INFORMATION PACKAGE
/ECTS/

FIELD OF HIGHER EDUCATION: 5. TECHNICAL SCIENCES

PROFESSIONAL FIELD: 5.1. MECHANICAL ENGINEERING

SPESIALITY: DESIGN, TECHNOLOGY AND MANAGEMENT IN THE SEWING INDUSTRY

EDUCATIONAL DEGREE: MASTER

LEVEL BY NATIONAL QUALIFICATION FRAMEWORK LEVEL 7

NUMBER OF CREDITS ON ESTS 60

QUALIFICATION: MASTER of ENGINEERING

DUARATION: ONE YEAR

FORM OF EDUCATION: FULL or PART TIME

ENTER FROM 2017/2018

QUALIFICATION CHARACTERISTICS

of the specialty: **DESIGN, TECHNOLOGY AND MANAGEMENT IN THE SEWING INDUSTRY**

EDUCATIONAL DEGREE: **MASTER**

QUALIFICATION: **MASTER - ENGINEER IN THE SEWING INDUSTRY**

DESIGNATION AND COURSE EDUCATIONAL PURPOSES

MA programme is intended for the BA degree students graduated in the professional field 5.1. Machine engineering, who have knowledge in the sphere of design, technologies and management of the sewing industry.

The professional purpose of a Master in Engineering in the sewing industry is to carry out investigating, design, research, introducing, exploitation, production, technological, organizational and management, advertising, trade and logistic activity both in the public and private sector of sewing and textile industry.

The developed course programme documentation corresponds to the latest trends in the technical, technological and economic improvement of the sewing industry, taking into account international experience and the preservation of national traditions and achievements in the field of design, production and management of textile and sewing products.

The MA programme of "Modeling, technologies and management in the sewing industry" aims at training specialists for investigating, designing, construction, technology, production, organization, control and management, advertising, trade and logistic activities, as well as research and introducing activity in all levels, processes and areas of the contemporary sewing industry, who have the knowledge, skills, habits, attitudes and values relevant to modern sewing fast-developing technologies, techniques and requirements of the international market regarding sewing products. The Master in modeling, technologies and management in the sewing industry should acquire skills to improve their knowledge and practical skills and competences, master modern methods for carrying out research and have very good professional communication, through which continuously to maintain their professionalism at advanced level in the field of sewing industry.

REQUIREMENTS FOR TRAINING THE SPECIALIST

The Master of Engineering in the sewing industry is preparing as wide-profiled specialist who besides good specialized training, has knowledge of the organization, planning, processing and analysis of scientific experiments. The training course is structured in the following parts:

- required subjects, which provide the building of base theoretical and specialized platform in preparation for major "Modeling, technology, and management in the sewing industry";

- elective courses that enable it to be expanded and upgraded general theoretical and specialized training in the major. During the course of the elective subjects the students are providedwith conditions for deepening and enriching the specification of the acquired knowledge and developed skills and competence within the required subjects;
- the compulsory courses provide an opportunity to enrich their knowledge, skills and competences of students in dependence of the diverse focus of their interests;
- the graduation of students requires taking State examination of the major or thesis defense, with which they acquired 15 credits.

PROFESSIONAL SKILLS AND COMPETENCES

Through this course education the future Masters in Engineering in the sewing industry shall gain:

• Professional knowledge in the field of: research and introducing activities; design of textile and garments; using modern design computer technologies, modeling, design, advertising, organization of production and other processes and activities in the field of sewing industry; modern textile and sewing technologies; advertising and company management.

• Professional skills: to select and creatively interpret the scientific information in various sources; to master research strategies thanks to which will accomplish at a high scientific level empirical and theoretical tasks on specific creative projects; to use and apply in a creative way their knowledge in science and practice; to design textile products, garments, fashion collections, the manufacturing organization in the sewing company; to set tasks and in the best way possible to solve problems and queries arisen in the production, sale and trade of textile products and garments; to apply modern methods and tools for solving engineering tasks given; to put into practice the established interdisciplinary connections; to organize and manage the production, advertising, trade and logistic activity in the sewing industry.

