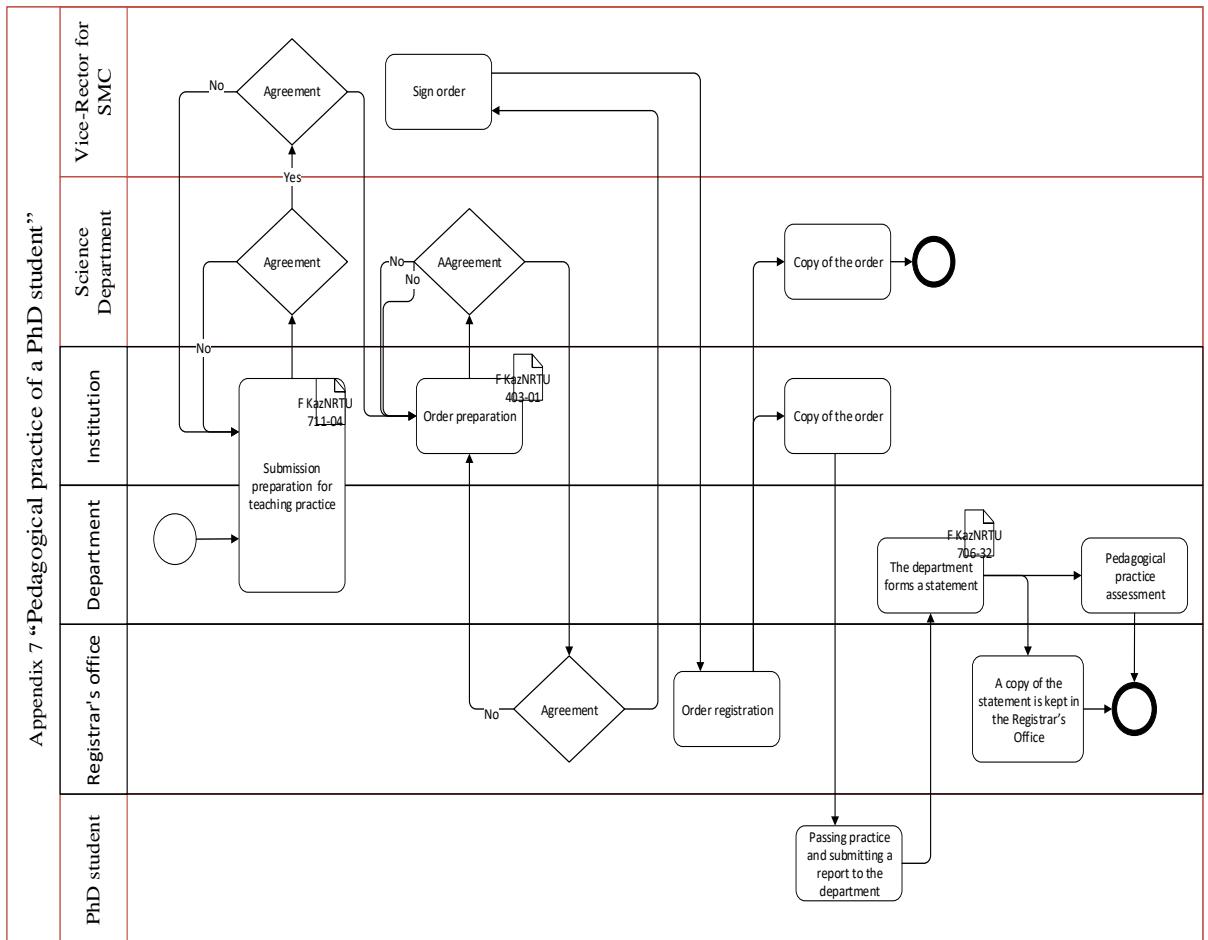
Publications of a master's student



