UNIVERSITY OF RUSE
"Angel Kunchev"

Silistra Branch

ERASMUS & ECTS

Information Package

_____ Silistra _____
2021

UNIVERSITY OF RUSE
"Angel Kunchev"

SILISTRA BRANCH

Erasmus

ECTS

Information Package

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GENERAL INTRODUCTION

THE ECTS SYSTEM

The Information Package provides a description of the University of Ruse, of the Faculty of Electrical Engineering, Electronics and Automation and the courses offered by the Faculty in order to help prospective ECTS students to prepare for their study period at this institution.

What is ECTS?

ECTS, The European Credit Transfer and Accumulation System, was developed by the Commission of the European Communities in order to provide common procedures to guarantee academic recognition of studies abroad. It provides a way of measuring and comparing learning achievements and transferring them from one institution to another. The European Commission promotes the system and the international cooperation between universities as a means of improving the quality of education bringing benefits both to students and higher education itself. In this respect, student exchange is the basic element in university cooperation. Recognition of education and diplomas is the necessary condition for establishing an open European higher education space where students and lecturers can "move" with no restriction.

ECTS provides **transparency** through the following means:

- **ECTS credits** which are a numerical value allocated to course units to describe the student workload required to complete them;
- **The Information Package** which supplies written information to students and staff on institutions, departments/faculties, the organization and structure of studies and course units; it also provides useful information about the location of the University, its admission procedures, accommodation opportunities, academic calendar, etc.
- **The Transcript of Records** which shows students' learning achievements in a way which is comprehensive, commonly understood and easily transferable from one institution to another;
- **The Learning Agreement** covering the programme of study to be taken and the ECTS credits to be awarded for their satisfactory completion, committing both home and host institutions, as well as the student.

The ECTS Credits

ECTS credits are allocated units to describe the student workload required to complete them. They reflect the quantity of work each course requires in relation to the total amount of work required to complete a full year of academic study at the institution, i.e. lectures, practical classes, seminars, self-study – in a library or at home - and exams or other assessment activities. ECTS credits express a relative value.

In ECTS, **60 credits** represent the workload of a year of study; normally **30 credits** are given for a semester and **20 credits** for a term. It is important that no special courses are set up for ECTS purposes, but that all ECTS courses are mainstream courses of the participating institutions, as followed by the home students under normal regulations. Credits are awarded only when the course has been completed and all required examinations or other assessment activities have been successfully passed. Detailed information about disciplines (short description of course contents, teaching methods, types of assessment, etc.) is given in the information package of each degree programme.

ECTS Students

Students participating in ECTS receive full credit for all academic work successfully carried out at any of the ECTS partner institutions. These credits are transferred to the home university and fully replace the annual/semester workload including exams and other forms of assessment. In this way students can study abroad for a certain period of time and when they come back, they are able to continue their education without any loss of semesters and exams. Some students may also decide to graduate from the host university, and permission for that is given by the academic authorities based upon the student's transcript of credit points and his/her performance at the home university.

DATA ABOUT BULGARIA

The Republic of Bulgaria is a country situated in South-East Europe. In the north it borders the Republic of Romania, in the east it ranges to the Black Sea, in the south it neighbours the Republic of Turkey and the Republic of Greece, and in the west it borders (former Yugoslavian) Republic of Macedonia and Republic of Serbia.
Area: 110,993.6 sq km
Population: 7,364, 570
Capital city: Sofia
Official language: Bulgarian
Alphabet: Cyrillic
Religion: There is freedom of religious confessions. Traditional religion in the Republic of Bulgaria is Eastern Orthodox Christianity
National holiday: March 3, the Day of the Liberation of Bulgaria from Ottoman domination (1878)

Public (non-working) holidays:

3 March – Liberation Day (national holiday)
1 January – New Year
Easter (Resurrection of Christ) – two days (Easter Sunday and Easter Monday)
1 May – Labour Day (the Day of International Working Class Solidarity)
6 May - Day of Bravery and Bulgarian Army, Gergyovden (St. George's Day)
24 May – Day of Bulgarian Education and Culture, and of the Slavonic Alphabet
6 September - Unification Day

22 September - Independence Day
1 November – Day of the National Revival Leaders
24 December – Christmas Eve
25 and 26 December – Christmas

Monetary unit: the Bulgarian Lev (BGN)

Administrative division: 28 regions, named after their respective regional centres
State system: a parliamentary republic with a one-chamber parliament (National Assembly), consisting of 240 national representatives, elected for a four-year term of service. The head of state of the republic is the President, elected for a five-year term of service. The Council of Ministers is the main body of executive power.
Climate: moderate continental with Black Sea influence in the east and Mediterranean in the south.
Water: rivers (main rivers are the Danube, Maritsa, Mesta, Strouma, Iskar, and Yantra); warm and cold mineral springs (more than 600)
Transport: railway, automobile, air and water
International automobile sign: BG
International telephone code: +359 ……..
International telephone code for Ruse: +359 82 ……..

Official Symbols of Bulgaria

The national flag of the Republic of Bulgaria is in three colours: white, green and red bands, following horizontally from top to bottom.

A legend associates the origin of these three colours with the colour symbols of the Old Bulgarian Army. Its left wing was set apart by white strips on the spears, the right one by red, while arranged in the centre were the elite troops with a green strip, the traditional colour of the ruler. The three-colour flag was first used by the First Bulgarian Legion of Georgi Rakovski (1861). By force of the Turnovo Constitution (1879), the three-colour flag - white, green and red, was confirmed as Bulgaria's national flag.

The coat-of-arms of the Republic of Bulgaria is a rampant gold crowned lion against a dark-red background in the form of a shield. Above the shield there is a big crown, whose original shape was that of the crowns of medieval Bulgarian rulers, with five crosses and one other cross, separately, over the crown itself. The shield is supported by two golden crowned rampant lions, facing the shield from the left and right heraldic side. They are standing on two crossed oak tree twigs with acorns. Inscribed in golden letters onto a white strip with a three-colour edging, placed under the shield across the ends of the oak twigs, is ***Union is Strength.***

The Bulgarian Landmarks in the UNESCO List of the World Natural and Cultural Heritage

Kazanluk Tomb
A Thracian tomb, dated to the late 4th-early 3rdcentury B.C. The murals in the burial chamber and in the corridor are of exclusive artistic value. The tomb is located in the Tyulbeto Hill near the town of Kazanluk.

Ivanovo Rock Churches
A rock monastery compound of the Holy Archangel Michael, with partially preserved churches. The murals in the Church of the Holy Virgin have been described as some of the most significant achievements of 14th century Bulgarian medieval art. The churches are located about 20 km away from the city of Ruse, east of the village of Ivanovo, in the rocks of the Rusenski Lom Nature Park.

Boyana Church
It has unique murals from 1259, considered among the masterpieces of medieval European painting. It is at a distance of about 8 km from the centre of the city of Sofia (in the Boyana residential district), in the foothills of Mount Vitosha.

Madara Horseman
A rock relief, cut into the Madara rocks on the northern slope of the Provadiisko Plateau at a height of 23 m. This is the most significant monumental piece of art from the early Middle Ages, unique of its kind in European cultural history. It is close to the village of Madara, about 16 km away from the city of Shumen.

Rila Monastery
The most impressive monastery compound in Bulgaria of exceptional architectural and artistic merits. Founded in the 10th century, rebuilt in the 13th-14th century, a literary centre in the 15th century and completed in its present-day striking appearance during the 19thcentury. A spiritual centre of the Bulgarian people, it is located in the northwest part of the Rila Mountain, about 20 km from the town of Rila and about 120 km from Sofia.

Nessebur, the old part of the town
An architectural, historical and archaeological reserve at the Black Sea coast with valuable archaeological relics from different periods, original churches from the 5th to the 17th century and authentic National Revival Period houses.

Sveshtari Tomb
A Thracian tomb from the first half of the 3rd century B.C. The central burial chamber has exceptionally lavish decoration and impressive caryatides in high relief. It is located close to the village of Sveshtari, 7 km northwest of the town of Isperih.

Sreburna Reserve
A biosphere reserve in the valley of the Danube, including the Sreburna Lake and its surroundings. It has been established for the preservation of rare plant and animal species. It is 16 km west of the town of Silistra.

Pirin National Park
It is part of the scenic Pirin Mountain. Located in the high parts of the Northern Mount Pirin, it is characterized by a specific relief and an inimitable plant and animal world. It also incorporates the Bayuvi Dupki - Dzhindzhiritsa Biosphere Reserve and the Yulen Reserve.

