



NEOFIT RILSKI SOUTH-WEST UNIVERSITY - BLAGOEVGRAD
BULGARIA

FACULTY OF PEDAGOGY

DEPARTMENT OF TECHNOLOGICAL AND VOCATIONAL
EDUCATION

QUALIFICATION DESCRIPTION

BACHELOR'S PROGRAMME TECHNIQUES, TECHNOLOGIES AND ENTERPRISE

Field of higher education:	1. Educational sciences
Professional area:	1.3. Teaching methods of... (different subjects)
Degree level:	Bachelor's
Professional qualification:	Teacher of techniques, technologies and enterprise
Period of education:	Four years (8 semesters)
Form of education:	Full-time
Code:	

PROGRAM STRUCTURE

The program has been officially approved and accredited. The curriculum and syllabi are developed according to the requirements of the higher education policies and standards in Bulgaria.

The study lasts 4 (four) years (8 semesters). The curriculum provides 2400 academic hours and 240 ECTS CR. The ECTS credits are divided equally in the eight semesters according to the State requirements.

The program structure provides compulsory, elective and facultative courses.

There are 33 **compulsory courses** included (**a total number of 1665 academic hours**). They offer a profound fundamental knowledge and specific competences in both theoretical and practical areas of the study. They follow an interdisciplinary approach. The technical studies and teaching training are also an important part of the program. They take place in different centers, schools and laboratories.

The elective courses (a total number of 735 academic hours) widen the general and basic knowledge and help students to acquire more specific information and professional skills. The curriculum provides 28 elective courses organized in 5 modules: applied social sciences, technical and natural sciences, psychological theories applied in education, educational technologies and specific teaching methods. Students chose 13 of them according to their interests and educational needs.

The facultative courses enable students to acquire new skills and knowledge of their interest that are not a part of the curriculum.

Students graduate after they successfully pass their final exam or defend their senior thesis according to the state and university rules and regulations.

EDUCATIONAL MOBILITY AND INTERNATIONAL COMPATIBILITY OF THE EXPERTISE GAINED

The curriculum design, the program structure, ECTS, the quality of education and the qualification gained enable students to be competitive on the labour market as specialists or to continue their education and qualification in Bulgaria or abroad.

QUALIFICATION AND CAREER OPPORTUNITIES

The qualification gained covers the requirements of the national and the European qualification frameworks. Graduated students become qualified design and technologies teachers. They are prepared to implement educational and research work, management and administration activities in the field of design methods, techniques, technologies and enterprise, according to the needs and the requirements of the modern school system.

The Bachelor's program offers career opportunities in the field of private and public education organizations and institutions.

Graduate Bachelor's students have a future possibility:

- to specialize in different forms of continuing education and lifelong learning;
- to proceed with their education in Master's degree

OUTLINE OF THE PROGRAM

First semester		Second semester	
Compulsory courses	ECTS credits	Compulsory courses	ECTS credits
Educational studies	5	Psychology (general, developmental, educational)	4
Mathematics	5	Engineering and Computer Graphics	5
Biology	5	Training in Technical Measurement	3
Materials science	6,5	Technological Training in Agro- and Zoo- Technologies	3
Training in Computer Technologies	5	Sports	
Foreign language	3,5		
Sports			
Elective courses		Elective courses	
		Students can chose one course in each of the following modules:	
		Module A (Applied Social Sciences and Activities)	5,5
		Basics of Distance Education	
		Modern Educational Strategies and Technologies	
		Module B (Technical and Natural Sciences):	4
		Technical Mechanics	
		Applied Mechanics	
		Module C (Applied Psychological and Educational Sciences and Activities):	5,5
		Technology of Organizational Behavior	
		Jobs Analysis	
	Total:		Total:
	30		30
Third semester		Fourth semester	
Compulsory courses	ECTS credits	Compulsory courses	ECTS credits
Pedagogy of General Technical Preparation	4	Didactic Prognosis and Modeling Part 1	6
Teaching Practice at School	4	Pedagogical Training in Information and Communication Technologies in Education	5
Fundamentals of Electrical Engineering and Electronics	4	Technological Training in Mechanical Technologies	3
Training in Electrical Engineering and Electronics	3	Technological Training in Home and Service Technologies	5
Educational Training in School Administration	3	Sports	
Sports			
Elective courses		Elective courses	
Students can chose one course in each of the following		Students can chose one course in each of the following modules:	