• Competences:

-self-dependence and responsibility – to be able to independently plan, organize and manage in a professional way the technological and technical activity in the sewing industry; to have the ability to find independently the way in theoretical and applied achievements and their application in the theory and practice of sewing production; to be able to establish organizational structures and to manage teams independently, to organize activities requiring a high degree of coordination, to show creativity and innovation in developing projects;

- studying competence - to be able to assess thoroughly their knowledge and the need of new one, to orientate in the interdisciplinary course content, to have a wide terminological vocabulary;

-communication and social competences – to be able to present and defend in a clear, accessible and well-grounded way their own and collective ideas and formulations of problems and possible solutions; -personal and professional qualities -

A result of the academic education in the course is building up a comprehensive professional technical culture of a Master in engineering in

the sewing industry, which finds expression in moulding significant professional and personal qualities such as self-improvement of the knowledge and skills, acquiring higher qualification through self-learning, company training, creative usage and applying of knowledge and skills in the sphere of rapidly changing fashion trends, structure and composition of textile materials, machinery, equipment and technologies for their processing; skills in taking initiatives for making reasoned judgments and finding optimal solutions to complex production-technological, organizational and management issues.

FIELD OF PROFESSIONAL DEVELOPMENT

Students who successfully graduate their education are prepared to be implemented in all private, corporate and public companies, in representative offices of companies for sale and distribution of textile and sewing products and machinery and equipment for textile and sewing production, to work in manufacturing companies and departments for textile and sewing products such as process engineers, manufacturing organisers, engineer - designers of garments, department heads of sewing machines repair and operation - conventional and automated; to develop their own business and manage textile and sewing companies, as well as companies related to advertising, trade and logistics in the sewing industry sphere; to be teachers in professional high schools after acquiring an additional teaching qualification, they may also continue their education in PhD programs and become university lecturers.

POSITIONS, WHICH CAN BE TAKEN ACCORDING TO THE NATIONAL CLASSIFICATION OF OCCUPATIONS AND POSITIONS

The positions that can BE taken by the graduates with “Master” degree in the sewing industry according NKDP are: organizer and manager of medium and small companies; stylist-designer of clothes; inspector /quality of products, quality of production processes/; assessor /clothing/; quality controller; foreman; organizer of the production; manager; specialist and technician in companies related to commercial, logistics and design activities; leaders in business services and administrative activities - manager; infrastructure and logistics in the enterprise / sewing /; chief technologist; Deputy Head, separate proceedings; Engineer quality; Engineer-technologist, production of clothing; Engineer-technologist, production of textiles; Mechanical Engineer, Engineer, production planning, forecasting and development; Engineer, production efficiency; Engineer production; Chief Engineer, manufacturing; Logistics manager; Production manager; Technical Director; Director, production; researcher; teacher / acquired after teaching qualification /; teacher, high school; assistant, university.Master - engineer can continue their education in educational and scientific degree Ph.D.

QUALIFICATION CHARACTERISTICS was adopted at a meeting of the Department Council of the Department Mechanical Engineering and Technlogy, held on 25.08.2015, Protocol №5 The curriculum was adopted at a meeting of the Faculty Council of the Faculty of Engineering, held on 25.08.2015, Protocol № 4 and it was approved at a meeting of the Academic Council of SWU "Neofit Rilski", held on 16.09.2015, Protocol № 45.