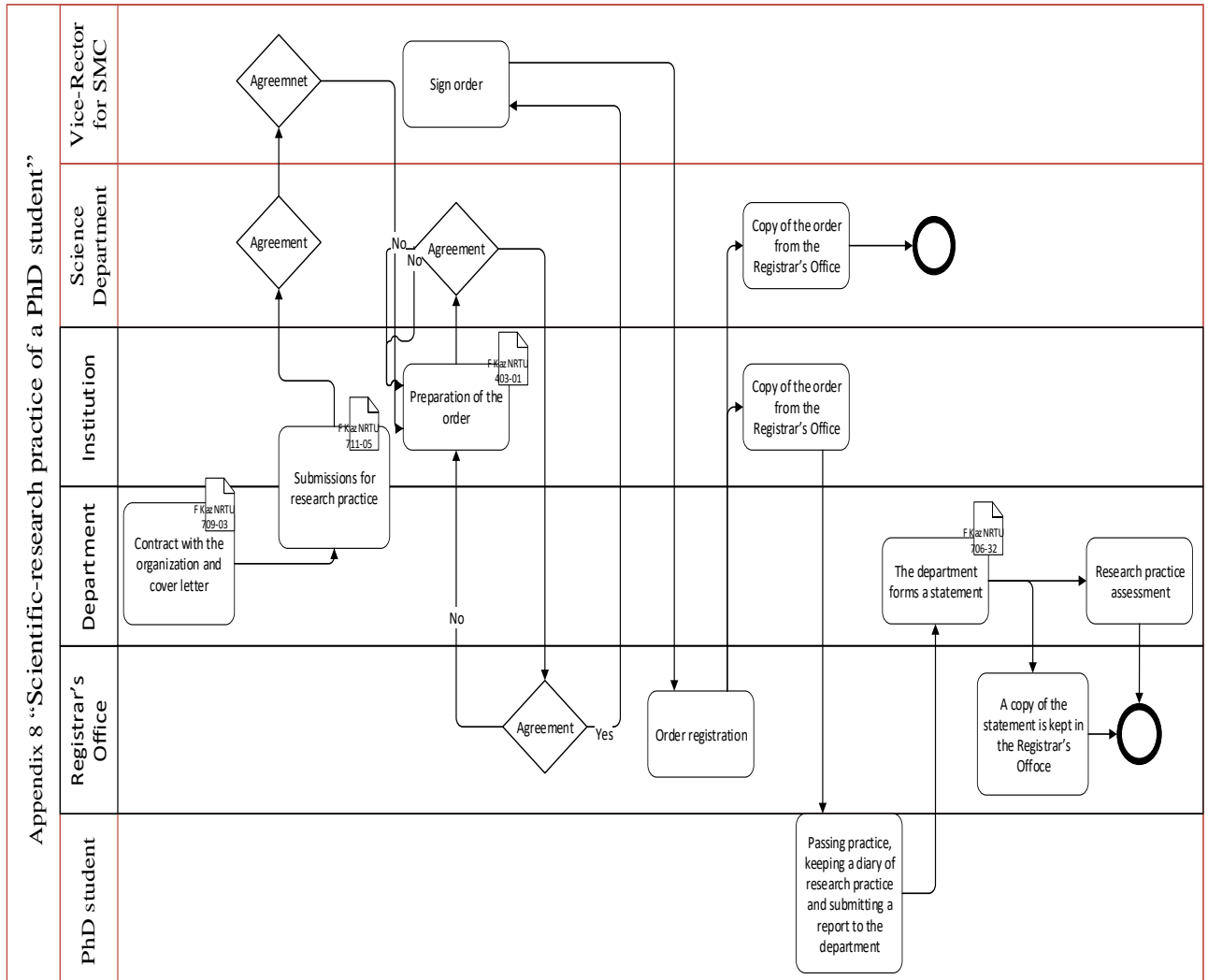
Scientific Internship of a master's student



