

Short information Doctoral studies at the Faculty of Economics, Ss Cyril and Methodius University

Table of Contents

<i>I. PhD programme on Economic Science</i>	<i>1</i>
<i>II. PhD programme in Organizational Science</i>	<i>6</i>
<i>III. PhD programme in Demography</i>	<i>12</i>
<i>IV. PhD programme in Statistical Methods for Business and Economy</i>	<i>18</i>

I. PhD programme on Economic Science

The contents of the study programme of the third cycle of studies in Economic Science are designed by following the contemporary contribution of theoretical and empirical economic analysis. This means that there are going to be used actual publications of textbooks of authors with international reputation such as articles and research publications that contain the key theoretically applicative contributions related to questions and issues raised by the contemporary, actual processes and dynamic changes in today's economies. This will provide the students with an access to the latest scientific findings in the three fields of Economic Science.

The structure and the contents of the study programmes of the third cycle of studies in Economic Science are designed also by researching similar study programmes taught at renowned universities in the USA and European Union. Also, the suggested study programme implements the standards from conceptual and methodological perspective stipulated with the Bologna Declaration. These standards are in the direction of achieving the objectives of united Europe by creating a society of knowledge based on two key pillars-the European Research Area – ERA and the European Research Area –EHEA, which have a special place in the processes towards EU integration.

YEARS AND SEMESTERS OF STUDY PROGRAMME

The study programme in Economic Science is organised with overall duration of 3 years i.e 6 semesters.

ECTS CREDITS OBTAINED BY THE STUDENT

By completing the three-year university third cycle - doctoral studies, at the study programme in Economic Science, the student obtains 180 ECTS credits.

STRUCTURE OF THE STUDY PROGRAMME

The studies are organized with duration of 3 years in accordance with the following regime:

- ☐ ***First Year (Training for research work and education) – 60 ECTS Credits with which the doctoral student acquires generic and specific knowledge necessary for preparation of the doctoral dissertation. The first year is organized within the frames of 2 semesters.***

- First Semester – 30.5 ECTS Credits (Table No.1),i.e.:

8 ECTS credits from 2 generic subjects (from Table No.2 and 2a)

22.5 ECTS credits from subjects of the field, research area and the specific research area (from Table No.7)

In the first semester the students take the two mandatory subjects selected from the list of generic subjects the realization of which is on the School of Doctoral Studies.

Mandatory subjects are the following ones (Table No.2a):

- 1) *Scientific –research ethics* with application and examples in the field of Economic Science – 4 ECTS credits.
- 2) *Methodology of research work* with application and examples in the field of Economic Science – 4 ECTS credits.

Elective subjects:

During the first semester the doctoral student takes 3 subjects from the list of subjects of the field, research area and the specific research area in accordance with the mentor chosen by the candidate (Table No.7). Each of these subjects corresponds to 7.5 ECTS credits.

- Second Semester – 29.5 ECTS credits (Table 7)

In the second semester the doctoral student selects one subject from the list of suggested subjects for obtaining generic knowledge, the list being adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje (Table No.2), where the selected subject brings 4 ECTS credits to the student.

In the second semester the doctoral student selects one subject of the field, research area and the specific research area in accordance with the recommendation of the mentor he/she chose (Table No.7).

In addition to this, the doctoral student should obtain additional 18 ECTS credits by participating at doctoral seminar with presentation (2 ECTS credits), at annual conference with presentation of a report (2 ECTS credits) and individual research (14 ECTS credits).

The total workload of the doctoral student for obtaining 7.5 ECTS credits is 225 hours out of which 70 hours are direct contact teaching lessons and tutorials, 100 hours are project and independent tasks, and the rest 55 hours are individual learning.