INFORMATION

ON

THE CITY

AND

THE UNIVERSITY

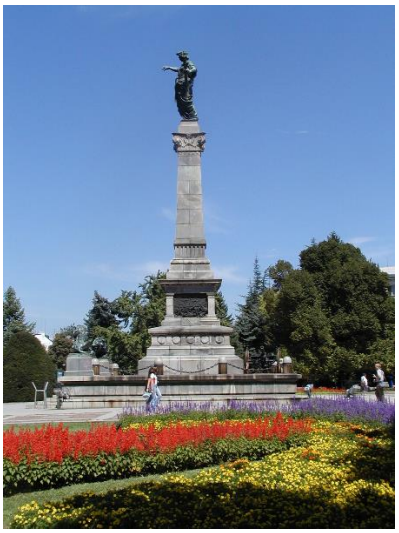
WELCOME

TO RUSE

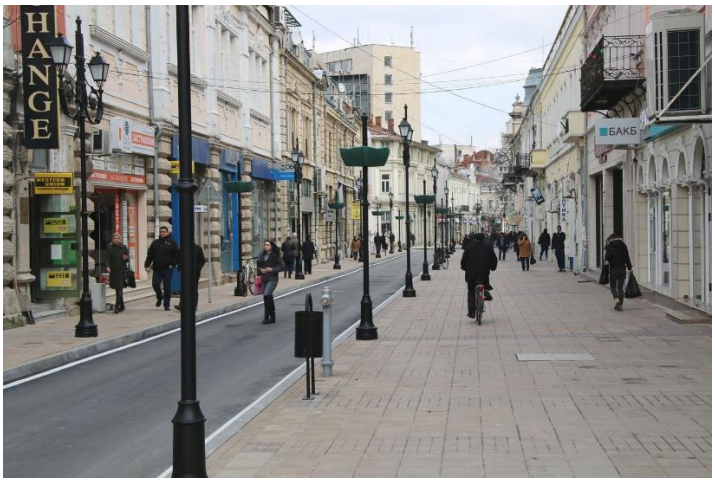
" ... All that I experienced afterwards had already been in Roustchouk"
Elias Canetti

Ruse is the biggest Bulgarian port town on the bank of the river Danube. After the opening of the Rhein - Main - Danube canal which covers 3,500 km and connects thirteen European countries with the Near and Far East via the Black Sea, the river becomes the longest inland waterway on the planet.

This key position has determined the nineteen century long co-existence of town, river, and people, carrying the unique atmosphere of history as a precious heritage, and of future as an open road full of promises. The Romans were the first to build the fort which they called Sexaginta Prista (the port of sixty ships). Then came others, from Europe, leaving their indelible imprint in this intersection of material and spiritual culture, followed by the imbued with the zeal of drive and enterprise Bulgarians, who gradually turned the place into a centre of the Bulgarian national revival. The very name Ruse became a synonym of economic growth and cultural rebirth.



The nineteenth century saw here the opening of the first Bulgarian printing house, the first model farm, the first Bulgarian railroad connecting Ruse with Varna, the first Bulgarian weather service, the first technical school and technical society, the first professional teachers' club, the first insurance agency, the first chamber of commerce and industry, the first inland navigation service on the Danube, the first teletel, the first moving picture show, the first Bulgarian newspaper, the first geography map.



New industries sprang up, banks and trade agencies were founded and European shipping agencies, as well as 17 foreign consulates were established. A large number of Bulgarian, Austrian, Italian, and Swiss men of arts created the wealth of architectural forms and styles characteristic of the period in Europe: Neoclassicism, Neo-baroque, Neo-gothic style, Art Nouveau, and Fin du siecle.

The town hosted a vast variety of multinational ethnic groups, which the Nobel writer Elias Canetti defined as a microcosmos of two dozen nationalities. French, German, Italian, Jewish, Armenian, Turkish, and other schools, boarding houses and churches, reading clubs, theatres and music halls, museums and bookshops, opened their doors to help diversify the cultural life of the city in its steady march towards enlightenment. In this completed picture of social life, today the town is still rediscovering its true face, spanning a bridge across cultures in the new context of integrated Europe.

THE UNIVERSITY OF RUSE

On **12 November 1945** the first out-of-capital higher education institution was founded in Ruse as an engineering school. Its three departments were specialized in Engineering for the purposes of the agricultural sector.

On **13 June 1966**, as a result of its intensive growth, the Minister of Education issued an Order No. 2583 to set up a Higher Institute of Mechanical Engineering, Mechanization and Electrification of Agriculture.

On **9 April 1981,** due to the widened scope of its engineering provision, including the sectors of transport, electronics and computing, it was transformed into 'Angel Kanchev' Technical University by a Decree No. 584 of the Council of Ministers.

On **1 August 1995** a Decision of the National Assembly was made to convert the Technical University in "Angel Kanchev" University of Ruse, thus recognizing its academic expertise not only in the engineering fields, but also in natural sciences, education, law, public health and healthcare, business and management, which were introduced as a response to the needs of the regional businesses and the community.

Mission statement of Ruse University

The University aims to provide:

Dissemination of knowledge,
excellence in fundamental and applied research and
introduction of innovations in practice,
which will help it to train highly-qualified specialists and
maintain the sustainable development of the region and the country.

ACADEMIC CALENDAR

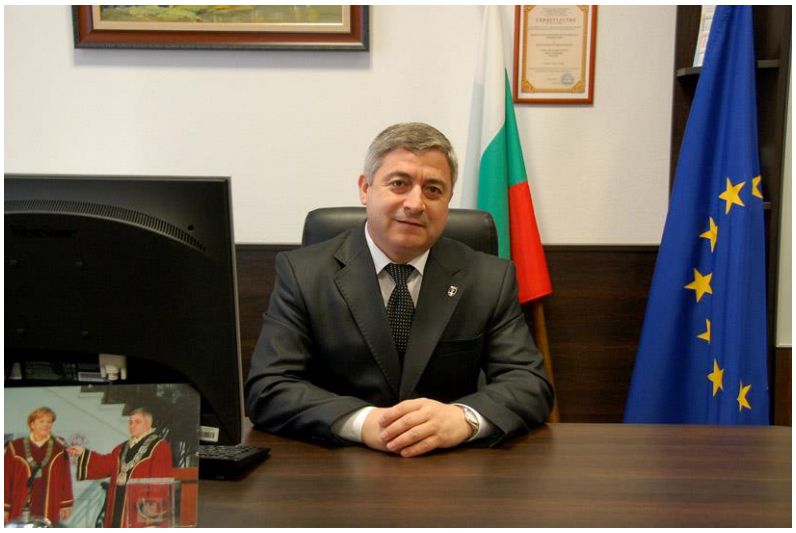
The academic year at the University of Ruse starts in September and is divided into two semesters – Fall and Spring. Each semester consists of:

- 15 weeks of classes;
- 4 weeks of regular examination session;
- 1 week for supplementary examination and 1 vacation week after the fall semester;
- Summer holidays (4-8 weeks) start after the end of the examination session and last till the beginning of the new academic year or till the beginning of the annual supplementary examination session in September for those students who have to resit exams left from the previous year.

The organisation of the training process is realised in the framework of the *Academic Calendar*, which is adopted each year by a resolution of the University's Academic Council.

PROFILE OF THE UNIVERSITY OF RUSE (UR)

Name of higher education institution	**University of Ruse "Angel Kanchev"**
Type of higher education institution	**State University**
Location and address	**8, Studentska Street, 7017 Ruse, Bulgaria**



Rector Corr. Mem. Prof. Hristo Beloev MEng, PhD, DSc

Number of students for the academic year 2018-19: 6753
Number of international students: 171 from **21** countries
Number of PhD students: 211
Full-time academic staff: 417 (212 full and associate prof; 21 Doctor of Sciences; 365 with a PhD degree)
Non-academic staff: **152**
Number of degree programmes offered:
51 Bachelor and 132 Master degree programmes in **7** of the **9** fields of study in higher education in Bulgaria (Engineering and Technology, Agricultural sciences and veterinary medicine, Social Studies, Economics and Management, Law, Education, Humanities, Mathematics and Natural Sciences, Health Care and Sport, Security and Defence).

The University of Ruse is the only university in Ruse, Razgrad, Silistra and Targovishte districts (with a population of approximately 1 million), which complies with the international index "one higher education institution per one million people".

The University of Ruse is a full member of:

- European University Association;
- Danube Rectors' Conference;
- Visegrad University Association;
- Interuniversity Center-Dubrovnik.
- Balkan University Association.

The University of Ruse was accredited by the National Evaluation and Accreditation Agency for a six–year period with the grade – 9,28 out of 10.