modules: Module A (Applied Social Sciences and Activities) Pedagogical Sociology Civil Education	6	Module B (Technical and Natural Sciences): Foundations of Environmental Conservation Renewable Energy Resources	5 6
Module B (Technical and Natural Sciences): Machines Science Machine elements	6	Module D (Specific Educational Technologies): Technology of Professional Training Technology of Lifelong Learning	
	Total: 30		Total: 30
Fifth semester		Sixth semester	
Compulsory courses	ECTS credits	Compulsory courses	ECTS credits
Didactics of Technology Education Part 1	5	Didactics of Technology Education Part 2	5,5 4
Teaching Practice at School	3,5	Teaching Practice at School	5
Didactic Prognosis and Modeling Part 2	5	Methods of Technical Training in Elementary School	5,5 5
Technological Training in Home and Service Technologies	3,5	Technical Modeling	5
Technological Training in Technical Design and Construction	3	Methods of Vocational Guidance	
Sports		Sports	
Elective courses		Elective courses	
Students can chose one course in each of the following modules: Module B (Technical and Natural Sciences): Psycho-Pedagogical Measurement in Technology Education School Consulting	5	Students can chose one course in each of the following modules: Module F (Specific Methods): Methods of Developing Economic Culture in Technological Education Methods of Education in Technical and Technological Activities for Children Dropped out of School	5
Module D (Specific Educational Technologies): Technology of Problem Behavior Fundamentals of Technical Creative Work	5		
	Total: 30		Total: 30
Seventh semester		Eight semester	
Compulsory courses	ECTS credits	Compulsory courses	ECTS credits

Methods of Technical Training in Secondary School	6	Pre-graduation Internship	20
Technologies for Teachers' Career Development	6	Final graduation exam: -Practical part	5
Management of Educational Projects	4.5	-Theoretical part or	5
Sports		Thesis defense	
Elective courses		Elective courses	
Students can chose one course in each of the following modules:	4,5		
Module B (Technical and Natural Sciences):			
History of Pedagogy and Vocational Training	4,5		
Management of Education			
Docimology			
Module F (Specific Methods):			
Methods of Extra -curricular Work in Technics and Technologies			
Methods of Comparative Educational Studies in the Field of Technics and Technology Education			
Module F (specific methods):	4,5		
Methods of Enterprise Education			
Methods of Trainings in Technics and Technologies			
	Total:		Total:
	30		30
Total number of ECTS credits for the whole course of study: 240			

Educational studies

ESTC credits: 5

Assessment form: exam

Semester: I

Department: Pedagogy, Faculty of Pedagogy

Lecturer:

Professor: Dobrinka Todorina, Ds, Pedagogy Department

E-mail: todorina@swu.bg

Head assistant: Nikolay Tzankov Ph.D., Pedagogy Department

E-mail: ntzankov@swu.bg

Course summary:

The understanding of main accents in modern science of education (particularly philosophy of education, theories of education and socialization and learning theory) is an essential part and the foundation of the professional competence of the future teachers, teaching at all levels and stages of the education system.

Course content:

Theoretical problems of education. Science and theory. Scientific research. Philosophy and methodology of science. Methods of scientific research in education. Branches of education science. System of education. Levels and spheres of education. Goals of education. Taxonomy of the educational goals. The role of the clubs in the work with gifted children and students. Approaches to education. The activity approach. The individual approach. The process-oriented approach. The Goal-oriented approach. The Competence approach. Education, socialization and development. Characteristics of development. Human development. Theories of development. Environment, development and education. Education, socialization and education. Socialization and identity. Factors and institutions of socialization. The role of teachers in education and development. Theories of education. Characteristics (referential meanings) of education. Education as a social phenomenon, system and process. Main characteristics and laws in the process of education. Out-of-school (extracurricular)

Evaluation and assessment:

The realization of the course is based on the basic ideas and principles of constructivism as a modern educational paradigm. The main principle is the one of setting a task within a certain situation. Practical situations are used to construct educational tasks to be completed with the help of ICT. The practice is organized and controlled through the use of a desktop visualization which allows the instructor to help students in all stages of their training. Students' achievements are regularly diagnosed through tests and practical assignments. The results are organized in a portfolio which is the basis of a summative assessment. The educational process is structured in a way that allows a transition from standard platforms for management of educational contents to system-based ones for sharing and creating of portfolio through the means provided by a shared environment.

Weekly workload: 2+1

Type of the course: compulsory

Mathematics

ECTS credits: 5

Assessment form: exam

Semester: I

Department: Mathematics

Lecturer: Assoc. prof. Kostadin Samardzhiev, PhD

E-mail: k_samardzhiev@abv.bg

Course summary:

The course includes: solving problems from corresponding topics of the school curriculum in mathematics; analyzing and generalizing of the solution methods, using students' knowledge in methodology and the courses: Foundations of High Course in Mathematics

Course content:

Students should obtain knowledge for the nature of mathematical problems in High Course in Mathematics (HCM). Moreover in the course are clarified the aims that should be pursued, when mathematical problems are solved. The course helps students to systematize and to assimilate their knowledge in methodology and in this way they get profound preparation for their future profession; the students get problem solving skills in HCM, using knowledge of different age groups.

Evaluation and assessment:

Teaching Methods: lectures, seminars, tutorials, assignments, projects, tests

Requirements/Prerequisite: Some knowledge in methodology of teaching mathematics and School Course in Mathematics 5-12 grade /specialized preparation 8-12 grade/, is necessary.