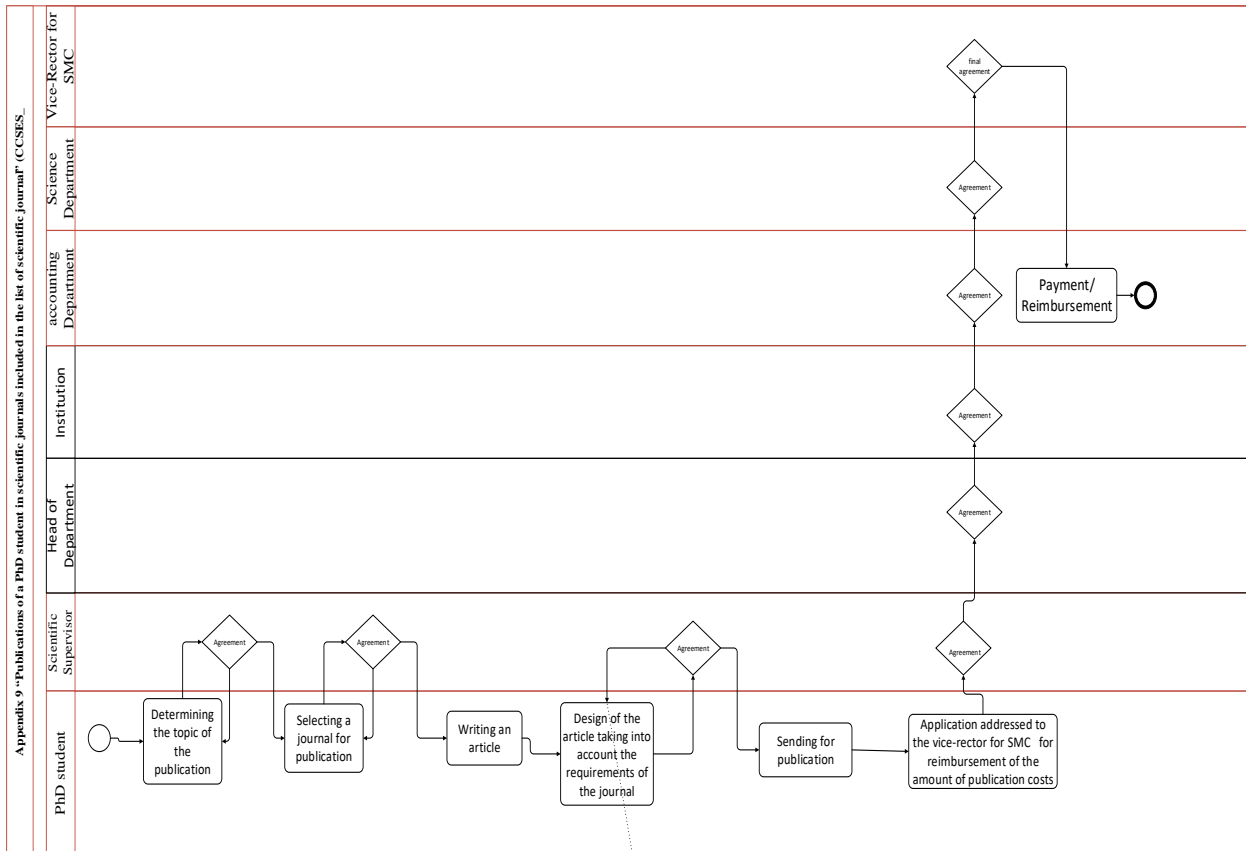
Pedagogical practice of a PhD student



Scientific-research practice of a PhD student