Table No.1: Overview of the activities and ECTS credits in the first year of third cycle of studies in the field of Economic Science

I year	Activities	Number of ECTS Credits
First semester		
	<i>Scientific –research ethics</i> with application and examples in the field of Economic Science. (Mandatory subject)	4 ECTS credits
	<i>Methodology of research work</i> – 4 ECTS credits (Mandatory subject)	4 ECTS credits
	Elective subject (of the field and research area)	7.5 ECTS credits
	Elective subject (of the field and research area)	7.5 ECTS credits
	Elective subject (of the field and research area)	7.5 ECTS credits
	TOTAL:	30.5 ECTS credits
Second Semester		
	Participation at doctoral seminar with presentation	2 ECTS credits
	Elective subject from the list of suggested subjects for obtaining generic knowledge, the list adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje	4 ECTS credits
	Elective subject (of the field and research area)	7.5 ECTS credits
	Individual research	14 ECTS credits
	Annual conference with presentation of report	2 ECTS credits
	TOTAL:	29.5 ECTS credits
TOTAL	FIRST YEAR	60 ECTS credits

Table No. 2: List of suggested subjects for obtaining generic knowledge, the list adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje (UKIM)

Generic Subjects	Teaching Staff	Institution	ECTS credits
Econometrics	Prof.Dr. Vesna Bucevska	Faculty of Economics	4
Statistical Analysis	Prof.Dr. Slave Risteski Prof. Dr. Dragan Tevdovski Assist.Prof. Marija Trpkova- Nestorovska	Faculty of Economics Faculty of Economics Faculty of Economics	4
Operational Research	Prof.Dr. Blagorodna Todosioska Prof.Dr. Sasho Arsov Assist.Prof. Violeta Cvetkoska	Faculty of Economics Faculty of Economics Faculty of Economics	
Quantitative Methods of Economic Analysis	Prof.dr.Biljana Angelova Assist.Prof.Aleksandar Stojkov	Institute of Economics Faculty of Law	4
Entrepreneurship and Innovation	Academic Taki Fiti	Faculty of Economics	

	Prof.Dr.Zoran Janevski Prof.Dr.Stojan Debarliev	Institute of Economics Faculty of Economics	4
Other subjects from the University units	Teaching staff from other University units	UKIM	4

Table No.2a: Mandatory subjects for obtaining generic knowledge:

Methodology of research work with application and examples in the field of Economic Science	Prof.Dr.Verica Janevska Prof.Dr. Violeta Panzova Assist.Prof. Marija Ackovska	Institute of Economics Institute of Economics Institute of Economics	4
<i>Scientific –research ethics</i> with application and examples in the field of Economic Science.	Prof.Dr.Leonid Nakov (Professor from other University units)	Faculty of Economics	4

☐ *Second and third year –preparation of doctoral thesis-120 ECTS credits (application, research work, preparation and defense)*

The application, preparation and defense of doctoral dissertation obtain a total of 120 ECTS credits and these activities are to be realized within a period of 2 years i.e. 4 semesters.

The activities in the third semester (Second Year) comprise of preparing application for the doctoral dissertation and public presentation of the theses, the methodology, the expected outcomes and other relevant aspects of the research the doctoral student plans to make. The structure of these activities and the corresponding ECTS credits are given in Table No.3.

Table No.3: Structure of studies in the second and third year of doctoral studies

II YEAR		ECTS credits
Third Semester		
	Preparation and submission of application of the topic for doctoral dissertation and individual research	28

	Doctoral seminar with presentation of a report	2
Fourth Semester		
	Workshop for research practice	3
	Annual conference with presentation	2
	Individual research and publication of results	25
TOTAL II YEAR		60
III YEAR		
Fifth Semester		
	Doctoral seminar with presentation of a report	2
	Individual research and publication of results	28
Sixth Semester		
	Workshop for research practice	3
	Individual research and writing of the dissertation	25
	Annual conference with presentation	2
TOTAL III YEAR		60
TOTAL ECTS CREDITS II AND III YEAR		120

Table No.4: Total ECTS credits of the three-year study programme

Semesters	Number of ECTS credits
I and II	30+30
III and IV	60
V and VI	60
Total	180

Table No.5: Ratio of mandatory to elective subjects

Study Programme	Duration of studies (years/ECTS)	Total number of subject curricula (exams)	Mandatory subjects (max. = 60%)	Elective subjects of the field and education area (30%)	Elective subjects from the list of UKIM (10%)
Economic Science	3/180	7	2	4	1
In percents		100%	28.6%	57.1%	14.3%

II. PhD programme in Organizational Science

The suggested study programme of the third cycle of studies in the field of Organizational Science and Management is a response to the manifested complex and dynamic changes in the business environment in the Republic of Macedonia, which applies the modern managerial techniques, procedures and methods under conditions of much intensified adoption of international managerial standards of behavior and promotion of transparency regarding the change of institutional regulations.