The final grade is formed of the results of two problem solving tests, during the semester – 75%, and a project presentation – 25%.

Weekly workload: 2+1

Type of the course: compulsory

Biology

ECTS credits: 5

Assessment form: exam

Semester: I

Department: "Turism"

Faculty of Economics

Lecturer: Assos. prof. Yana Voinova, PhD

E-mail: yanka2002voinova@abv.bg

Course summary:

The course in General biology is designed to teach students the basic knowledge about the different forms of organization of living matter, the organism systematics, the basic physiological processes, the organization of genetic material, the genetic engineering, the achievements and perspectives of plan biotechnologies etc. The main tasks are directed towards acquiring knowledge for the structure and functioning of living systems, and gaining research skills.

Course content:

The course presents the main issues of biology as a system of fundamental sciences, that underlie the agriculture, forestry, medicine and biotechnologies. The discipline content has been structured in two divisions:

Division I. Organism organization and systematic. Organism organization and systematic – viruses, prokaryotes- cyanobacteria and bacteria; eukaryotic cell structure and components; cell division – mitosis and meiosis; plant tissues; vegetative and generative plant organs; plant reproduction; organism classification – kingdom Protista, kingdom Fungi, kingdom Vegetalia, kingdom Animalia.

Weekly workload: 2+1

Type of the course: compulsory

Division II. Physiology, genetics, biotechnologies. *Basic physiological processes* in plants – photosynthesis, respiration, water exchange, mineral nutrition, growth and development; structure and organization of genetic material of prokaryotes and eukaryotes, nucleic acids (DNA and RNA) – structure and functions; karyotype, genes and chromosomes, crossover; phenotype and genotype, biotechnologies - *genetic engineering, tissue and cell cultures*.

Evaluation and assessment:

The lectures are presented using different graph images, pictures, figures, text materials, slides. The exercises are conducted in a laboratory.

The final grade is formed on the basis of continuous control and written exam. The continuous control takes place during the semester and includes a test, an assignment, and the students' preparation and work during the exercises. The share of the continuous control from the final grade is 40%.

The written exam includes 2 questions from the discipline content. The share of the written exam from the final grade is 60%. The final grade is formed on condition that the student' grade on the written exam is at least 3.00.

Materials science

ECTS credits: 6,5

Assessment form: exam

Semester: I

Department: Department Computer systems and Technologies

Mathematics and natural sciences department

Lecturer: Assoc. prof. Valeri Vachkov, PhD

E-mail: v.vatchkov@swu.bg

Course summary:

Electronics, mainly the microelectronics currently is developing with exceptionally fast pace, mainly for the usage of computer industry (personal computers and microcomputers). This presupposes proactive development of the technologies for different materials and increasingly improvement of the processes of their obtaining and processing. Such materials are the semiconductors and metals, dielectric and magnetic materials, the various thin layers with interesting qualities and applications. The main objective of each specialist, teaching in the area of electronics, specifically the microelectronics and nano electronics is to establish a connection among the composition, structure and qualities of the materials in order to use them professionally in the creation of products of the electronic industry, communications and computer technology. The main exploitation characteristics of the electronic devices, such as degree of integration, speed of action, selectivity, photo sensibility, performance, depend on the clarity, the casting, defects in structure, the compatibility and quality of processing of the materials.

The subject is related to the courses in physics, semiconductor elements, electrical and electronic measurements, microprocessor technology.

Course content:

The object of the course is that the students acquire knowledge about the main methods for creation and processing of the various electric material, used in the modern electronic and computer devices.

Expected results: The students should have an overview of the processes and technologies of production of material for electronic components and electronic devices. They should be able to acquire abilities of independent drafting of specific technological processes. To acquire knowledge logically to analyze the data taken in the process of practice. Should be able to record the basic characteristics of various materials, to make independent conclusions after analysis in the course of practical exercises and to offer solutions – schemes or practical ones. To build

knowledge and abilities to work experimentally and solve specific issues in the area of knowledge of materials and electronics.

Evaluation and assessment:

Ongoing control of each practical exercise. The aim of the ongoing control is to form responsibility in respect of the obligation of preliminary preparation, system work in education, forming of correct technological thinking, abilities to work with software and ability to work in a team.

Training in Computer Technologies

ECTS credits: 5

Weekly workload: 0+0+3

Assessment form: continuous assessment

Type of the course: compulsory

Semester: I

Department: «Technological and Vocational Education Training»

Faculty of Education

Lecturer: Head assistant Liybima Zoneva

E-mail: zoneva@swu.bg

Course summary:

The course aims to form an understanding of the nature, characteristics, functional specification and capabilities of the modern computer technologies and to teach basic instrumental and functional computer skills, which are necessary for an effective professional activity in the Information Society we are living. The emphasis is on the practical use of the computer systems and the global network for the purposes of the technological education and the formation of digital competence. Students research, evaluate, select and use information products, design and create data objects and resources by using modern information services.

