REPUBLIC OF BULGARIA D.A. TSENOV ACADEMY OF ECONOMICS – SVISHTOV	
FACULTY „ECONOMIC ACCOUNTING“	**DEPARTMENT „STATISTICS AND APPLIED MATHEMATICS“**

Endorsed by:
RECTOR:
(Prof. Mariyana Bozhinova, PhD)

Approved by the AC, Resolution №5/02.03.2022
Approved by the FC, Protocol №5/17.02.2022
Approved by the DC, Protocol №6/10.02.2022

QUALIFICATION DESCRIPTION

DOCTORAL PROGRAMME

„ STATISTICS AND DEMOGRAPHY“

Educational and scientific degree: **Doctor**		Area of study: **3. Social, economic sciences and law**
Mode of study:	Length of study:	Field of study: **3.8. Economics**
Full-time/Unsupervised	**3 years**	
Part-time/Distance	**4 years**	Code of the document: **ED/QD-D-FT/PT/U/D-3/4-3.8/-SD-FEA-DSAM-2022**
Language: **Bulgarian/English/Russian**		

1. General description of the doctoral programme

The doctoral programme “Statistics and demography” embodies a high degree of knowledge in economics, statistics and econometrics. It has been developed following the traditions and the modern standards of statistical training in the bachelor's degree and the master's degree. The programme responds to the growing demand of statisticians in various spheres of socio-economic life, to the introduction of new ICT, and to the increased requirements for the quality of statistical information corresponding to the European regulations.

The curriculum of the doctoral programme covers fundamental topics of statistical theory and practice, which are necessary both in the process of writing the dissertation thesis and for the successful career as future specialists in statistics. The activities in the curriculum of the doctoral programme “Statistics and demography” consider problems of theoretical and practical nature, which are mandatory for a modern

statistician. Educational activities include two disciplines for doctoral minimum, related to the field of research in the dissertation, participation in compulsory and faculty courses as methodology of science and research, academic writing and presentation methods teaching, methodology and methods of empirical research scientific, information technology, English language, participation in research projects and mobility. The scientific, research and publication activities include reviewing literature sources, research of the practice, application of the proposed methodologies and methods, participation in scientific forums and publications related to the topic of the dissertation. The educational process includes also teaching and expert activities, preparation of a dissertation paper and ends with the public defence of the dissertation. As a result of the training in the programme, PhD students master the algorithm of classical and modern statistical methods and techniques for analysis and their application in the study of economic, social and demographic processes.

The programme is written in compliance with the academic requirements and restrictions regarding its content, included disciplines, the technical layout, etc. Students, which are enrolled in the doctoral programme “Statistics and demography”, receive knowledge that will contribute to their further development as researchers, analysts and specialists in the planning, organization and conduct of empirical statistical research, the development of forecasts, strategies, economic, social and demographic analyses.

2. Learning objectives

The aim of the doctoral programme “Statistics and demography” is related with gaining both theoretical knowledge of statistical methods of analysis and opportunities for their application and acquiring practical skills for planning, organizing and conducting empirical statistical research, for developing models characterizing socio-economic phenomena and interpretation of the obtained results.

3. Organisation and length of study

The studying process for acquiring the educational and scientific degree “doctor” is carried out in full-time, part-time, self-preparation and distance form of education, financed by the state or by doctoral students. The organisation of the studying process is in accordance with an individual curriculum developed by the department according to a standard model.

The term of study in the doctoral programme "Statistics and demography" is 3 years in full-time and self-preparation form of study and 4 years in part-time and distance form. Doctoral training ends with public defence of the doctoral thesis in the presence of a scientific jury.

"D. A. Tsenov” Academy of Economics provides access of the doctoral students to the specialized fund “Dissertations, Habilitation Papers and Abstracts” at the “Acad. Nikola Mihov” Academic Library as well as to the digital library dlib.uni-svishtov.bg. Since 2008 the university maintains an independent profiled scientific publication "Annual Almanac of Research of Doctoral Students" (https://almanahnid.uni-svishtov.bg/) by holding an annual Doctoral Scientific Session. Thanks to project

funding, a laboratory environment and access to specialized econometric tools and guides has been provided for PhD students' research.