International Collaboration

The University of Ruse develops its international activity through:

- Participation in scientific programmes of the EU: FRAMEWORK PROGRAMMES, HORIZON 2020;
- Participation in academic programmes of EU: CEEPUS, ERASMUS+, ERASMUS MUNDUS, TEMPUS, etc.;
- Participation in other EU funding schemes: Operational Programmes 2007-2013 and 2014-2020 in Bulgaria, Romania-Bulgaria Cross Border Cooperation Programme 2007-2013, Interreg V-A Romania – Bulgaria, COST, Competitiveness and Innovation Framework Program (CIP), Intelligent Energy Europe Programme, South East Europe Transnational Cooperation Programme, Europe for Citizens, etc.
- Programmes for cooperation with Germany – DAAD, Baden-Wuertemberg Stiftung
- Participation in bilateral exchanges with more than 80 signed bilateral agreements for institutional partnership with other universities and scientific-research institutes from 31 countries.
- Organization and participation in international events.
- Membership in international organisations - DRC, EUA, VUA, Inter-University Centre-Dubrovnik, BUA и International Organisation of La Francophonie.
- Organisation of joint studies leading to the award of mutually recognised diplomas.

The University of Ruse is one of the first Bulgarian universities which started its participation in the ERASMUS programme. Now there are more than 450 bilateral agreements signed with universities and companies from 50 countries around the world (30 of them from EC). At least 80 undergraduate, post-graduate and PhD-students are annually involved in all EU exchange programmes.

Admission of foreign students

Terms of study:

- ***For a Bachelor's degree*** - 4 years;
- ***For a Master's degree*** – 1 or 2 years depending on the Bachelor's degree acquired;
- ***For a Doctoral degree*** – at least 3 years.

Bachelor degree programmes at the University of Ruse

Faculty of Agricultural and Industrial Engineering:

- Agricultural Machinery and Technologies
- Ecology and Environmental Protection
- Industrial Design
- Air-conditioning, Hydraulics and Gas Supply
- Agricultural Engineering
- Plant Growing
- Equipment Maintenance and Management

Faculty of Mechanical and Manufacturing Engineering:

- Mechanical Engineering
- Material Science and Technologies
- Quality Management and Metrology
- Industrial Engineering
- Civil Engineering

Faculty of Electrical Engineering, Electronics and Automation:

- Electrical Power Engineering
- Electronics
- Computer Control and Automation
- Computer Systems and Technologies
- Internet and Mobile Telecommunications
- Information and Communication Technologies
- Information and Communication Technologies (in English)

Faculty of Transport Engineering:

- Transport Engineering
- Transport Engineering and Management

Faculty of Natural Sciences and Education:

- Financial Mathematics
- Computer Science
- Software engineering
- Informatics and Information Technologies in Business
- Pedagogy of Education in Mathematics and Informatics
- Bulgarian Language and History
- Pre-school and Primary School Education
- Primary School Education with a Foreign Language
- Social Pedagogy

Faculty of Business and Management:

- Business Management
- Marketing
- International Economic Relations
- Economics
- European and Global Studies (in English)
- Business Administration
- Industrial Management

Faculty of Law:

- Law
- Crime prevention and public order maintenance

Faculty of Public Health and Health Care:

- Social Activities
- Kinesitherapy
- Occupational Therapy
- Nursing
- Midwifery

Silistra Branch:

- Pedagogy of teaching Bulgarian and Foreign Languages (English, Romanian)
- Pedagogy of teaching Physics and Informatics
- Electrical Engineering
- Automotive Engineering

Razgrad Branch:

- Biotechnologies
- Chemical Technologies
- Food Processing Technologies

Vidin Branch:

- Agricultural Machinery and Technologies
- Electronics
- Transport Engineering and Management
- Computer Science
- Industrial Management

Other University Units and Services

- Quality of Education and Accreditation Directorate
- Public Relations Directorate
- Foreign Students Directorate
- Student Admissions and University Registrar
- Scientific Research Sector
- University Computing and Information Services Center (UCISC)

- Center for Distance Learning
- European Integration and International Cooperation Sector
- Center for Continuing Education
- Center for Career Development
- University Library

The language of instruction for students in Bachelor and Master Degrees is Bulgarian.

The University of Ruse offers 2 Bachelor and 1 Master degree programmes in English

Bachelor degree programmes

- Information and Communication Technologies;
- European and Global Studies.

Master degree programmes

- European Studies and Regional Cooperation (in English and German);

Application Procedures

General Conditions and Documents for Admission of Foreign Students

Foreigners, who hold a high school diploma, giving them access to universities in the country issuing this diploma, are eligible for admission into the University of Ruse.

Preparatory Year

During their first year at the University foreign students study Bulgarian in a 10-month intensive course, tailored to meet the needs of linguistic and specialist training of international bachelor, master and PhD students. The course is organized by the Foreign Students Directorate.

Tuition Fees

Foreign citizens, studying at Ruse University, pay tuition fees. The fees are paid in two installments: at the beginning of the academic year and at the beginning of the second (Spring) semester.

For sending applications and for more detailed information foreign applicants can address:

Foreign Students Directorate
University of Ruse
8 Studentska Street
7017 Ruse
Bulgaria
tel.: +359 82 888 281

E-mail: *chs@uni-ruse.bg*

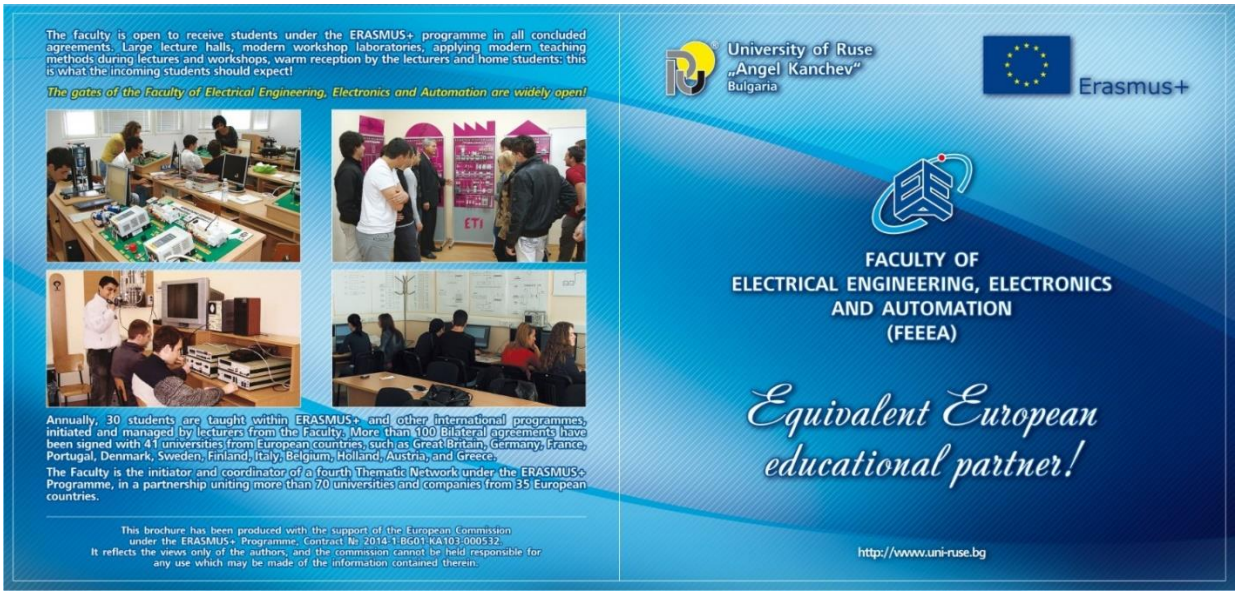
Application documents and procedures for admission of foreign students within exchange programmes of the European Union

Application and admission of international students to different programmes of the European Union are prepared in compliance with the individual bilateral or international agreements.

For international students, who wish to study at the University of Ruse within the ERASMUS programme, selected courses are offered in English. The list of these courses can be found on the university WEB site. http://erasmus.uni-ruse.bg/en/?cmd=cmsPage&pid=29

For sending application forms within ERASMUS and for more detailed information foreign applicants can address the International Relations and Erasmus Office:

International Relations and Erasmus Office
University of Ruse
8 Studentska Street
Ruse 7017
Bulgaria tel/fax: +359 82 888 650
E-mail: ***eims@uni-ruse.bg***
http://erasmus.uni-ruse.bg/bg/?cmd=gsIndex



If you need to send application documents to the Bulgarian-Romanian Interuniversity Europe Centre (BRIE) or to receive more detailed information, please contact:

Bulgarian-Romanian Interuniversity Europe Centre (BRIE):
University of Ruse
8 Studentska Street
Ruse 7017
Bulgaria
tel/fax: +359 82 825 667 or +359 82 825 662
E-mail: brie@uni-ruse.bg

General Information

Visa Requirements

According to the Law for Foreigners' Stay in the Republic of Bulgaria, each foreigner may enter the country with a valid passport (or other ID document) and an entry visa for Bulgaria. Entry visas are issued in all Embassies or Consulates of Bulgaria abroad. *No visas are required* for citizens of the countries of the European Union and of a number of other countries as well. On arrival in Bulgaria, every foreigner, if not accommodated in a hotel, should, within 24 hours, register his/her address with the Passport Service for Foreigners. Foreigners who are admitted as students at the University of Ruse should present their documents for admission issued by the University. This will allow them to get permission for longer stay in the country after their entry visas expire.