This study programme comprises in one place the modern scientific findings about Management, Entrepreneurship, Management Information Systems, Change Management, Management of Human Resources, Financial Management, Strategic Management and other business sciences which represent something that increases the effectiveness and efficiency of the third cycle of studies. In fact, the modern organizations nowadays are in a need to simultaneously delegate, decentralize, have functionally integrated organization units, complementary teams, interactive relations with human resources- both horizontally and vertically and diagonally as well, also aiming to integrate the longterm organization goals with the deep incentives for the purpose of having as efficient behavior of subordinates as possible. All the above listed is subject to a comprehensive study within the frames of this study programme of third cycle of studies.

YEARS AND SEMESTERS OF STUDY PROGRAMME

The study programme in Organizational Science and Management is organized with overall duration of 3 years i.e 6 semesters.

ECTS CREDITS OBTAINED BY THE STUDENT

By completing the three-year university third cycle - doctoral studies, at the study programme in Organizational Science and Management, the student obtains 180 ECTS credits.

STRUCTURE OF THE STUDY PROGRAMME

The doctoral studies last three years that corresponds to 180 ECTS credits obtained.

The study programmes comprises:

1. training for research work, that corresponds to 30 ECTS credits;
2. teaching, that corresponds to 30 ECTS credits;
3. application, preparation and defense of the doctoral dissertation that corresponds to 120 ECTS credits.

The studies are organized with duration of 3 years in accordance with the following regime:

☐ ***First Year (Training for research work and education) – 60 ECTS Credits with which the doctoral student acquires generic and specific knowledge necessary for preparation of the doctoral dissertation. The first year is organized within the frames of 2 semesters.***

- ***First Semester – 30.5 ECTS Credits (Table No.1), i.e.:***

8 ECTS credits from 2 generic subjects (from Table No.2 and 2a)

22.5 ECTS credits from subjects of the field, research area and the specific research area (from Table No.3)

In the first semester the students take the two mandatory subjects selected from the list of generic subjects the realization of which is on the School of Doctoral Studies.

Mandatory subjects are the following ones (Table No.2):

- 3) *Scientific –research ethics* with application and examples in the field of Organizational Science and Management– 4 ECTS credits.
- 4) *Methodology of research work* with application and examples in the field of Organizational Science and Management – 4 ECTS credits.

Elective subjects:

During the first semester the doctoral student takes 3 subjects from the list of subjects of the field, research area and the specific research area in accordance with the mentor chosen by the candidate (Table No.7). Each of these subjects corresponds to 7.5 ECTS credits.

- **Second Semester – 29.5 ECTS credits**

In the second semester the doctoral student selects one subject from the list of suggested subjects for obtaining generic knowledge, the list being adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje (Table No.2a), where the selected subject brings 4 ECTS credits to the student.

In the second semester the doctoral student selects one subject of the field, research area and the specific research area in accordance with the recommendation of the mentor he/she chose (Table No.3).

In addition to this, the doctoral student should obtain additional 18 ECTS credits by participating at doctoral seminar with presentation (2 ECTS credits), at annual conference with presentation of a report (2 ECTS credits) and individual research (14 ECTS credits).

The total workload of the doctoral student for obtaining 7.5 ECTS credits is 225 hours out of which 70 hours are direct contact teaching lessons and tutorials, 100 hours are project and independent tasks, and the rest 55 hours are individual learning.

The structure of the study programme Organizational Science and Management of the third cycle of studies is given in Table 1.

Table 1.