Foreign language

ENGLISH FOR TECHNICAL PURPOSES

ESTC credits: 3,5

Weekly workload: 0+0+2

Assessment form: exam

Type of the course: compulsory

Semester: I

Department: Pedagogy

Lecturer: Head assistant: Yana Rangelova, Pedagogy Department

E-mail: yana.rangelova@abv.bg

Course summary:

This course is designed for students in technical or vocational education. It is intended to develop the ability of the participants to communicate comprehensively and to undertake technical studies in English, using appropriate vocabulary and grammatical structures. The course focuses on all language skills as well as accuracy.

Students encounter various activities and audio visual aids as sources/cues for learning and using the language. The course aims to consolidate the English that the students already know, and to give them confidence in using the language.

This course is aimed at:

Preparing participants who intend to get a job in technology.

Developing participants' communication skills.

Providing participants with background in major technological concepts.

Understanding some English terms used in topics related to technical and industrial fields.

Recognizing and use different note taking techniques.

Course content:

Tools and instruments, basic technical operations, materials, quality and characteristics of materials, describing tools and materials, shapes and measurement, describing a workshop, giving and understanding technical instructions, reading comprehension.

Evaluation and assessment:

Final evaluation includes:

- Attendance.
- Written and oral presentation of an own design project.
- All self-study assignments submitted.
- Final written test (min. 66% correct).
- Oral exam.

Psychology (general, developmental, educational)

ECTS credits: 4

Assessment form: exam

Department: "Department of Psychology

Lecturer: Assoc. Prof. Maria Mutafova, PhD,

E-mail: mariamutafova@swu.bg

Course summary:

Bachelors acquire specialized theoretical competence in Psychology (General, Developmental and Educational psychology) course. The purpose of the proposed training is students to benefit from advances in world practice in General, Developmental and Educational psychology, and building skills to interpret data from empirical studies for application of appropriate methods of psychological diagnosis, research design and psychological characteristics of the interaction between teachers and students of varying ages. Competence, skills and research culture in Psychology is stimulated.

Weekly workload: 2+1

Type of the course: compulsory

Engineering and Computer Graphics

ECTS credits: 5

Assessment form: exam

Semester: I

Technical Education and Vocational Training Department

Department: «Technological and Vocational Education Training»

Faculty of Education

Lecturer: Assoc. Prof. Eng. Stoycho Stefanoff, PhD

E-mail: ststephanoff@swu.bg

Course summary:

The course is designed to introduce students to the design methods of spatial objects and standards related to engineering graphics and the power of computer graphics.

Course content :

Place and role of engineering and computer graphics. Resources and requirements for forming the drawings. Geometrical Drawing. Projection drawing (geometric bodies, rectangular design, perspective projection, intersection of geometric objects, unfolds of geometric objects, views, sections and cuts). Technical Drawing. Introduction to computer graphics.

Evaluation and assessment:

In lectures, students are introduced to the theoretical basis of the course.

Lectures using combined classical and interactive methods used multiemediyni programs.

Assessment of student achievement is based on:

- Visit and activity on lectures and practical exercises;

- Execution of assignments.
- Control classes.

Technological Training in Agro- and Zoo- Technologies

ECTS credits: 3

Assessment form: continuous assessment

Semester: II

Department: "Turism"

Faculty of Economics

Lecturer: Assos. prof. Yana Voinova, PhD

E-mail: yanka2002voinova@abv.bg

Course summary:

The aim of the course is students to accumulate the necessary knowledge in the technologies to grow plants and animals and to get acquainted with the latest developments in Bulgaria and the world.

Course content:

The discipline content has been structured in two divisions:

Division "Agrotechnologies". Students study the biology varieties of more important types and sorts in economical important agricultural crops, the suitable soils in the respective agro-ecological regions of Bulgaria, the sowing rate and other agricultural activities in the relevant technologies. Attention is paid to the resource-economic and the soil protection technologies.

Division "Zootechnologies" Considered the biological characteristics of the individual types of producing animals, the breeds and the breed structure, the technologies of growing, feeding, reproduction, etc., and areas of the different breeds in relation of the ecological factors of the environment and their air conditioning for maximum expression of the genetic potential.

Evaluation and assessment:

The exercises are conducted in a laboratory, agro-firms and different farms (cattle-breeding, poultry). During the exercises many different tasks are made. The continuous control takes place during the semester and includes discussions, protection of a project and a test.

Weekly workload: 0+0+2

Type of the course: compulsory

Pedagogy of General Technical Preparation

ECTS credits: 4

Assessment form: exam

Semester: III

Department: «Technological and Vocational Education Training»

Faculty of Education

Lecturer:

Ass. Prof. Emiliya Bozhkova, Phd.

E-mail: emboj@abv.bg

Course summary:

Training in the disciplines performs leading integral and system-building functions regarding the vocational preparation of students. The knowledge and skills gained integrate the laws and regularities of the educational, scientific - methodical and organizational-managerial functions of the general technology preparation system.