Traveling to Ruse

The distance from Ruse to Sofia(the capital city of Bulgaria) is 315 km.
The distance from Ruse to Bucharest (the capital city of Romania) is 60 km.
Travel to both capital cities is by train and by bus.
There are also provisions for quick and easy transport to various parts of the city and other regions of the country
After arriving at the University each international student is welcome to contact the office of the Foreign Students Directorate while Erasmus students have to contact the Center for European Integration, International Cooperation and Mobility.

Living Expenses

The optimum amount of living expenses is connected with a balanced budget, including subsistence costs, accommodation costs, medical services, public transport, food and public services, tuition costs (for EU member country students) and some other expenses. Minimum living costs are achieved through the use of the refectory and through modest expenses for transport and other public services. Under these conditions, the average living expenses may range from 150 to 250 Euro per month.

Accommodation and on-campus facilities

Accommodation can be found in several sectors:

In one of the many hotels in Ruse. The approximate price for a single room is about 40 – 80 Euro per night. ***In one of the cheaper hotels***. Offering less comfort, or in single rooms in hotel chains at prices about 15–25 Euro per night. ***Renting a flat.*** The rent for such a flat (1 to 3 rooms) varies from 60 to 250 Euro per month depending on the degree of comfort, furniture and location. Rents exclude expenses for electricity, hot water, central heating and telephone, which may cost about 50–100 Euro per month.

The University of Ruse offers very good on-campus accommodation for 2400 students at rents of about 35 Euro per month. There are eight student hostels, two of which are for families.

The University of Ruse on-campus facilities offer excellent opportunities for study, research, recreation and sport. The student hostels, the refectory, the medical centre, the post office, the sports facilities and the student culture club are all situated on campus, which is surrounded by green parkland and is within easy reach of the city parks, the river Danube and the city centre.

The University of Ruse offers on-campus sports facilities for volleyball, basketball, table tennis, bodybuilding, football, field and track events and other sports. The sports teams and clubs for football, athletics, volleyball, basketball, handball, aerobics and calisthenics are the responsibility of qualified teachers, which explains why they often win first prizes at various competitions.

There is a variety of amateur clubs, forming the Student Cultural Club Society, which was established in 1954. Examples are the Folk Dance Theatre, the Artists Club, the Pantomime Studio, the Drama Society, the Photographer's club, the Literature Club, the Modern Dance Society, and the folk dance band. Their guidance is entrusted to distinguished performers, artists and musicians.

The Tourist Society ACADEMIC unites a variety of clubs: for mountain climbing, water sports, skiing, cycling, rock climbing, mountaineering, speleology and cross-country walking. They attract large numbers of students, faculty members and administrative staff, who can take holidays in the university resort centres on the Black Sea coast, in the Balkan mountains, or along the bank of the Danube.

Medical Services and Insurance

There are many clinics, hospitals and private surgeries where you may ask for qualified medical help paying cash at quite reasonable rates. You may also get medical insurance in one of the numerous insurance companies in Bulgaria.

Other Useful Information

Public Transport: Trams, buses and trolley buses are the main public transport in Bulgaria. Tickets are sold at bus stations (bus stops), at newspaper stands or in some cases by drivers. Tickets should be perforated in the vehicle. There are also season travel cards for one day, one week or one month. The price of the ticket for public transport is 1.00 Lv. (about 0.50 Euro).

Taxi: There are many taxis in Ruse, provided mostly by private firms. Information about the firm and charge rates (day and night) can be seen on stickers on the front or rear windows of the car. Charge rates for 1 kilometre are between 0.70 and 0.90 Lv. (about 0.35–0.45 Euro).

Money Exchange: Popular currencies in Bulgaria are the USD and EURO. Open hours of the banks are usually between 9.00 a.m. and 4.00 p.m. There are also a lot of foreign exchange offices.

Food Stores. Restaurants: All food stores work usually till 7.00 or 8.00 p.m., but there are also 24-hour open stores and stores that work on Saturdays and Sundays. Most foodstuffs, vegetables and fruit are sold at prices, similar to those in Western Europe. Restaurants offer highly varied prices depending on their category. In some small and inexpensive restaurants the price of a meal is about 10 Euro.

Phone Services: There are 3 large mobile network operators on the territory of Bulgaria and these are M-Tel, GloBul and Vivatel. Pre-paid cards are available at the offices of the mobile operators. For international calls you may also use the services of the national post offices.

Bookshops and Photocopying Services: Copy services, books, textbooks, manuals and other training aids are offered in the University bookshop and stationery shop.

Student Organisations

The Student Council is a body which protects the interests of the students. It is elected by full-time bachelor, master and doctoral students and includes student representatives in the General Assembly of the University. The Student Council at the University of Ruse maintains an information centre, located on the first floor of the Central Building.


ПРИРОДА
ЕКОЛОГИЯ
Tests
OPEL
ASTRA
VECTRA
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ИСТОРИЯ
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БЪЛГАРИЯ
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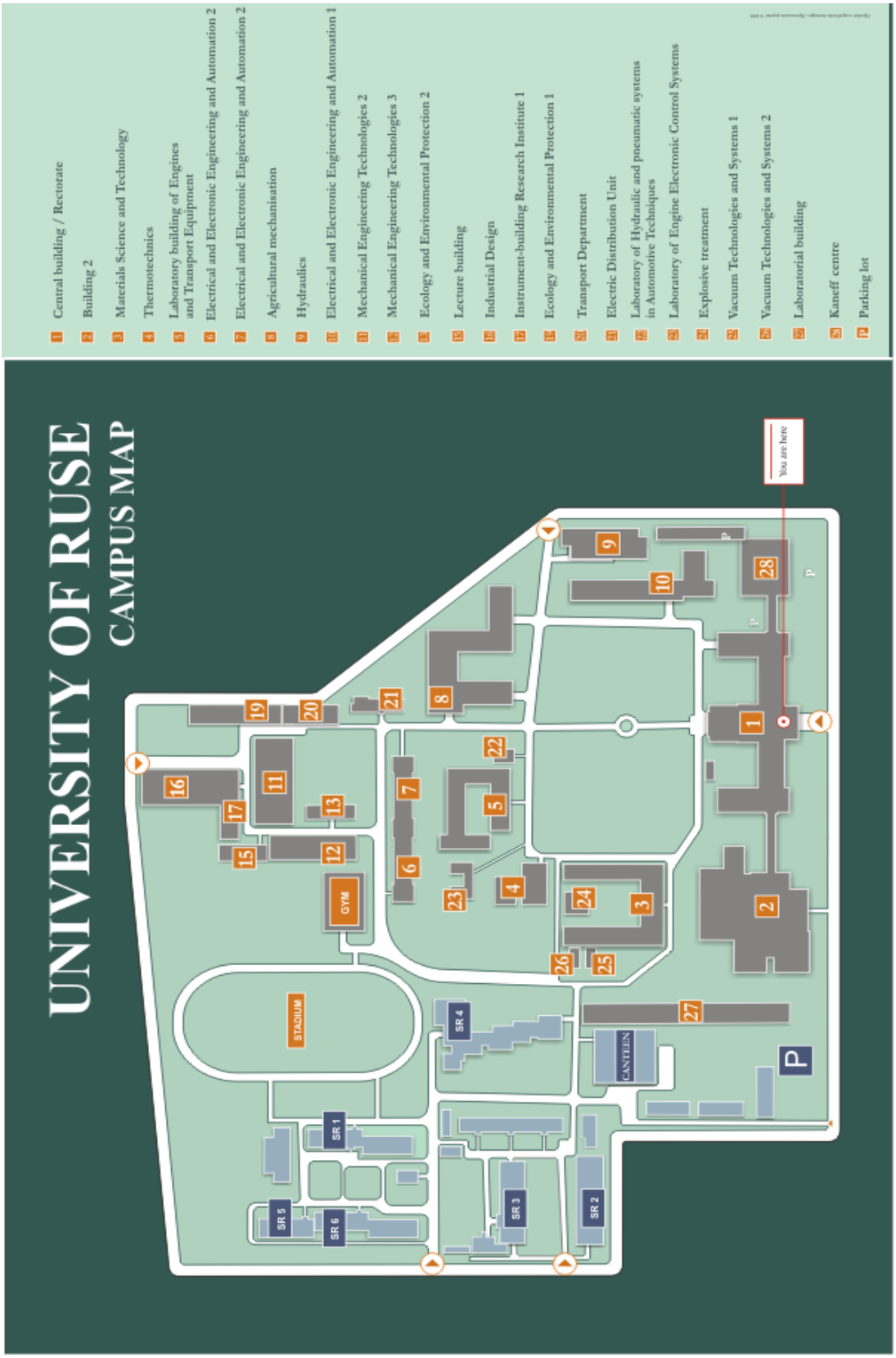
Campus Map of the University of Ruse