First Semester	Credits (ECTS)
Scientific research ethics with application and examples in the field of Organizational Science and Management (Subject for obtaining generic knowledge)	4 ECTS credits
2. Methodology of research work with application and Examples in the field of Organizational Science and Management	4 ECTS credits

(Subject for obtaining generic knowledge)

3. Elective subject of the field and research area	7.5 ECTS credits
3. Elective subject of the field and research area	7.5 ECTS credits
4. Elective subject of the field and research area	7.5 ECTS credits

TOTAL: 30.5 ECTS Credits

Second Semester	Credits (ECTS)
Elective subject from the list of suggested subjects for obtaining generic knowledge, the list adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje	4 ECTS credits
Elective subject of the field and research area	7.5 ECTS credits
Doctoral seminar with presentation	2 ECTS credits
Research (for preparing the topic for doctoral dissertation)	14 ECTS credits
Annual conference with public presentation of a report	2 ECTS credits
Total:	29.5 ECTS credits

Third Semester	Credits (ECTS)
Research, preparation and submission of application of the 1. topic for doctoral dissertation	28 ECTS credits
2. Doctoral seminar	2 ECTS credits
Total:	30 ECTS credits

Fourth Semester	Credits (ECTS)
1. Workshop for research practice	3 ECTS credits
2. Individual research and publication of results	25 ECTS credits
3. Annual conference with public presentation of a report	2 ECTS credits
Вкупно:	30 ECTS credits

Fifth Semester	Credits (ECTS)
1. Individual research and publication of results	28 ECTS credits
2. Doctoral seminar	2 ECTS credits
Total:	30 ECTS credits

Sixth Semester	Credits (ECTS)
1. Workshop for research practice	3 ECTS credits
2. Research and writing of thesis	25 ECTS credits
3. Annual conference with public presentation of a report	2 ECTS credits
Total:	30 ECTS credits

Table No.2: Mandatory subjects for obtaining generic knowledge:

Methodology of research work with application and examples in the field of Organizational Science	Prof.Dr.Verica Janevska Prof.Dr. Violeta Panzova Prof. Dr.Marija Ackovska Assist.Prof.Marija Topuzovska Latkovikj	UKIM/Institute of Economics UKIM/Institute of Economics UKIM/Institute of Economics UKIM/Institute of Economics	4
Scientific –research ethics with application and examples in the field of Organizational Science	Prof.Dr.Leonid Nakov (Professor from other University units)	UKIM/Faculty of Economics	4

Table No. 2a: List of suggested subjects for obtaining generic knowledge, the list adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje (UKIM)

Generic subjects	Number of ECTS credits	Teaching Staff	Institution
Econometric Models	4	Prof.Dr.Vesna Bucevska	Faculty of Economics
Operational Research	4	Prof.Dr. Blagorodna Todosioska Assist.Prof.Violeta Cvetkoska	Faculty of Economics Faculty of Economics
Statistics for Business and Economy	4	Prof.Dr. Slave Risteski	Faculty of Economics
Quantitative Methods of Economic Analysis	4	Prof.Dr.Aleksandar Stojkov	Faculty of Law
Entrepreneurship and Innovations	4	Academic Taki Fiti Prof.Dr.Zoran Janevski Prof.Dr.Stojan Debarliev Assist.Prof.Vesna Zabijakin Chatleska	Faculty of Economics Institute of Economics Faculty of Economics ISSPI

The doctoral students who completed their postgraduate studies before the adoption of European Credit Transfer System, with the Decision of the Council of the study programme are given the option to have 60 ECTS credits recognized, the credits referring to the training for research and education. Those students directly enroll in the III (third) semester and move on by completing the obligations for that semester i.e. in accordance with the structure of the study programme of the third cycle of doctoral studies.

Training for Research

The training for research work, the research and the publishing of results, comprises:

- three subjects for gaining generic knowledge and skills for research work that corresponds to 12 ECTS credits (each of the subjects in this part correspond to 4 ECTS credits), i. e. the following subjects: *Scientific-research ethics*, one of the group of subjects in *Methodology of research work* and one of the provided list of other subjects in training for research work. The list of other subjects is approved by the Doctoral Studies University Board upon a proposal of the study programmes organizers.
- Doctoral seminars, conferences and workshops on research practice that corresponds to 18 ECTS credits.

Subjects for gaining generic knowledge and skills for research work

1. The subject Methodology of research work with application and examples in the field of organizational science
2. One subject from the group of subjects Methodology of research work with application and examples in the field of organizational science
3. One subject offered on the list of other subjects from the group of training for research (UKIM's list of elective subjects)

Education

Education comprises subjects of the field, research area and specific research area totaling 30 ECTS credits.