DEGREE COURSE OF MODELLING, TECHNOLOGIES AND MANAGEMENT IN THE SEWING INDUSTRY

CURRICULUM

First academic year			
First semester	ECTS credits	Second semester	ECTS credits
Design and organisation of the production in sewing industry	5	Technology of manufacture of garments with Complex	4
Modern textile technologies	5	Structure Parts	
Theory of engineering experiment	5		
Quality management in sewing industry	5	High efficiency materials and technologies	3
Elective course from Group 1	5	Design and manufacture of	5
Elective course from Group 2	5	fashion collection- Course project	
Elective choice I		**Elective course from Group 3**	3
-Computer design of textile products		Diploma Thesis	15
-Development and design of constructors documentation with CAD systems		**Elective choice III** -Advertising and computer design of textile and garment -Market economics	
Elective choice II -Advertising design of textile and garment -Trade mark			
	Total: 30		Total: 30

TOTAL: 60 CREDITS FOR ONE ACADEMIC YEARS

DESIGN AND ORGANISATION OF THE PRODUCTION IN SEWING INDUSTRY

ECTS credits: 5	**Semester**: I
Evaluation: current control, course work **Exam type**: term assessment	**Hours per week:** 2 lectures+2 laboratory exercises
Course type: lectures +laboratory exercises	**Course status:** Compulsory
	Degree Course: Modelling, Technologies and Management in the Sewing Industry

Lecturer: Prof. Eng. Snezhina Andonova, PhD
Department: Mechanical engineering and technologies
Faculty: Faculty of Engineering
Phone: (+359 73) 073 88 51 62, Email: andonova_sn@swu.bg

Assistant: Assistant Professor Elena Blagova, PhD
Department: Mechanical engineering and technologies
Faculty: Faculty of Engineering
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Address: 2700, Blagoevgrad, Ivan Mihailov Str. 66

Annotation:

The course comprises the main issues related to the methodology of consistent design of technological lines in the manufacturing industry and the overall organization of production in the sewing industry.

The purpose of the course:

The course aims at students' acquiring knowledge of the objectives, tasks, methods, organizational and technological features in the consecutive design and practical realization of the organization of production in a sewing factory.

Educational methods:

Lectures, individual work and scientific literature textbook exercises, brainstorming and discussion, solve problems, exercise, and Power Point presentation.

Inscribing for tuition: Not necessary.

Inscribing for exam: Agreement with the lecturer and the Students Service Department

THEORY OF ENGINEERING EXPERIMENT

ECTS credits: 5	**Semester:** 1 st
Evaluation: written exam	**Hours per week:** 1 lecture + 2 laboratory exercises
Course type: lectures + laboratory exercises	**Course status:** Compulsory
	Degree course: Modelling, Technologies and Management in the Sewing Industry

Lecturer: Assoc. Prof. Dimitrina Kerina, PhD – d_kerina@swu.bg
Assistant: Assoc. Prof. Fetima Sapundzi, PhD - sapundzhi@swu.bg
Department of Communication and Computer Engineering and Technologies – technical_kktt@swu.bg
Faculty of Engineering - technical@swu.bg, 2700 Blagoevgrad, 66 Ivan Mihailov str., *Phone:* +359-73-88 51 62

Annotation:
Main topics of the course are: Theoretical foundations of engineering experiment, Planning and organization of engineering experiment, Statistical methods for processing of experimental results and Methodology development and defence of master's thesis.

Purpose of the course:
The course in Theory of Engineering Experiment aims to provide theoretical and practical knowledge of M. Sc. Degree students for the development and defence of Master's thesis.

Educational Methods:
Lectures are prepared on Power point. The contemporary technical equipment as multimedia, software, models, etc. is used for these lectures. Lectures are visualized by demonstrations and laboratory tasks performance during the laboratory classes.

Inscribing for tuition: Not necessary.