INFORMATION

ABOUT

SILISTRA

AND

ФИЛИАЛ
СИЛИСТРА

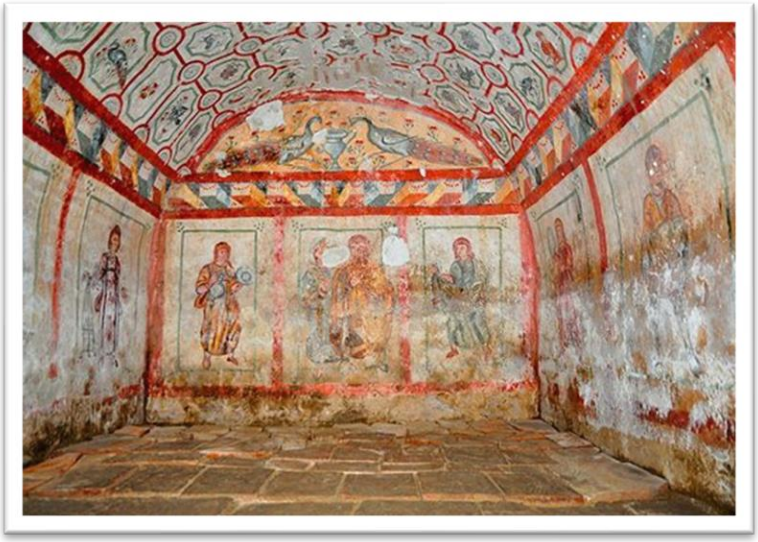
SILISTRA BRANCH

DUROSTORUM-DRUSTER - SILISTRA

Is a port city on the Danube River in northeastern Bulgaria.

It is the administrative and economic center of the eponymous municipality of Silistra and district of Silistra. According to the last census of the NSI as of 31.12.2015, the population is 32,868 inhabitants.

City of SILISTRA - (ancient Durostorum and medieval Drustur) was founded in 106 AD, when by order of Emperor Trajan on the territory of today's city is located one of the elite units of the Roman Empire - XI Claudius Legion. This is the beginning of a remarkable and glorious story. In 169, the emperor-philosopher Marcus Aurelius declared Durostorum a self-governing Roman city - municipality. Between the 2nd and 6th centuries, Durostorum was the main outpost of the empire against the barbarians of the Lower Danube. Silistra is a city with a rich history, as landmarks here are the late ancient Roman tomb and the Turkish fortress Medjidi Tabia.



During the era of the First Bulgarian Kingdom under Khan Omurtag in Druster, the Danube residence "The Glorious House on the Danube" of the Bulgarian khans and kings was built, in which in 896 - 897 Tsar Simeon the Great himself settled.
Its ruins and fortified Druskininkai citadel still impress today with their size and solidity.
In 870 the city received a Bulgarian episcopal chair, headed by Bishop Nikolai.

In 927 the first Bulgarian patriarchal chair was founded in Drustar, headed by the first Bulgarian patriarch Damyan. During the Second Bulgarian Kingdom - Drustar was a metropolitan department and residence of district governors. Here, in 1279, Tsar Ivailo lived with his army, repelling the Tatar invasions. A little later, Despot Theodore Svetoslav resided in Drustar, before his enthronement in Tarnovo in 1299.

Around 1370, Drustur emancipated himself in the capital of an independent feudal principality, headed by Terter, son of the Dobrudja despot Dobrotitsa.

Srebarna Biosphere Park is located right on the road of migratory birds from Europe to Africa - Via Pontica. Srebarna has been entered in the register of protected areas by a Decree of the Council of Ministers. Lake Srebarna is included in the List of UNESCO World Natural and Cultural Heritage Sites and in the List of Ornithologically Important Sites in Europe (protected areas of the national ecological network within the meaning of the Biodiversity Act).

The Danube Park in Silistra was founded in 1895. On June 29, 2015, 145 years have passed since its establishment. The Danube Park in the town of Silistra is the first public park in the country. It is a wonderful place to relax with great views of the Danube and many places for young children to play. In it you can see some tree species that are unique in their kind and are protected.

SILISTRA - NORTHEASTERN CENTER OF HIGHER EDUCATION IN BULGARIA

In 1890, with Decree №756 of December 18, the Silistra State Pedagogical School was opened, whose building (late secession) is still one of the symbols of the city.

In 1941 the Institute for Primary Teachers was established in Silistra. The training in it is after V high school class (now X class) and lasts 4 years. It is recognized as a semi-higher special educational institution by an Ordinance-Law of 1945. The institute was closed in 1948. Two years later, teacher training was resumed through the Pedagogical School (1950-1963).

The State Council of the People's Republic of Bulgaria by Decree № 305 of 31 August 1971 established the Higher Pedagogical Institute. It is one of the three institutes existing in Bulgaria (along with those from Smolyan and Kardzhali).

The Academic Council of the **University of Ruse "Anel Kanchev"** in its meeting of **June 20, 1995 supports the proposal for THE ACCESSION of the Semi-Higher Pedagogical** Institute in Silistra to the University of Ruse as **FACULTY OF LEGAL INDEPENDENCE.** The decision of the General Assembly is dated May 31, 1995.

At the end of September 1996, the Rector of the University of Ruse sent a letter to Acad. Kanchev ". By Ministerial Decree № 41 of 16 February 2001, published in the State Gazette, № 17, 2001, the Faculty of Pedagogy-Silistra was transformed into a Branch-Silistra in the structure of RU "Angel Kanchev", and the Technical College-Silistra became the main structural unit of the University.

With the Council of Ministers №17 of 08.02.2008 the Technical College in Silistra is closed. The material base of the school and the archive are provided to the Silistra Branch. By decision of the Academic Council of the University of Ruse "Angel Kanchev" from its meeting on February 26, 2008 the training of students from the closed college continues in the Silistra Branch of RU "Angel Kanchev" for obtaining a bachelor's degree. and the staff of the Technical College merges with the academic community in the Silistra Branch. The Academic Council approves the Board of Directors and the Director as governing bodies.

BRANCH - SILISTRA

of the University of Ruse
"Angel Kanchev"

Branch - Silistra is an accredited educational structure of the University of Ruse "Angel Kanchev", which has as its vocation the dissemination of knowledge and the introduction of innovations in the practical training of students, which helps build highly qualified professionals and sustainable development of the region and country. . The specialties cover the universe of higher education, consisting of humanities, natural and technical sciences.

With a letter ex. № 959 of July 25, 2014. NEAA granted program accreditation in the professional **field 1.3. Pedagogy of education in ...,** specialization **Pedagogy of education in Bulgarian and foreign languages** and specialization **Pedagogy of education in physics and informatics,** for obtaining the educational qualification degree BACHELOR with a grade of 9.30 for a period of six years;

With a letter ex. № 1135 of November 10, 2015. NEAA gave program accreditation to the professional field 5.2 **Electrical Electronics and Automation**, incl. of the specialty Electrical Engineering, full-time and part-time form of education for acquiring the Bachelor's degree, with a grade of 9.32 for a period of six years

The structure of the Branch includes the Department of Philology and Natural Sciences, the Center for Continuing Education, the Scientific Center "St. Dazi Dorostolski", the Student Teaching and Research Laboratory "Cultural and Historical Heritage".

The Branch provides training in full-time and part-time form of students in the following bachelor's degrees:

- Pedagogy of teaching Bulgarian and foreign languages (English or Romanian);
- Pedagogy of teaching physics and informatics;
- Automotive engineering;
- Electrical engineering.

On the eve of May 24, the Branch hosts a Scientific Session for students, PhD students and young scientists, Specialty Days, Open Day, various competitions for students, high school graduates and students. The celebrations annually present the Award for the highest overall success of the entire course of study, established by the District Governor of Silistra and the Award for the highest success of the mother during the four-year training period established by the Mayor of Silistra .

In 2015, the Silistra Municipal Council established the Student of the Year Award, which is presented on September 14 - the Day of the City of Silistra to an excellent student with performances in research.

On the occasion of the holiday, the University of Ruse is holding a traditional International Scientific Conference (in 2020 - the 59th in a row), successor to the May Scientific Holidays in Silistra, organized by the Branch.

The branch has a rich library with over 50,000 library units of study and specialized technical literature. The library has free internet access.