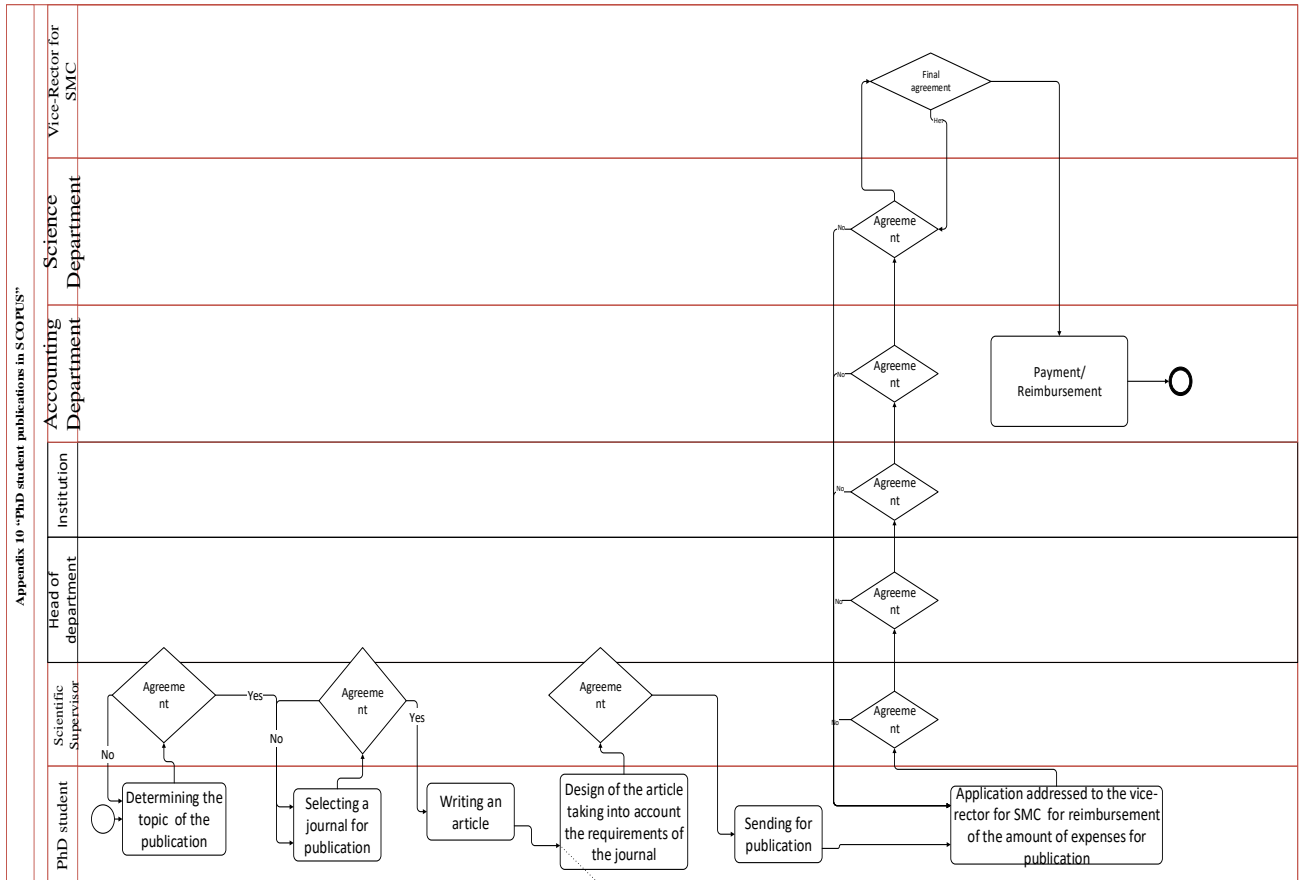


Publications of a PhD student in scientific journals included in the list of scientific journals