Course content:

Weekly workload: 2+1+0

Type of the course: compulsory

MODULE FIRST. Methodological grounds of pedagogy of general technological preparation. Scientific status. Structure of scientific problems. Scientific tools. Conceptual system. Development of scientific theories for general technological preparation.

MODULE SECOND. Theory of general technological preparation: General technological preparation as social-economical and pedagogy phenomenon. Cooperation between the general training, vocational and general technological preparation. Contents of the general technological preparation. Criteria and indicators for determining the level and character of students' general technological preparation.

MODULE THIRD. Base systems for general technological preparation. Traditions and tendencies. Basis approaches. Peculiarities of general technological preparation in the system of continuous training. General technological preparation and realization opportunities of personality in market economy conditions.

Evaluation and assessment:

The training is organized as lectures and seminars in small groups. Used are discussions, debates, presented are individual and team approaches.

During the training course performed is ongoing assessment for evaluating individual tasks. The assessment is carried out as per six-grade system depending on the tasks implementation as follows: Excellent 6 – over 80%, Very good 5 – 70%-80%, Good 4 – 50% - 70%, Satisfactory 3– 30% -50%, Poor 2 – below 30%.

Exam procedure: To sit an exam allowed are students having met the requirements of the Rules of Educational Activity of SWU and the overall grade of the ongoing assessment is not lower than Satisfactory 3. The examination procedure includes: presenting preliminary assigned practical task on three problematic areas of the lecture course; solving a non-standardized test consisting of 6 issues with free answer on the lecture course. In case of failure to present the practical task the students are not allowed to do the test.

Teaching Practice at School

ECTS credits: 4

Assessment form: continuous assessment

Semester: III

Department:«Technological and Vocational Education Training»

Faculty of Education

Lecturer: Head assistant Svetlana Nikolaeva, PhD

E-mail: snicolaeva@abv.bg

Course summary:

Observation is to introduce a form of practical training to students specialty "Technology , technology and entrepreneurship ." The purpose of observation is to make students to get a concrete idea of Bidirectional and complexity of the work of the teacher and to form a professional cognitive interest in the teaching profession .

Weekly workload: 0+0+3

Type of the course: compulsory

Fundamentals of Electrical Engineering and Electronics

ECTS credits: 4

Assessment form: exam

Semester: III

Department: Electronics and Communication Engineering and Technologies
Technical College

Lecturer: Assoc. prof. Vladimir Gebov, PhD

E-mail: askon@abv.bg

Course summary:

The Discipline Fundamentals of Electrical Engineering and Electronics is part of a group of educational disciplines in POTT specialty on bachelor's academic degree. It is part of the curriculum like Basics of Electrotechnics and electronics.

Course content:

The Discipline Fundamentals of Electrical Engineering and Electronics contains of two modules:

1. The first one is "Basics of Electrotechnics". It introduces the students with the basic laws and physical phenomena in a wide range of the human knowledge – The use of electromagnetic phenomena. The basic passive and active elements of electrical circuits are given. A variety of electrical machines - their principle of operation, parameters, features and use are viewed. The module Basics of Electrotechnics uses the sets of the previous mathematic disciplines and some units of the Physics discipline.
2. The acquired knowledge are used as base for future electrical and electronic disciplines and form the outlook of the future specialists in this field.
2. The second module is "Basics of Electronics". It introduces the students with the basic building elements of Radio-electronic circuits and devices with their principle of operation and their structural features. The basic areas of the usage of semiconductor components and their defining parameters and features in static and dynamic mode are given. The module "Basics of Electronics" is based on the acquired knowledge from Basics of Electrotechnics and some units of the Physics discipline. The acquired knowledge are used for base for future specialized Radio-electronic disciplines.

Evaluation and assessment:

Forms of current-control testing before each exercise. Examination procedure - to test only allowed students the tasks of practical exercises and the test in writing.

Training in Electrical Engineering and Electronics

ECTS credits: 3

Assessment form: continuous assessment

Semester: III

Department: Department of Computer Systems and Technologies
Faculty of Mathematics and Natural Sciences

Lecturer: Head assistant E.Radev

E-mail: emil777@abv.bg

Course summary:

The students pursue instructional occupations by Technological Practice by as investigating and use cardinal methods and funds for wattage electric and not electric sizes magnitudes and get skills for the installation of passive and semiconductors elements on a board for electronic installation, by bonding, sorts introductions structure particularities, markup, deductions. The students get what was had known for the stand - alone mounting of electronic devices, aligned with of the instructional plans in the average school.

Weekly workload: 0+0+2

Type of the course: compulsory

Course content:

Electrical safety end guard labor. The instruction on going of the practical held. Electricity measurements. Measuring devices. Plumbing of stress and electricity. Quantifying of resistance. Plumbing of power. DCS electricity chains. AC electricity variables chains. Transformers, rectifiers, switches and filters. Preparation of the elements for fabrication and fabrication. Noting and lifting characteristics of semiconductor diodes, thyristor, bipolar and field-effect transistor.