The student at the third cycle of doctoral studies selects the subjects from the list of generic subjects and subjects of the specific area of research under guidance and consultation with his/her mentor.

The list of selected subjects is submitted to the Head of the study programme of the third cycle of studies, during the process of enrolling at the doctoral studies.

The selected subjects are registered in a corresponding student record and in the student's index. The selected subjects could be changed by submitting a request for

subject change. The decision for changing selected subjects is made on behalf of the Council of the study programme.

III. PhD programme in Demography

The suggested study programme of the third cycle of studies in Demography aims at creating sophisticated knowledge and competences in demography in accordance with the various requests of the state institutions in the country. In addition, as target group of this study programme of third cycle of studies are candidates who want to get trained for performing scientific-research and education work at universities and scientific institutions in the country.

The issue of finance is a subject to accentuated interest among the modern scientific thought all across the world. This is proven with the fact that large number of universities offer study programmes of third cycle of studies (doctoral studies) oriented toward demography. At the same time, the scientific interest in demography is confirmed with the existence of large number of scientific and professional journals which year by year produce enormous quantum of papers with theoretical and applicative contents. With the establishment of a study programme of third cycle of studies in the field of Demography the aim is to make use of all the modern scientific results and findings obtained by the relevant international universities where demography is taught, as well as to use modern scientific literature.

YEARS AND SEMESTERS OF STUDY PROGRAMME

The study programme in Demography is organized with overall duration of 3 years i.e 6 semesters.

ECTS CREDITS OBTAINED BY THE STUDENT

By completing the three-year university third cycle - doctoral studies, at the study programme in Demography, the student obtains 180 ECTS credits.

STRUCTURE OF THE STUDY PROGRAMME

The studies are organized with duration of 3 years in accordance with the following regime:

- ☐ ***First Year (Training for research work and education) – 60 ECTS Credits with which the doctoral student acquires generic and specific knowledge necessary for preparation of the doctoral dissertation. The first year is organized within the frames of 2 semesters.***

- First Semester – 30.5 ECTS Credits (Table No.1), i.e.:

8 ECTS credits from 2 generic subjects (from Table No.2 and 2a)

22.5 ECTS credits from subjects of the field, research area and the specific research area (from Table No.7)

In the first semester the students take the two mandatory subjects selected from the list of generic subjects the realization of which is on the School of Doctoral Studies.

Mandatory subjects are the following ones (Table No.2a):

- 5) *Scientific –research ethics* with application and examples in the field of Economic Science – 4 ECTS credits.
- 6) *Methodology of research work* with application and examples in the field of Economic Science – 4 ECTS credits.

Elective subjects:

During the first semester the doctoral student takes 3 subjects from the list of subjects of the field, research area and the specific research area in accordance with the mentor chosen by the candidate (Table No.7). Each of these subjects corresponds to 7.5 ECTS credits.

- Second Semester – 29.5 ECTS credits (Table 7)

In the second semester the doctoral student selects one subject from the list of suggested subjects for obtaining generic knowledge, the list being adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje (Table No.2), where the selected subject brings 4 ECTS credits to the student.

In the second semester the doctoral student selects one subject of the field, research area and the specific research area in accordance with the recommendation of the mentor he/she chose (Table No.7).

In addition to this, the doctoral student should obtain additional 18 ECTS credits by participating at doctoral seminar with presentation (2 ECTS credits), at annual conference with presentation of a report (2 ECTS credits) and individual research (14 ECTS credits).

The total workload of the doctoral student for obtaining 7.5 ECTS credits is 225 hours out of which 70 hours are direct contact teaching lessons and tutorials, 100 hours are project and independent tasks, and the rest 55 hours are individual learning.