MANUAL
of the Silistra Branch

Director

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Head of the department

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Director

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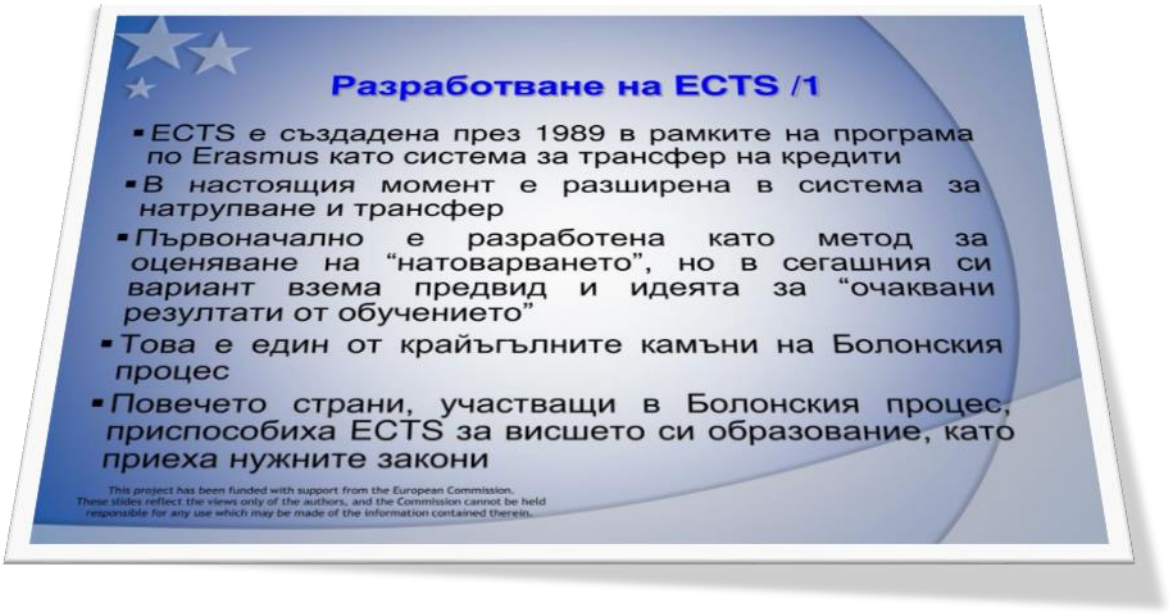
e-mail: dmindizova@uni-ruse.bg

Erasmus+



DEPARTMENT

in philological and natural sciences

Assoc. prof. Rumiana Lebedova, PhD
Bulgarian Literature

Assoc. Prof. Dr. Eng. Valentin Stoyanov
Electrical Engineering

Assoc. Prof. Dr. Diana Zhelezova-Mindizova
Methodology of teaching English

Assoc. Prof. Dr. (Lina) Galina Lecheva
Methodology of Teaching Literature

Assoc. Prof. Dr. Eng. Evgeniya Goranova
Methodology Of Teaching Computer Science

Ch. Ass. Prof. Dr. Eng. Valentin Manev
Automotive Engineering

Ch. Ass. Prof. Dr. Eng. Milen Sapunjiev
Automotive Engineering

Senior lecturer Rosen Chanov
(Physical education and sport)

Ch Ass. Proff. Dr. Silvia Angelova
Bulgarian Language

Ch Ass. Proff. Dr Diana Bebenova
Comparative Linguistics

Ass. Prof. Dr PhS Todorka Georgieva
Bulgarian Language

Ch. Ass. Prof. Dr. Eng Ivan Grigorov
Electrical Engineering

SCIENTIFIC CENTER "ST. DAZIY DOROSTOLSKY

The interest in science, literature, history and language in our country began at the end of the IX century, when the first literary centers of Borisova and Simeonova Bulgaria were established - Preslav and Ohrid literary schools. Later, other centers were formed, giving the appearance not only of ours, but also of Slavic science and literature - Athos, Tarnovo, Vidin and Sofia schools. Today's successors are the Cyril and Methodius Research Center at the Bulgarian Academy of Sciences, the Center for Slavic and Byzantine Studies "Ivan Duychev", Preslav Literary School at Shumen University "Bishop Konstantin Preslavski", Tarnovo Literary School at Veliko Tarnovo "St. St. Cyril and Methodius "and others. - are worthy successors and guardians of the traditions to preserve, study and retransmit the Bulgarian. They stimulate the creative activity of teachers, students and researchers, direct research in new areas, generate innovations in science and technology.

The idea to create a center in the city of Silistra arose soon after the visit of Pope John Paul II, who in 2002 brought to Bulgaria some of the relics of St. Dazius, the first martyr in Dorost, the first Dorostol martyr, who was beheaded in 304. on the banks of the Danube because of his faith.

Gradually in 2005 the idea was clarified and in 2006 it was realized.

On September 1, 2006, His Eminence Metropolitan Hilarion, in the presence of citizens of Silistra and guests from other countries - Ukraine, Russia and South Korea, consecrated the Science Center and gave it the name of St. Dazi Dorostolski with the blessing of then Patriarch Maxim.

Founders of NC "St. Daziy Dorostolski "are the late Prof. Slavcho Ivanov, the late Assoc. Prof. Petranka Trendafilova, Assoc. Prof. Todorka Georgieva and Assoc. Prof. Rumyana Lebedova. Their colleagues are the then students Mirolyuba Stoyanova and Maria Tomova. The Scientific Center "St. Daziy Dorostolski "(NC) is a structural unit of the University of Ruse" Angel Kanchev "based in Silistra. The activity of NC "St. Daziy Dorostolski "has a research character and aims to solve scientific and applied research problems. It is aimed at:

(1) Carrying out of fundamental and applied scientific researches, of consulting and expert activity.

(2) Creation of own intellectual products, representing monographs; collections, incl. Notices of the National Center "St. Dazi Dorostolski "; studios; articles; reports; presentations, movies, etc.

(3) Implementation of information activity and management of the intellectual products, created by members of NC.

(4) Providing services to citizens, organizations and companies.

(5) Organizing and conducting scientific forums, specialized expeditions, practices, seminars.

(6) Development of international cooperation.

(7) Coordinated with the Branch and the University participation in the activities of local and foreign scientific organizations.

(8) Resolve other issues related to the research activities of the Center.

The scientific forums organized so far by the NC are:

◎ International scientific conference dedicated to the 1900th anniversary of the proclamation of Silistra as a self-governing city;

◎ International Round Table "Dialogues with Time" in memory of Prof. Dr. Slavcho Ivanov (1939-2006);

◎ Round table "Christianity - language and mentality",

◎ International seminar on "Educational projects of Independent Bulgaria" and others.

10 refereed volumes of "Notices of the NC" St. Dazi Dorostolski "

CULTURAL AND HISTORICAL HERITAGE TEACHING AND RESEARCH LABORATORY

The Research and Laboratory "Cultural and Historical Heritage" headed by Assoc. Prof. Dr. Rumyana Lebedova was established in 2013 under a project of the Research Fund in the Silistra Branch of RU "Angel Kanchev" in order to unite and encourage students with interests in the humanities. It includes students majoring in "Pedagogy of teaching Bulgarian language and foreign language."

The establishment of a youth research group and the equipment of a training and research laboratory contribute to the development of activities aimed at attracting and motivating good students to more active research and creative activities. At the same time, conditions are created for public expression and presentation of the results of their research.

As a technically equipped space and as a prerequisite for the creation of a community, UIL provides an opportunity to initiate and implement various ideas and projects related to cultural and historical heritage, knowledge and preservation of which is a prerequisite for the motto of the European Union - "United in diversity". ».

The established working group, whose composition is updated periodically without losing continuity, is engaged in various initiatives that form and develop in students a number of practical skills - teamwork, creativity, striving for scientific clarification of facts, research, argumentation of theses with authentic material, creation of a scientific text, presentation of the achieved results, public activity. These skills are applicable in the implementation of their specific responsibilities, as well as extremely useful in their work as future teachers, as most of the activities are carried out in partnership with various cultural and educational institutions, which could be future employers of students.