Evaluation and assessment:

The cardinal methods used in the education in the discipline are: instructions, discussion, explanation, pointing out, model, training exercises.

The current control is practiced during the practical semester occupations by students' judgment of the work in the hour and on representation and pleading of the statements in the conclusion as well of the semester.

Educational Training in School Administration

ECTS credits: 3**Assessment form:** exam**Semester:** III**Department:**«Technological and Vocational Education Training»

Faculty of Education

Lecturer: Head assistant Svetlana Nikolaeva, PhD**E-mail:** snicolaeva@abv.bg**Course summary:**

Pedagogical practice "School Administration " is intended to build and expand socialpedagogical competence of students in relation to their future opportunities to participate in the organization and management of formal and informal forms of education.

Weekly workload: 0+0+2**Type of the course:** compulsory

Didactic Prognosis and Modeling Part 1 and Part 2

ECTS credits: 6;5**Assessment form:** exam**Semester:** IV; V**Department:**«Technological and Vocational Education Training»

Faculty of Education

Lecturer: Assoc. prof. Sashko Plachkov, PhD**E-mail:** pla4kov@swu.bg**Course summary:**

The aim of the course is the students to gain knowledge about the theoretical and methodological bases and problems of forecasting and modeling in the private didactical system of scientific knowledge.

Course content:

Methodological foundations of didactic forecasting and modeling. Didactic prognostic system . Terms of didactic forecasting and modeling in the educational environment for teaching in technology and entrepreneurship. Principles and methods of didactic forecasting and modeling.

Evaluation and assessment:

Current control in the process of training with a weight 30% of the total score of the exam.

Examination procedure includes : presentation of development with practical tasks to represent the three main models of predicted activity - retrognosis , diagnosis and prognosis.

Pedagogical Training in Information and Communication Technologies in Education

ECTS credits: 5

Assessment form: continuous assessment

Semester: IV

Department: :«Technological and Vocational Education Training»

Faculty of Education

Lecturer : Head assistant Liybima Zoneva

E-mail: zoneva@swu.bg

Course summary:

The course forms an understanding of the characteristics and the technological tools to implement pedagogical activity in the modern process of informatization of the education. Students will master basic instrumental and functional information knowledge, necessary to operationalize some innovative educational technologies in the high-tech IT environment. Some modern methods of teaching are used.

Students learn and apply new means and techniques of teaching, assessment, school administering and science research based on the use of modern information and communication technologies. Students gain skills in designing, planning, organizing and implementing the educational process by using advanced technology tools and products.

Weekly workload: 0+0+3

Type of the course: compulsory

Technological Training in Mechanical Technologies

ECTS credits: 3

Assessment form: continuous assessment

Semester: IV

Department: «Technological and Vocational Education Training»

Lecturers: Assoc. Prof. Eng. Akulina Stefanoffa, PhD

Head assistant: Assist. Eng. Yordan Angelov

E-mail: AkStephanoffa@abv.bg

iordanangelov@abv.bg

Course summary:

The course is designed to acquaint students with the materials , tools , machines and technologies in three main directions in technological education of students : woodworking, metalworking and work with textiles. The purpose of education is to teach specific technical and technological knowledge of wood , textile and metal materials to form general industrial and professional skills and habits.

Course content:

Module "Wood" - Structure, meaning and properties of wood . Hand tools and work with them. Types of cutting. Structural compounds. Materials for bonding and surface treatment . Technological operations.

Module " Working with textiles" - Types textiles. Technological operations.

Module "Metal" - Technological properties of metallic materials and details. Types of metals and types of parts. Instruments and accessories for manual and machine processing of metals. Joining of metal parts by welding and riveting.

Evaluation and assessment:

Classes are conducted in specially equipped offices . Perform various tasks.

Current rating is average of the three modules. During the sessions are designed with different themes articles. For each article to determine criteria and indicators for evaluation. Is assessed by a discussion of the practical protection works by checking the competence test.

Technological Training in Home and Service Technologies

ECTS credits: 5; 3.5

Assessment form: continuous assessment

Semester: IV, V

Department: «Technological and Vocational Education Training»

Faculty of Education

Lecturers:

Assoc. Prof. Mitova, Ph. D

Assoc. Prof. Stefanova, Ph. D

Head assistant Liybima Zoneva

E-mail: didimitova2006@swu.bg, didimitova2006@abv.bg, zoneva@swu.bg

Course summary:

The education in the discipline provides basic knowledge and skills in the technological competence in the area of everyday and operation technologies. By using different techniques, students master a sequence of operation for implementation of individual and group technological projects with elements of entrepreneurial initiative.

Course content:

First module:

Development of technological projects by topics from the entrepreneurial subjects' contents in elementary school and high-school. Implementation of small business in educational environment.