Table No.1: Overview of the activities and ECTS credits in the first year of third cycle of studies in the field of Demography

I year	Activities	Number of ECTS Credits
First semester		
	<i>Scientific –research ethics</i> with application and examples in the field of Demography. (Mandatory subject)	4 ECTS credits
	<i>Methodology of research work</i> – 4 ECTS credits (Mandatory subject)	4 ECTS credits
	Elective subject (of the field and research area)	7.5 ECTS credits
	Elective subject (of the field and research area)	7.5 ECTS credits
	Elective subject (of the field and research area)	7.5 ECTS credits
	TOTAL:	30.5 ECTS credits
Second Semester		
	Participation at doctoral seminar with presentation	2 ECTS credits
	Elective subject from the list of suggested subjects for obtaining generic knowledge, the list adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje	4 ECTS credits
	Elective subject (of the field and research area)	7.5 ECTS credits
	Individual research	14 ECTS credits
	Annual conference with presentation of report	2 ECTS credits
	TOTAL:	29.5 ECTS credits

TOTAL FIRST YEAR

60 ECTS credits

**Table No.2: List of suggested subjects for obtaining generic knowledge
the list adopted by the School of Doctoral Studies at UKIM**

Generic Subjects	Teaching Staff	Institution	ECTS credits
Econometrics	Prof.Dr. Vesna Bucevska	Faculty of Economics	4
Statistical Analysis	Prof.Dr. Slave Risteski Prof. Dr. Dragan Tevdovski Assist.Prof. Marija Trpkova-Nestorovska	Faculty of Economics Faculty of Economics Faculty of Economics	4
Selected problems from Microeconomics and Macroeconomics	Academic Taki Fiti Prof.Dr.Vladimir Filipovski Prof.Dr.Predrag Trpeski	Faculty of Economics Faculty of Economics	
Entrepreneurship and Innovation	Academic Taki Fiti Prof.Dr.Zoran Janevski Prof.Dr.Stojan Debarliev	Faculty of Economics Економски институт Faculty of Economics	4
Other subjects from the University units	Teaching staff from other University units	UKIM	4

Table No.2a: Mandatory subjects for obtaining generic knowledge:

Methodology of research work with application and examples in the field of Economic Science	Prof.Dr.Verica Janevska Prof.Dr. Violeta Panzova Assist.Prof. Marija Ackovska	Institute of Economics Institute of Economics Institute of Economics	4
<i>Scientific –research ethics</i> with application and examples in the field of Economic Science.	Prof.Dr.Leonid Nakov (Professor from other University units)	Faculty of Economics	4

☐ *Second and third year –preparation of doctoral thesis-120 ECTS credits (application, research work, preparation and defense)*

The application, preparation and defense of doctoral dissertation obtain a total of 120 ECTS credits and these activities are to be realized within a period of 2 years i.e. 4 semesters.

The activities in the third semester (Second Year) comprise of preparing application for the doctoral dissertation and public presentation of the theses, the methodology, the expected outcomes and other relevant aspects of the research the doctoral student plans to make. The structure of these activities and the corresponding ECTS credits are given in Table No.3.

Table No.3: Structure of studies in the second and third year of doctoral studies

II YEAR	ECTS
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		credits
Third Semester		
	Preparation and submission of application of the topic for doctoral dissertation and individual research	28
	Doctoral seminar with presentation of a report	2
Fourth Semester		
	Workshop for research practice	3
	Annual conference with presentation	2
	Individual research and publication of results	25
TOTAL II YEAR		60
III YEAR		
Fifth Semester		
	Doctoral seminar with presentation of a report	2
	Individual research and publication of results	28
Sixth Semester		
	Workshop for research practice	3
	Individual research and writing of the dissertation	25
	Annual conference with presentation	2
TOTAL III YEAR		60
TOTAL ECTS CREDITS II AND III YEAR		120

Table No.4: Total ECTS credits of the three-year study programme

Semesters	Number of ECTS credits
I and II	30.5+29.5
III and IV	60
V and VI	60
Total	180

Table No.5: Ratio of mandatory to elective subjects

Study Programme	Duration of studies (years/ECTS)	Total number of subject curricula (exams)	Mandatory subjects (max. = 60%)	Elective subjects of the field and education area (30%)	Elective subjects from the list of UKIM (10%)

Demogrpaphy	3/180	7	2	4	1
In percents		100%	28.6%	57.1%	14.3%

IV. PhD programme in Statistical Methods for Business and Economy

The objectives of the doctoral study programme in Statistical Methods for Business and Economy is to educate scientists who would be able to independently and creatively conduct original statistical and econometric research in the field of economy and business at a high level and in compliance with the international standards in these areas i.e scientists who shall work on developing and promoting the application of the latest statistical and econometric methods in science (at universities and other higher education institutions), and in the public and private sector as well.