UNDERGRADUATE SPECIALTIES

SPECIALTY

1.3.3. Pedagogy of Teaching

IN

BULGARIAN LANGUAGE and FOREIGN LANGUAGE

educational qualification degree
BACHELOR

PROFESIONAL STANDARTS

OF A BACHELOR IN

PEDAGOGY OF TEACHING BULGARIAN LANGUAGE AND A FOREIGN LANGUAGE

SUBJECT: **Pedagogy of Teaching Bulgarian Language and A Foreign Language**
Educational level: **Bachelor**
Professional qualification: **Teacher of Bulgarian Language and A Foreign Language**

The main aim of the specialty "Pedagogy of Teaching Bulgarian Language and A Foreign Language" is to train qualified specialists in conformity with the requirements of the contemporary school.
The professional duty of the teacher of Bulgarian language and foreign language is to maintain the educational and learning processes in the subjects Bulgarian language and literature and the corresponding foreign language; to carry out organizational and managing tasks at school; to be involved in methodological, cultural and educational structures.
The teacher of Bulgarian language and literature and foreign language should be acquainted with the cultural history of the European civilization; to be aware of the structure and the organization of the Bulgarian education as well as the tools for its marketing and management. He should be accurate and fluent (orally and in writing) in Bulgarian language and the corresponding foreign language.
The training is based on:

- **Special theoretic instruction,** including the acquisition of the contemporary attainments in the fields of the theory of Language and Literature, which is accompanied by courses in Historical linguistics, Contemporary Bulgarian language, Contemporary foreign language, Bulgarian literature, Russian classic literature, Classical and West European literature.
- **Pedagogical and methodological training in the corresponding subject area,** which comprises theoretical course, observational lessons and pedagogical practice.
- **Compulsory optional subjects:** the Bible, Folklore, Literature, Socio-linguistics, National identity and literature, Analytical reading in foreign language. Methodology of the literary investigations. All these help students to enrich their general philological background.

The teacher of Bulgarian language and literature and foreign language should master the following skills:

- To teach using strategies for active learning, which encourage active involvement and critical thinking; to sustain students` interest, to stimulate alternative viewpoints for realization of didactic aims; to weave into his teaching strategies for cooperative learning; to consider his instructions with the reactions of the students; to use writing activities and discussions as a means of investigation and clarification of ideas.
- To use additional didactic sources which enrich the learning process, make it easy and accessible for the students and stimulate interpretation of the topics in the syllabi; to implement activities which take the learning process beyond the limits of the classroom and encourage life-long learning.

CURRICULUM

OF THE DEGREE COURSE IN

PEDAGOGY OF TEACHING BULGARIAN LANGUAGE AND A FOREIGN LANGUAGE

First year

Code	First term	ECTS	Code	Second term	ECTS
	Obligatory courses			***Obligatory courses***	
	BULGARIAN LANGUAGE COURSES			*BULGARIAN LANGUAGE COURSES*	
SB14919	Introduction to the Literary Theory	6	SB14924	Phonetics of the Contemporary Bulgarian language	4
SB14920	Introduction to the General Lingustic Theory	5	SB14925	Lexicology of the Contemporary Bulgarian language	5
SB14921	Bulgarian Folklore	6	SB14926	Old Bulgarian literature	3
	FOREIGN LANGUAGE COURSES		SB14927	Ancient literature	3
SB14922	Practical course in the Foreign language – part 1	9	SB14928	Old Bulgarien Literature	
	Psycho-pedagogical and methodological courses			*FOREIGN LANGUAGE COURSES*	
SB14923	Audiovisual and information technologies	3	SB15242	Practical course in the Foreign language – part 2	10
	Total for the term:	**30**		**Total for the term:**	**3**
S00072	Sports	1	S00072	Sports	1

Second year

Code	Third term	ECTS	Code	Fourth term	ECTS
	Obligatory courses			***Obligatory courses***	
	BULGARIAN LANGUAGE COURSES			*BULGARIAN LANGUAGE COURSES*	
SB14931	Morphology of the Contemporary Bulgarian language	5	SB14934	Contemporary Bulgarian Literature	2
SB14932	Literature of the Bulgarian Renaissance	4		*FOREIGN LANGUAGE COURSES*	
SB14933	Western European literature	6	SB14940	Practical course in the Foreign language - part 2	8

SB14934	Children`s and Adolescents' Literature – specialized seminars	3	SB14941	Phonetics of the Contemporary foreign language(0024 Phonetics of the Contemporary English language; 0022 Phonetics of the Contemporary French language; 0022 Phonetics of the Contemporary Romanian language)	3
SB14936	Russian literature – specialized seminars	3	SB14942	Lexicology of the Contemporary foreign language(0024 Lexicology of the Contemporary English language; 0024 Lexicology of the Contemporary French language; 0024 Lexicology of the Contemporary Romanian language)	3
	FOREIGN LANGUAGE COURSES			***Psycho-pedagogical and methodological courses***	
SB14941	Practical course in the Foreign language - part 3	7	SB14946	Pedagogical Psychology	6
	Elective courses (students choose one course from each group)		SB14947	Pedagogy (Theory of Training)	6
SB14937	Sociolinguistics	2		***Elective courses (students choose one course from each group)***	
SB14938	Dialectology	2	0052	Guidelines to the foreign-language children's literature	2
			0052	Cultural realia of foreign-language children's literature	2
	Total for the term:	**30**		**Total for the term:**	**30**
S00072	Sports	1	S00072	Sports	1

Third year

Code	Fifth term	ECTS	Code	Sixth term	ECTS
	Obligatory courses			***Obligatory courses***	
	BULGARIAN LANGUAGE COURSES			*BULGARIAN LANGUAGE COURSES*	
SB14947	Syntax of the Contemporary Bulgarian Language	6	SB14965	Historical Grammar	5
SB14948	Stylistics and text linguistics	5	SB14966	Contemporary Bulgarian Literature	2
SB14949	Modern Bulgarian Literature	3		*FOREIGN LANGUAGE COURSES*	

	FOREIGN LANGUAGE COURSES		SB14967	Practical course in the Foreign language - part 3	4
SB14950	Practical course in the Foreign language - part 3	3		Syntax of the Contemporary foreign language (0023 Syntax of the Contemporary English language; 0023 Syntax of the Contemporary French language; 0023 Syntax of the Contemporary Romanian language)	3
SB14951	Morphology of the Contemporary foreign language(0022 Morphology of the Contemporary English language; 0022 Morphology of the Contemporary French language; 0022 Morphology of the Contemporary Romanian language)	6		***Psycho-pedagogical and methodological courses***	
SB14952	Cultural Studies	4	SB14958	Methodology of Teaching Bulgarian language and literature	6
	Elective courses (students choose one course from each group)			Bulgarian Language	3
SB14945	History and Literature	3			3
SB14946	National identity and literature	3	SB14960	Observation of lessons in Bulgarian language	1
			SB14962	Methodology of Teaching a Foreign language	6
			SB14963	Observation of lessons in a Foreign language	2
	Total for the term:	**30**		**Total for the term:**	**30**
S00072	Sports	1	S00072	Sports	1

Fourth year

Code	Seventh term	ECTS	Code	Eighth term	ECTS
	Obligatory courses			***Obligatory courses***	
	BULGARIAN LANGUAGE COURSES			*FOREIGN LANGUAGE COURSES*	
SB14964	Communication in Contemporary Bulgarian language	5	SB14967	Practical course in the Foreign language - part 4	6
				Psycho-pedagogical and methodological courses	

SB14964	History of the Contemporary Bulgarian language	2	SB14970	Pre-graduation teaching-training practice in Bulgarian language	2
SB14964	Contemporary Bulgarian Literature	6	SB14971	Pre-graduation teaching-training practice in Literature	2
	FOREIGN LANGUAGE COURSES		0043	Pre-graduation teaching-training practice in Foreign Language	2
	Practical course in the Foreign language - part 4	6		Self preparation for the graduation	
	Psycho-pedagogical and methodological courses			***Elective courses (students choose one course from each group)***	
SB14969	Audio-visual and Informational technologies in teaching - part 2	3			
SB14970	Teacher-training practice in Bulgarian language	1	SB14975	Problems of deviant behavior and psychotherapeutic methods	2
SB14970	Teacher-training practice in Bulgarian literature	1	SB14976	Psychology of Communication	2
SB14971	Teacher-training practice in a Foreign language	2	SB14952	School legislation	2
	Elective courses (students choose one course from each group)		SB14953	Pedagogical ethics	2
	Guidelines to the literature of the foreign language	4			
0041	Analytical reading in the foreign language	4			
	Total for the term:	**30**		**Total for the term:**	**30**
			0270	Sports	1
				Graduation	
			SB14979	State exam in Bulgarian language and literature (written)	4
			SB14980	State exam in foreign language (written)	4
			SB14981	State practical exam in both directions	2
				Or	
			SB14982	Thesis in Bulgarian language and literature	4
			SB14983	State exam in foreign language (written)	4

			SB14984	State practical exam in both directions Or	2
			SB14985	State exam in Bulgarian language and literature (written)	4
			SB14987	Thesis in foreign language	4
0270	Sports	1	SB14988	State practical exam in both directions	2

Total for the course of study: 240 ECTS credits

Introduction to the General Linguistics Theory

ECTS credits: 5 **Weekly classes:** 2lec+1sem+0labs+0ps
Assessment: exam **Type of exam:** written

Department involved:
Department of Philological Studies
Silistra Branch

Lecturers:
Assoc. Prof. Todorka Yordanova Georgieva, MA, DSc, Dept. of Philological Studies,
tel.: 359 86 821 521, E-mail: tgeorgieva@fs.uni-ruse.bg

Abstract:
The aim of the instruction in Introduction to the General Linguistics Theory is the students to get acquainted with the main problems of the theory of language; with its main constituents ,as well as to understand the origin and the character of language, its role in real life and the objective laws governing language development. Objects of study are the relationships between language and society, language and thought, langue and parole, linguistic semantics, classification of languages, the origin and the main stages in the development of the written" word".