Second module:

Construction of everyday-used objects at home, by treatment and processing of fundamental constructional and non-constructional materials. Application of informational and communicational technologies.

Evaluation and assessment:

The grading is based on the practical assignments execution; development and defense of technological projects; presentation of the results of these projects. The criteria for grading are: understanding of the material, systematic activity of the assignments' executions, initiative, defense of ideas and decisions, variety of decisions, creativity.

Didactics of Technology Education Part 1 and Part 2

ECTS credits: 5; 5,5

Assessment form: exam

Semester: VII

Department:«Technological and Vocational Education Training»

Faculty of Education

Lecturer: Assoc. prof. Sashko Plachkov, PhD

E-mail: pla4kov@swu.bg

Course summary:

The course aims to introduce students to specific scientific problems of technological education in terms of educational traditions and trends of its development in the era of social globalization and digitalization.

Weekly workload: 0+0+3

Type of the course: compulsory

Weekly workload: 2+0+2

Type of the course: compulsory

Course content:

Specifics and management of the process of technological training. Content and ways of organizing the technological training. Nature of entrepreneurial projects and initiatives in schools and out of school environment. Principles and methods of training in technology and entrepreneurship. Technological training through experience and entertainment.

Evaluation and assessment:

Current control in the process of training with a weight 30% of the total score of the exam.

Examination procedure includes: development of two practical tasks in one of the topics covered in the lectures.

Teaching Practice at School

ECTS credits : 3.5; 4

Assessment form: continuous assessment

Semester: V; VI

Department:«Technological and Vocational Education Training»

Faculty of Pedagogy

Lecturer:

Head assistant: Lyubima Zoneva ,

E-mail: zoneva@swu.bg

Course summary:

The current practice of the students is to provide specific methodological training, independence and confidence in teaching performances of future teachers in the educational learning environment in technology and entrepreneurship in secondary school.

Practical work includes planning and constructing activities "teaching-learning" in education technology and entrepreneurship observations, self-study and conducting lessons in basic school, and use of other organizational forms of training in technology and entrepreneurship

Weekly workload: 0 +0+3

Type of the course: compulsory

Methods of Technical Training in Elementary School

ECTS credits: 5,5

Assessment form: exam

Semester: VI

Department:«Technological and Vocational Education Training»

Faculty of Education

Lecturer: Assoc. prof. Sashko Plachkov, PhD

E-mail: pla4kov@swu.bg

Course summary:

The aim of the course is students to be able to master the basic methodological tools for teaching pupils in technology and entrepreneurship including of subject cycle in primary and lower secondary education.

Course content:

Methodological characteristics in the application of the competency approach in teaching technology and entrepreneurship. Methodological characteristics in the formation of technical and economic concepts in teaching technology and entrepreneurship. Methodological characteristics in dealing with structural and non-structural materials. Methodological characteristics for the development and presentation of technical and technological ideas and solutions / design, construction, modelling / .

Evaluation and assessment:

Current control in the process of training with a weight 30% of the total score of the exam.

Examination procedure includes: presentation of preliminary developed methodological model on a chosen theme from the subject cycle in primary and lower secondary education; constructed with 6 practical terms which are consistent with the content of the course .

Technical Modeling

ECTS credits: 5

Weekly workload: 2 + 0 + 2

Assessment form: exam

Type of the course: compulsory

Semester: VI

Department: Department:«Technological and Vocational Education Training»

Faculty of Education

Lecturer: Assoc. Prof. Eng. Stoycho Stefanoff, PhD

E-mail: ststephanoff@swu.bg

Course summary:

The course introduces students to the basic terms and the role of technical engineering, design and modeling in the creation of technical objects and technological processes. The basic concepts and standardization requirements for constructing documents.

Course content :

Basic concepts - technical objects , techniques and technologies. Technical design - principles , methods and construction requirements . Design . Technical design, design methods . Automated design . Technical modeling - definition , geometric patterns . Application methods of study design and modelirane .

Evaluation and assessment:

For the course using interactive methods , multimedia display, and licensed products for technical design, construction and modeling.

Students individually develop assignments that protect the lecturer .

In the training process we carry out control activities.

Methods of Vocational Guidance

ECTS Credits: 5

Weekly workload: 2 +0 +2

Assessment form: exam

Type of the course: compulsory

Semester: VI

Department: “Technological Training and Vocational Education”

Faculty of Education

Lecturer: Assoc. Prof. Dimitar Iskrev, PhD

E-mail: iskrev@swu.bg

Course summary:

The course is aimed at developing psychological and pedagogical foundation of vocational guidance as integrative social activity. Consider the technology career through social and educational institutions.

Course content: On defines the purpose, objectives and aspects of vocational guidance. It reveals dynamics of the guidelines for the institutionalization of the idea of vocational guidance. Outlines the specialized activities of vocational guidance. On indicate practical approaches, principles, methods and stages of career guidance as social educational process.