4. Knowledge

The educational and scientific degree “doctor” in the doctoral programme “Statistics and demography” provides in-depth theoretical knowledge on:

- planning, organizing and conducting empirical research on social and economic phenomena and processes;
- application of classical and modern statistical methods for analysis, evaluation, modelling and forecasting;
- applying correlation and regression analysis in the socio-economic sphere;
- characterization of structural changes and differences;
- analysis of variational statistical distributions;
- use of specialized statistical and econometric software products in the processing and analysis of information presented as complex databases.

5. Skills

The doctoral programme “Statistics and demography” develops competencies and skills for independent research, including:

- planning, organizing, conducting and analysing the results of empirical research on social and economic phenomena and processes;
- use of classical and modern statistical methods for analysis, estimation, modelling and forecasting of social and economic phenomena and processes;
- use of specialized statistical and econometric software products in the processing and analysis of information presented as complex databases.
- defining research theses, revealing problem situations, compiling working hypotheses, formulation of scientifically substantiated conclusions and conclusions, argumentation of own opinions, views and ideas.

6. Competences

Within the doctoral programme, PhD students acquire competences in fields relevant for their professional realisation, providing them the opportunity to demonstrate autonomy and responsibility, to acquire competences for learning, as well communication, social and professional competences, in particular:

6.1. Independence and responsibility

Doctoral students who have completed the doctoral programme “Statistics and demography” acquire skills to:

- independently combine the different elements of the knowledge and skills, the professional and personal qualities, the experience which they possess;
- create and interpret new knowledge through their own research based on a study of the achievements in the respective scientific field (the field of statistics and the field of research);

- expand the scope of the scientific field on the basis of the acquired new knowledge;
- show creative thinking, practical skills and innovation in the development and implementation of projects, taking into account the influence of many factors.

6.2. Learning competences

Graduates of the doctoral program "Statistics and Demography" acquire practical habits in the field of:

- gathering information on the basis of sample surveys;
- conducting independent theoretical and empirical research;
- the application of statistical methods for analysis of the causal relationships between the studied phenomena;
- the econometric modelling of the patterns in the dynamics, seasonality and cyclicity of the studied processes;
- the use of specialized modern software for processing statistical information.

6.3. Communicative and social competences

The competencies of doctoral students who have completed the doctoral programme “Statistics and demography” are associated not only with the acquired theoretical knowledge, but also with mastering and applying the necessary professional skills. In such a way, the inter-connections between science, scientific knowledge and practice in real conditions are realized. The optimal synthesis between the indicated theoretical and practical-applied components ensures the skilled use of labour with a higher level of reasoning, purposefulness and efficiency.

6.4. Professional competences

During the doctoral training, PhD students deepen and expand their theoretical knowledge in the field of statistics in terms of:

- modern research in the field of statistical sciences;
- statistical methods and their use in performing analyses, forecasts and estimations;
- planning, organizing and conducting population and sample surveys;
- the establishment, maintenance and functioning of the national statistical information system according to the requirements of the European and world standards, etc.

7. Brief description of the academic staff

The training in the doctoral programme “Statistics and demography” is carried out by the highly qualified academic staff of the Department of Statistics and Applied Mathematics in accordance with national and European educational standards. The lecturers are highly qualified professionals with long experience in the scientific guidance of PhD students, participation in teaching mobility in European programmes and participation in professional and scientific networks. With their professionalism and

positions in research, they ensure high quality of the educational and research process in accordance with the achievements of modern statistical science and practice.

8. Professional realisation

The graduates of the doctoral programme "Statistics and demography" find successful realisation not only in the field of science and higher education, but also as experts, advisors, analysts, managers and other specialists in the National Statistical Institute, the Territorial Statistical Bureaus, ministries, agencies, regional administrations, research institutes, banks, insurance companies, tax administration, marketing and sociological agencies, research units of companies, etc. The training provides the graduates of the doctoral programme with high educational qualification, corresponding to the growing requirements and opportunity for scientific and teaching career in the field of higher education.

9. Educational and scientific degree and professional qualification

Graduates of the doctoral programme "Statistics and demography" acquire educational and scientific degree "doctor", gaining in-depth theoretical knowledge in the field of statistics and their practical application through the use of statistical software products, modern statistical information systems, electronic libraries, etc.