The objectives of the doctoral study programme in Statistical Methods for Business and Economy are to educate scientists who would be able to independently and creatively conduct original statistical and econometric research in the field of economy and business at a high level and in compliance with the international standards in these areas i.e scientists who shall work on developing and promoting the application of the latest statistical and econometric methods in science (at universities and other higher education institutions), and in the public and private sector as well. The final objectif of these studies is to create and develop individual research competences necessary for the participants in this doctoral studies programme to build their future academic careers or careers either in the public or in the private sector. The doctoral study programme in Statistical Methods for Business and Economy covers advanced knowledge in the field of statistics, econometrics and their application in economy and business. These studies are based on the principles of multidisciplinary, option-to-choose-from and the principles of the Bologna Declaration. The structure of these studies reflects the multidisciplinary character of the statistics as scientific discipline. The option-to-choose-from allows students to have individual and directed scientific-research development of each and every student. The institutional development of the studies within the frames of Bologna Declaration should provide greater mobility of students and teaching staff and to provide framework for cooperation on scientific research topics of joint interest.

YEARS AND SEMESTERS OF STUDY PROGRAMME

The study programme in Statistical Methods for Business and Economy is organized with overall duration of 3 years i.e 6 semesters.

ECTS CREDITS OBTAINED BY THE STUDENT

By completing the three-year university third cycle - doctoral studies, at the study programme in Statistical Methods for Business and Economy, the student obtains 180 ECTS credits.

STRUCTURE OF THE STUDY PROGRAMME

The studies are organized with duration of 3 years in accordance with the following regime:

- ***First Year (Training for research work and education) – 60 ECTS Credits with which the doctoral student acquires generic and specific knowledge necessary for preparation of the doctoral dissertation. The first year is organized within the frames of 2 semesters.***
- ***First Semester – 30.5 ECTS Credits (Table No.1), i.e.:***
8 ECTS credits from 2 generic subjects (from Table No.2 and 2a)

22.5 ECTS credits from subjects of the field, research area and the specific research area (from Table No.7)

In the first semester the students take the two mandatory subjects selected from the list of generic subjects the realization of which is on the School of Doctoral Studies.

Mandatory subjects are the following ones (Table No.2a):

- 7) *Scientific –research ethics* with application and examples in the field of Statistical Methods for Business and Economy – 4 ECTS credits.
- 8) *Methodology of research work* with application and examples in the field of Statistical Methods for Business and Economy – 4 ECTS credits.

Elective subjects:

During the first semester the doctoral student takes 3 subjects from the list of subjects of the field, research area and the specific research area in accordance with the mentor chosen by the candidate (Table No.7). Each of these subjects corresponds to 7.5 ECTS credits.

- Second Semester – 29.5 ECTS credits (Table 7)

In the second semester the doctoral student selects one subject from the list of suggested subjects for obtaining generic knowledge, the list being adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje (Table No.2), where the selected subject brings 4 ECTS credits to the student.

In the second semester the doctoral student selects one subject of the field, research area and the specific research area in accordance with the recommendation of the mentor he/she chose (Table No.7).

In addition to this, the doctoral student should obtain additional 18 ECTS credits by participating at doctoral seminar with presentation (2 ECTS credits), at annual conference with presentation of a report (2 ECTS credits) and individual research (14 ECTS credits).

The total workload of the doctoral student for obtaining 7.5 ECTS credits is 225 hours out of which 70 hours are direct contact teaching lessons and tutorials, 100 hours are project and independent tasks, and the rest 55 hours are individual learning.