Evaluation and assessment:

Theoretical training for the course is combined with practical exertions in which the students' knowledge is specified on a practical level. Training of the course then concludes with continuous assessment determined by the current control (for lectures and practical exercises), the implementation of course assignments and the results of control classes as follows:

Current control: T - 50 points; Assessment course work: W - 150 points; assessment of the control classes: C - 200 points (K = KW1 + KW2) № 1-2 theoretical questions (KW1 - up to 90 points); № 2 - test (KW2 - 100 points).

Rating Scale: when collected up to 50 measurement points - rating: Poor (2) when collected from 51 to 60 points - rating: Medium (3), when collected from 61 to 75 points - rating: Good (4), when collected from 76 to 90 points - rating: Very Good (5), when collected from 91 to 100 points - rating: Excellent (6).

Methods of Technical Training in Secondary School

ECTS credits: 6

Assessment form: exam

Semester: VII

Department: «Technological and Vocational Education Training»

Faculty of Education

Lecturer: Assoc. Prof. D. Mitova, Ph. D

E-mail: didimitova2006@swu.bg, didimitova2006@abv.bg

Course summary:

The discipline is aiming at mastering of the methodological aspects of education in technologies in the high-school stage. The educational content and the means of its implementation are adapted to the contemporary tendencies in technological education in the world and to the new vision of realization of such and education in Bulgarian high-schools.

Course content:

First module:

General educational problems: Scientific status of the methods. Characteristics of the contemporary didactic system in technological education in high-school. Books and handouts.

Second module:

Specific methodological educational problem: Organizational forms of technological education. Didactical principles and methods in technological education. Process. Project-oriented technological education in high-school.

Evaluation and assessment:

During classes, the education is taking place by lectures, practical exercises and school observations. Credits and grades are gained according to scenario playing of lessons in technology in high-school; the materials preparation for this scenario; presentation and defense of technological projects.

For additional out-of-class work, the education level is attained by investigation of information sources, problem-solving, development of technological models and products, examples etc.

Credits turn into conditional units according to the following basis:

0,1 credits = 2 conditional units, 0,5 credits = 10 conditional units, 1 credit = 20 conditional units.

A final procedure for knowledge check is the written exam. When examination, several criteria are taken into consideration: degree of attained information in problems about technological education in high-school, consistency of knowledge and creativity and improvisation in project presentations.

Weekly workload: 2+0+2

Type of the course: compulsory

Technologies for Teachers' Career Development

ECTS credits: 6

Assessment form: exam

Semester: VII

Department: “ Technological Training and Vocational Education”,
Faculty of Education

Lecturers:

Assoc. Prof. Dimitar Iskrev,

E-mail: iskrev@swu.bg

Course summary:

The course is aimed at learning the organizational foundations of career development of teachers as public deterministic and integrative process.

Course content:

Define the essence, aspects and classification of occupations. On indicate modern approaches, models and stages of a career as a social personal process. On reveals the dynamics of the main scientific and theoretical concept for career behaviour of the individual. On outlines psychological determinants and regularities career development, social and personal factors in the selection of teaching profession and career. Consider the technology of recruitment and career development in education.

Evaluation and assessment:

To determine the current assessment of semester credits become conventional units. The minimum number of units for contingent credits for the semester is 100 conventional units for 6.5 credits. This is for the score Medium (3). For Good (4) - 105 units; for Very Good (5) - 110 units; for Excellent (6) - 115 conventional units. If the student does not collected required number of units to obtain the credit, the teacher assigns additional tasks - writing an essay, bibliography, plan syllabus and more, for be able to attend the examination session.

Management of Educational Projects

ECTS credits: 4.5

Assessment form: exam

Semester: VII

Department: «Technological and Vocational Education Training»
Faculty of Education

Lecturer: Assoc. Prof. D. Mitova, Ph. D

E-mail: didimitova2006@swu.bg, didimitova2006@abv.bg

Course summary:

By examination of the student discipline the students gain knowledge about its nature, specifications and main characteristics of management of projects, as well as they gain knowledge about planning, organization, preparation and realization of educational technological projects, oriented towards

Course content:

Module 1: Technology of development and management of educational projects

Module 2: The student project in its technological education – nature & specification of its realization.

Evaluation and assessment:

Weekly workload: 2 +0+2

Type of the exam: compulsory

Weekly workload: 1+0+2

Type of the course: compulsory

The provided in the education program credits during the semester are gained through presence in lectures as well as practices, referrals to theoretical sources, participation in discussions, problem-solving and individual projects and materials about a presentation.

As a concluding procedure about grading, there is an examination. The final grade is formed by two individual works and projects presentations.

When organizing the grading, the level of knowledge is taken into consideration, as well as the systematic knowledge prove and creativity and attractiveness of projects.

Credits turn into conditional units according to the following basis:

0,1 credits = 2 conditional units, 0,5 credits = 10 conditional units, 1 credit = 20 conditional units