Inscribing for exam: Agreement with the lecturer and the Students Service Department

MODERN TEXTILE TECHNOLOGIES

ECTS credits: 5	**Hours per week:** 3 lecture hours and 1 practical exercises hour per week
Evaluation: current control	**Exam type**: written exam
Semester: 1st semester	**Degree Course:** Modelling, Technologies and Management in the Sewing Industry

Lecturer: Part- time, Associate Professor, Eng. Ivelin Rahnev, Ph. D,
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Faculty: Faculty of Engineering
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Assistant: Chief assist. Prof. Eng. Blagoyka Paleva- Kadiyska, Ph. D,
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Annotation:
The course "Modern Textile Technologies" provides preliminary information and basic knowledge of the students on the trends in the development of textile technologies used in this industry for the production of textile products. The subject provides initial knowledge of the new technological processes for processing of textile materials and the obtaining of articles - spinning, weaving and knitting.
The purpose of the course:

The purpose of the course:
Students to acquire the necessary minimum of theoretical and professional knowledge and skills for the implementation of modern technological methods ин textile.

Educational methods:
Lectures, individual work and scientific literature textbook exercises, brainstorming and discussion, work individually, solve problems, exercise, and Power Point presentation.

Course Status:
Compulsory course in riculum of Modelling, Technologies and Management in the Sewing Industry

Assessment: written final exam

Registration for the Exam: coordinated with lecturer and Students Service Department

TECHNOLOGY OF MANUFACTURE OF GARMENTS WITH COMPLEX STRUCTURE PARTS

ECTS credits: 4	**Semester**: II
Evaluation: Written exam	**Hours per week:** 2 lectures+2 laboratory exercis es
Course type: lectures +laboratory exercises	**Course status:** Compulsory
	Degree Course: Modelling, Technologies and Management in the Sewing Industry

Lecturer: Prof. Eng. Snezhina Andonova, PhD
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Assistant: Assistant Professor Umme Kapanyk
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Annotation:

The course helps the students' theoretical knowledge and practical skills with regard to the technology for production of different types of intended sewing articles with complex internal structure to enrich and further develop.

The purpose of the course:

During the practical classes the students sew a shoulder and a waist clothing pattern with a complex internal structure.

Educational methods:

Lectures, individual work and scientific literature textbook exercises, brainstorming and discussion, solve problems, exercise, and Power Point presentation.

Inscribing for tuition: Not necessary.

Inscribing for exam: Agreement with the lecturer and the Students Service Department

HIGH EFFICIENCY MATERIALS AND TECHNOLOGIES

ECTS credits: 3	**Semester**: II
Evaluation: Written exam	**Hours per week:** 2 lectures+1 laboratory exercis es
Course type: lectures +laboratory exercises	**Course status:** Compulsory
	Degree Course: Modelling, Technologies and Management in the Sewing Industry

Lecturer: Assoc. Prof. Eng. Ivan Amudzhev, PhD
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Assistant: Assist. Prof. Vasil Chobanov,
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Annotation:

The course focuses on modern high-performance materials and technologies in the field of machine-building. An important attention is paid to the nanotechnologies and nanomaterials, which are the basis of many metallographic problems. What is also studied are the achievements in biocompatible materials and memory alloys. An attention is drawn to composites, powders, functional coatings, carbide and the whole group of steels and alloys with special properties (superconducting alloys, magnetic materials, etc.), new polymer materials.

The purpose of the course:

The course has a theoretical and applied character. Its main objective to introduce to students the basic applied research and achievements of the contemporary science in the field of materials and technologies in machine building; students should be informed of the scientific research in different natural sciences, assisting for the complex solution of the task of developing and implementing high efficient materials and technologies.

Educational methods:

Lectures, individual work and scientific literature textbook exercises, brainstorming and discussion, solve problems, exercise, and Power Point presentation.

Inscribing for tuition: Not necessary.

Inscribing for exam: Agreement with the lecturer and the Students Service Department

ADVERTISING DESIGN OF TEXTILE AND GARMENT

ECTS credits: 5	**Semester**: I
Evaluation: current control, course work **Exam type**: term assessment	**Hours per week:** 2 lectures+2 laboratory exercises
Course type: lectures +laboratory exercises	**Course status:** elective
	Degree Course: Modelling, Technologies and Management in the Sewing Industry

Lecturer: Prof. Eng. Snezhina Andonova, PhD
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Annotation:

The course provides fundamental knowledge of creating a generic image in advertising using different visual tools and of linking the artistic to the psychological flair; what are analyzed are the "permanent" and "variable" dimensions of the "corporate style" as an advertising signage system; the requirements for establishing a characteristic and durable visual image in the user's mind, the methods for highlighting the complex subject centre during the advertisements creating, the laws of composing design of advertising materials are introduced.