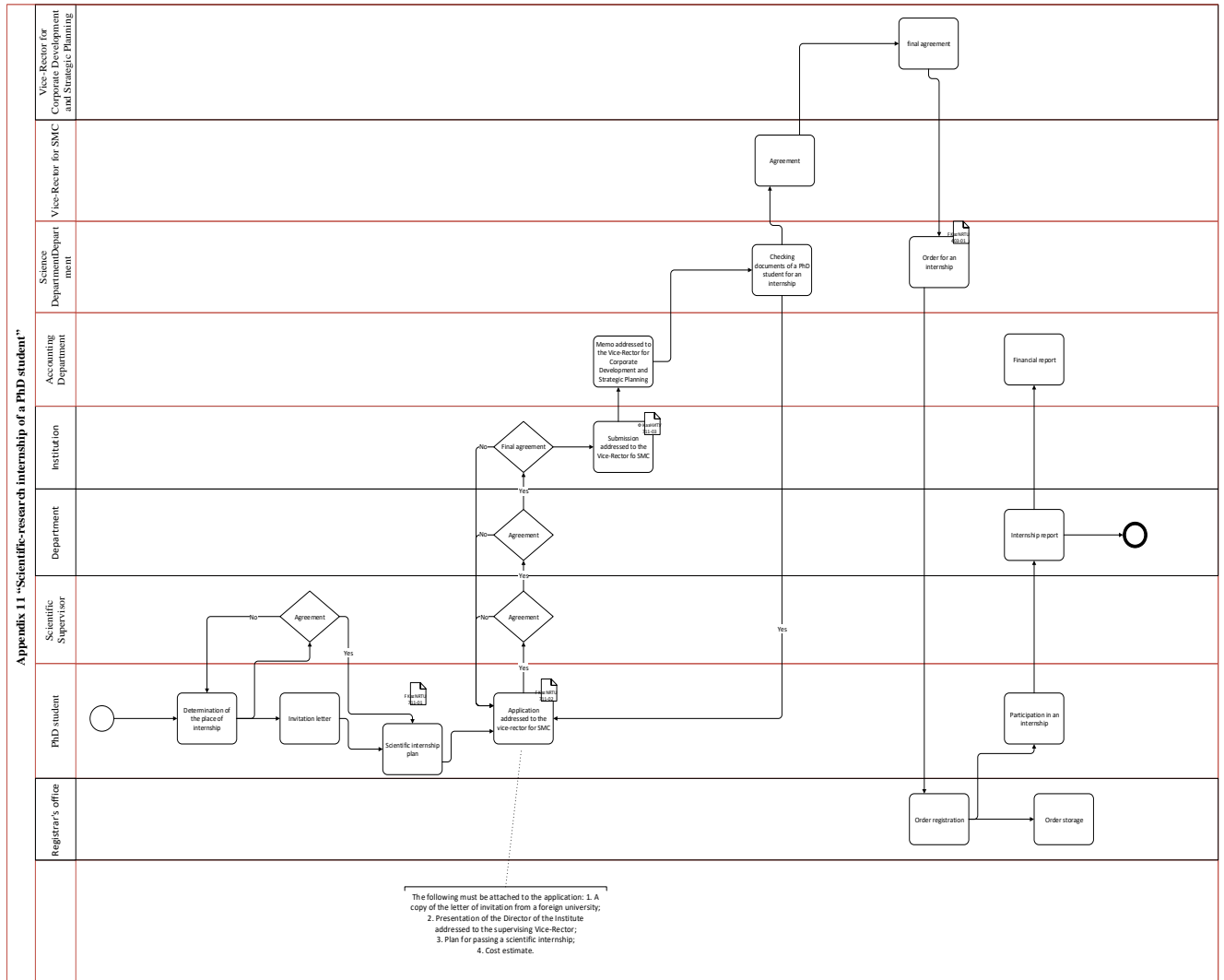
Affiliation is checked by the Science Department

PhD student publications in SCOPUS



Affiliation is checked by the Science Department

Scientific-research internship of a PhD student



Amendment record sheet

Sequential number of amendments	Section, paragraph of the document	Type of amendment (amend, cancel, add)	Notification number and date	Amendment made	
				Date	Surname and initials, signature, position