Table No.1: Overview of the activities and ECTS credits in the first year of third cycle of studies in the field of Statistical Methods for Business and Economy

I year	Activities	Number of ECTS Credits
First semester		
	<i>Scientific –research ethics</i> with application and examples in the field of Statistical Methods for Business and Economy. (Mandatory subject)	4 ECTS credits
	<i>Methodology of research work</i> – 4 ECTS credits (Mandatory subject)	4 ECTS credits
	Elective subject (of the field and research area)	7.5 ECTS credits

Elective subject (of the field and research area)	7.5 ECTS credits
Elective subject (of the field and research area)	7.5 ECTS credits
TOTAL:	30.5 ECTS credits
Second Semester	
Participation at doctoral seminar with presentation	2 ECTS credits
Elective subject from the list of suggested subjects for obtaining generic knowledge, the list adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje	4 ECTS credits
Elective subject (of the field and research area)	7.5 ECTS credits
Individual research	14 ECTS credits
Annual conference with presentation of report	2 ECTS credits
TOTAL:	29.5 ECTS credits
TOTAL FIRST YEAR	60 ECTS credits

Table No. 2: List of suggested subjects for obtaining generic knowledge, the list adopted by the School of Doctoral Studies at the Ss. Cyril and Methodius University in Skopje (UKIM)

Generic Subjects	Teaching Staff	Institution	ECTS credits
Econometrics	Prof.Dr. Vesna Bucevska	Faculty of Economics	4
Statistical Analysis	Prof.Dr. Slave Risteski Prof. Dr. Dragan Tevdovski Assist.Prof. Marija Trpkova-Nestorovska	Faculty of Economics Faculty of Economics Faculty of Economics	4
Operational Research	Prof.Dr.Blagorodna Todosioska Prof.Dr.Sasho Arsov Assist.Prof.Violeta Cvetkoska	Faculty of Economics Faculty of Economics Faculty of Economics	4
Selected problems from microeconomics and macroeconomics	Academic Taki Fiti Prof.Dr.Vladimir Filipovski Prof.Dr.Predrag Trpeski	Faculty of Economics Faculty of Economics Faculty of Economics	
Entrepreneurship and Innovation	Academic Taki Fiti Prof.Dr.Zoran Janevski Prof.Dr.Stojan Debarliev	Faculty of Economics Економски институт Faculty of Economics	4
Other subjects from the University units	Teaching staff from other University units	UKIM	4

Table No.2a: Mandatory subjects for obtaining generic knowledge:

Methodology of research work with application and examples in the field of Statistical Methods for Business and Economy	Prof.Dr.Verica Janevska Prof.Dr. Violeta Panzova Assist.Prof. Marija Ackovska	Institute of Economics Institute of Economics Institute of Economics	4
<i>Scientific ethics</i> –research with application and examples in the field of Statistical Methods for Business and Economy.	Prof.Dr.Leonid Nakov (Professor from other University units)	Faculty of Economics	4

- **Second and third year –preparation of doctoral thesis-120 ECTS credits (application, research work, preparation and defense)**

The application, preparation and defense of doctoral dissertation obtain a total of 120 ECTS credits and these activities are to be realized within a period of 2 years i.e. 4 semesters.

The activities in the third semester (Second Year) comprise of preparing application for the doctoral dissertation and public presentation of the theses, the methodology, the expected outcomes and other relevant aspects of the research the doctoral student plans to make. The structure of these activities and the corresponding ECTS credits are given in Table No.3.

Table No.3: Structure of studies in the second and third year of doctoral studies

II YEAR		ECTS credits
Third Semester		
	Preparation and submission of application of the topic for doctoral dissertation and individual research	28
	Doctoral seminar with presentation of a report	2
Fourth Semester		
	Workshop for research practice	3
	Annual conference with presentation	2
	Individual research and publication of results	25
TOTAL II YEAR		60
III YEAR		
Fifth Semester		

	Doctoral seminar with presentation of a report	2
	Individual research and publication of results	28
Sixth Semester		
	Workshop for research practice	3
	Individual research and writing of the dissertation	25
	Annual conference with presentation	2
TOTAL III YEAR		60
TOTAL ECTS CREDITS II AND III YEAR		120

Table No.4: Total ECTS credits of the three-year study programme

Semesters	Number of ECTS credits
I and II	30.5+29.5
III and IV	60
V and VI	60
Total	180

Table No.5: Ratio of mandatory to elective subjects

Study Programme	Duration of studies (years/ECTS)	Total number of subject curricula (exams)	Mandatory subjects (max. = 60%)	Elective subjects of the field and education area (30%)	Elective subjects from the list of UKIM (10%)
Statistical Methods for Business and Economy	3/180	7	2	4	1
In percents		100%	28.6%	57.1%	14.3%