The purpose of the course:

The aim is to provide learners with knowledge to form a specific visual image about the overall activity of a textile or sewing factory and to realize the advertising material through modern computer technologies.

Educational methods:

Lectures, individual work and scientific literature textbook exercises, brainstorming and discussion, solve problems, exercise, and Power Point presentation.

Inscribing for exam: Agreement with the lecturer and the Students Service Department

COMPUTER DESIGN OF PLANE TEXTILE ARTICLES

ECTS credits: 5	**Hours per week:** 2 lecture hours and 2 practical exercises hour per week
Evaluation: current control	**Exam type**: term assessment
Semester: 1st semester	**Degree Course:** Modeling, Technologies and Management in the Sewing Industry

Lecturer: Chief Assistant Professor, Eng. Blagoyka Paleva-Kadiyska, Ph.D,
Department: Mechanical engineering and technologies
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Assistant: Assist. Prof. Elena Blagova, PhD
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Annotation:
The course "Computer design of plane textile articles" provides basic knowledge of students in the design of fabrics and knits. She acquaints students with methods of theoretical design of knits and fabrics and the practical use of some computer software products developed on this subject

The purpose of the course:
The subject has a theoretical-applied character. The main idea of the course is to acquaint students with the basic methods used for the design of textile products and the necessary technological calculations for their elaboration.

Educational methods:
Lectures, individual work and scientific literature textbook exercises, brainstorming and discussion, work individually, solve problems, exercise, and Power Point presentation.

Assessment: Formative assessment

Course Status:
Elective course in riculum of Modelling, Technologies and Management in the Sewing Industry

DEVELOPMENT OF CONSTRUCTION DOCUMENTATION WITH CAD SYSTEMS

ECTS credits: 5	**Hours per week:** 2 lecture hours and 2 practical exercises hour per week
Evaluation: current control	**Exam type**: term assessment
Semester: 1st semester	**Degree Course:** Modelling, Technologies and Management in the Sewing Industry

Lecturer: Chief Assistant Professor, Eng. Blagoyka Paleva-Kadiyska, Ph.D,
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Annotation:
The discipline covers the main issues related to the development of structural documentation - templates, detail reproduction (grading) and floor planing with minimal material consumption through a CAD system.

Educational Methods:
Lectures, individual work and scientific literature textbook exercises, brainstorming and discussion, work individually, solve problems, exercise, and Power Point presentation

Assessment: Formative assessment

Course Status:
Elective course in riculum of Modelling, Technologies and Management in the Sewing Industry

ADVERTISING AND COMPUTER DESIGN OF TEXTILE AND GARMENT

ECTS credits: 3	**Semester**: II
Evaluation: current control, course work **Exam type**: term assessment	**Hours per week:** 1 lectures+2 laboratory exercises
Course type: lectures +laboratory exercises	**Course status:** elective
	Degree Course: Modelling, Technologies and Management in the Sewing Industry

Lecturer: Prof. Eng. Snezhina Andonova, PhD
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Annotation:

The course gives knowledge about application of artistic tools and specialized software products in the creation of advertising materials.

The purpose of the course:

The aim is to get the students the necessary knowledge and skills to application of specialized software products for artistic design of advertising materials, respecting the basic requirements for advertising textile and sewing products.

Educational methods:

Lectures, individual work and scientific literature textbook exercises, brainstorming and discussion, solve problems, exercise, and Power Point presentation.

Inscribing for exam: Agreement with the lecturer and the Students Service Department