Dean: (Prof. Atanas Atanasov, PhD)

Head of department: (Assoc. prof. Plamen Petkov, PhD)

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CURRICULUM

Doctoral programme
„ STATISTICS AND DEMOGRAPHY “

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I. EDUCATIONAL ACTIVITY

№	Type	Code	Subject/Activity	ECTS credits	Form of assessment
1	R	*Fundamental Courses (doctoral minimum I)*		25	exam
		FEA-DSAM-D-101	1. General theory of statistics		
2	E	*Specialized Courses (doctoral minimum II)*		25	exam
		FEA-DSAM-D-102	1. Economic statistics		
		FEA-DSAM-D-103	2. Social statistics		
		FEA-DSAM-D-104	3. Demographic statistics		
		FEA-DSAM-D-105	4. Principles of econometric study		
			5. Subject related to the topic of the doctoral degree dissertation		
3	C	FIC-DSSL-D-901	Methodology of science and research	10	c.g.
4	C	FIC-DSSL-D -902	Academic writing and presentation methods	10	c.g.
5	C	FEA-DSAM-D -901	Methodology and methods of empirical research	10	c.g.
6	C		Attendance and participation in courses (seminars, doctoral degree tutorials), conferences and other training activities	5	IS report
			Total:	**85**	

7	F	FMM-DBI-D-901	Information technology	10	c.g.
8	F	FF-DFLT-D-901	English for doctoral degree students (B2)	10	c.g.
9	F	FF-DFLT-D-902	English for doctoral degree students (C1)	10	c.g.
10	F	A master or bachelor degree subject		According to the curriculum of the subject	exam
11	F	Participation in trainings related to the doctoral degree studies		5 for each training	certificate
12	F	Participation in mobility for training or practice purposes		30 for each mobility	Mobility protocol

II. SCIENTIFIC, RESEARCH AND PUBLICATION ACTIVITY

№	Type	Subject/Activity	ECTS credits	Form of assessment
1	C	Publications regulated in group D, indicators 4 – 10 from RIDASRBA	30	IS report
		Total:	**30**	
2	F	Participation in science and research projects	10 per project	contract
3	F	Participation in mobility for research purposes	10 per mobility	Mobility protocol
4	F	Participation with science reports in scientific forums (national or international)	1 for each report	Participation certificate publication
5	F	Publications exceeding the standard of minimum required points regulated in RIDASRBA outside ch. II.1 and II.4	1 for each subchapter	publication

III. PREPARATION OF A DISSEERTATION PAPER AND AN ABSTRACT

№	Type	Activity	ECTS credits	Form of assessment
1	C	Dissertation paper, including:	50	Science advisor and a DC protocol
1.1.		Theoretic and research work	10	science advisor
1.2.		Empirical and research work	10	science advisor
1.3.		Preparation of a chapter from the dissertation paper	20	science advisor
1.4.		Submission of a final version to the approval of the DC	10	a DC protocol
2	C	Preparation of an abstract and an original contribution declaration	10	a DC protocol
		Total:	**60**	

IV. TEACHING AND EXPERT ACTIVITY

№	Type	Subject/activity	ECTS credits	Form of assessment
1	E	Delivering a series of lectures and/or seminars according to the curriculum	5	Report from the SA visit
		Participation in expert and consultancy activity		Report by the SA; contract/reference
		Total:	**5**	
2	F	Delivering a series of lectures and/or seminars according to the curriculum	5 ECTS credits for 28 provisional classes	Remuneration form
3	F	Participation in expert and consultancy activity	2 ECTS credits per participation	report by the SA; contract/reference
4	F	Participation in mobility for teaching purposes	10 ECTS credits per mobility	certificate

BASIC COMPONENTS OF THE CURRICULUM

Activity	ECRS credits
COMPULSORY ACTIVITIES	
Educational activity	85
Scientific and educational activity	30
Preparation of a dissertation paper and an abstract	60
Teaching and expert activity	5
Total:	180
FACULTATIVE ACTIVITIES	
Educational activity	According to the IS of the doctoral student
Scientific and education activity	
Teaching and expert activity	

DEAN: (Prof. Atanas Atanasov, PhD.)

HEAD OF DEPARTMENT: (Assoc. prof. Plamen Petkov, PhD)