Course content:
History of language study; Origin, content and function of language; Language and Society; Language and thought; Aspects and trends in language and parole study; Basic processes in language development; Objective laws for language development; Classification of language; genealogic, morphologic, of the stages, etc.; Languages of the Balkan peninsula; International and artificial languages; Intralinguistics: phonetics, lexicology, morphology, syntax, textual linguistics, stylistics; Extralinguistics: sociolinguistics, phycholinquistics, linquagraphology, etc.

Teaching and assessment:
The instruction is organized in lectures, seminars training. The active part of the instruction is the written assignment. The instruction in the seminars and the practical training aim at building skills for making linguistic analyses and interpretations on different theoretical topics. The exam consists of two parts; (theoretical and practical – case study) and solving a practical problem.

Introduction to The Literary Theory

ECTS credits: 6 **Weekly classes:** 2lec+1sem+0labs+0ps
Assessment: exam **Type of exam:** oral/ written

Department involved:
Department of Philological studies
Silistra Branch

Lecturer:
Assoc. Prof. Rumiana Dimitrova lebedova, MA, PhD, Dept. of Bulgarian Language, Literature and Art,
tel.: 359 86 821 521, E-mail:Lebedova@abv.bg

Abstract:

Theory of Literature is a basic subject in the literary science and is of prime importance in its hierarchy. It serves as basis for other subjects as History of Literature, as well as for literary analyses. It promotes development of research methods in literature and updates criteria for poetic assessment and evaluation.

Course content:

History of Literature. Basic literary notions – character, plot, idea, architectonics, lay-out, genre, gender, etc. Methodological trends. Criteria for assessment and interpretation of literary works.

Teaching and assessment:

The training is based on lectures, seminars and practical training, where theory is interpreted in original texts. The instruction includes a written assignment. The exam is includes the topics both from the lectures, the seminars and the course project.

Audiovisual a Information technologies

ECTS credits: 3 **Weekly classes:** 0lec+ 0sem+0labs+2ps

Assessment: continuous assessment **Type of exam:** written

Department involved:

Department of Technical and Natural Sciences
Silistra Branch

Lecturers:

Assoc.Prof. Temenuzka Bogdanova Buhcheva, MA.; Dept. of Technical and Natural Sciences, Silistra Branch tel: 086/821521, E-mail:betina93@abv.bg

Abstract:

The course is intended for students of the specialty Bulgarian language and English language.It aims at having students acquire functional computer literacy in the operational system Windows Office, Microsoft. In the exercises students do practical tasks - make text documents (application, report, leaflet, etc.); electronic tables - diagram design in accordance with given information. Students make presentations and work in a net.

Course content:

Windows XP, Word 2000, Excel 2000, Power Point, System and helpful programs, e-mail and Internet.

Teaching and assessment:

Students have their classes in rooms equipped with personal computers. At the beginning of the classes students have the necessary explanations and directions as to the topics, and the examples they are to follow. Then the students individually develop the given examples on their computers. Each time the student's work is tested and marked.

Ancient literature

ECTS credits: 3 **Weekly classes:** 1lec+1sem+0labs+0ps+se

Assessment: exam **Type of exam:** oral

Department involved:

Department of Philological Studies
Silistra Branch

Lecturers:

Assoc. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: glecheva@uni-ruse.bg

Abstract:

The subject presents the major themes relevant to the peculiarities and the main trends in the development of Bulgarian literature during the Ancient time through the Ancient Rome till the Middle Ages. The topics in the syllabus are structured regarding the chronology of the main periods of Classical Bulgarian literature. It includes theoretical themes as well as detailed characteristic of the literary trends at this period of time.

Course content:

Literary trends, literary and aesthetic methods and tendencies in Classical literature and literary trends in the culture in Europe.

Teaching and assessment:

The instruction is based on lectures and seminars. Students are encouraged to give their point of view in the seminars, where they themselves give presentations for their colleagues. Students build up their psychological and didactic competence, they work in teams and analyze literary texts. The exam is a free discussion over two topics from the examination synopsis.

West European Literature

ECTS credits: 6
Weekly classes: 1lec+2sem+0labs+0ps+se
Assessment: exam
Type of exam: oral

Department involved:

Department of Philological studies
Silistra Branch

Lecturers:

Assoc. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: glecheva@uni-ruse.bg

Abstract:

The subject acquaints the students with the development of the literary interpretations concerning Man and the World during: the separate cultural periods of the evolution of the European civilization; and the development of the literary conception of world, society and man in the different stages of the European civilizations.

Course content:

Literary trends, methods, tendencies in West European culture. The rise, theoretical background and creative invention of the literary trends in West European culture. The literary analysis is based on texts, studied in secondary school.

Teaching and assessment:

The instruction is based on lectures and seminars. Students are encouraged to give their point of view in the seminars, where they themselves give presentations for their colleagues. The exam is a free discussion over two topics from the examination synopsis.

Russian Literature

ECTS credits: 3
Weekly classes: 0lec+2sem+0labs+0ps+1se
Assessment: defence
Type of exam: oral

Department involved:
Department of Philological Studies
Silistra Branch

Seminar tutor:
Assoc. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: glecheva@uni-ruse.bg

Abstract:
The subject Russian literature is studied in the IIIrd sem. from the curriculum for the specialty Bulgarian language and Foreign language. It represents the major Russian authors and their works.

Course content:
Literary trends, schools, literary and aesthetic methods and tendencies during the classic ("Gold" and "Silver") period in the development of the Russian literature (XIX c. and first two decades of XXc.). The creation of the most prominent authors is studied: A.C.Pushkin, M.Y.Lermontov, N.V.Gogol,I.C.Tolstoy, F.M.Dostoevski, A.P.Chehov.

Teaching and assessment:
The instruction is presented in seminars. The attendance is obligatory. Continuous tests are assigned regularly as well as individual tasks. The final exam-defence is oral.

Phonetics of the Contemporary Bulgarian Language

ECTS credits: 4
Weekly classes: 2lec+1sem+0labs+0ps+1ce
Assessment: continuous assessment
Type of exam: written

Department involved:
Department of Philological Studies
Silistra Branch

Lecturers:
Assoc. Prof. Todorka Yordanova Georgieva, MA, DSc, Dept. of Philological Studies,
tel.: 359 86 821 521, E-mail: tgeorgieva@fs.uni-ruse.bg

Abstract:
The aim of the instruction in Phonetics of the Contemporary Bulgarian language is the students to get acquainted with the articulation of the sounds and the structure of the speech organs; to learn about the vocal and the consonant system of the Contemporary Bulgarian language; about the historical and the contemporary laws of the sound; about the peculiarities of the compatibility of the phonemes, the suprasegment units – syllable, stress and intonation as well as the guidelines for the Standard Received Pronunciation of the Contemporary Bulgarian language and orthography.

Course content:
Phonetics and phonology as sciences for the sign and the functional structure of language. Articulation and acoustics of the speech pattern. Phoneme system of the Contemporary Bulgarian language; Sound variations and laws; stress, intonation. Orthoepy and orthography.

Teaching and assessment:
The instruction includes lectures on the basic topics from Bulgarian Phonetics. In the seminars solve theory-based topical problems and fulfill tasks related phonetically to orthography. The evaluation is complex – it consists from a written elaboration on a topic from the examination synopsis, assessment of the assignment and the continuous test assessment in the seminars.

Lexicology of the Contemporary Bulgarian Language

ECTS credits: 5 **Weekly classes:** 2lec+1sem+0labs+0ps
Assessment: exam **Type of exam:** written
Department involved:
Department of Philological studies
Silistra Branch
Lecturers:
Lecturer: Silvia Georgieva Angelova, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: silvijabg@yahoo.com
Abstract:
Students receive knowledge about the word as a basic language unit, as well as the relationship between its lexical and grammatical meaning; about the deviations of the lexical meaning of the word; its semantic relationship in the dictionary. Phraseology. Functional lexical differentiation
Course content:
Lexicology as science. Lexeme. Word as a language unit. Semantic relationship among words.Dictionaries of the Bulgarian language. Phraseology. Functional lexical differentiation.
Teaching and assessment:
The subject Lexicology of the Contemporary Bulgarian language includes lecture course, covering the major themes from Bulgarian lexicology. During the seminars training students fulfill a series of tasks related to theory. The final mark is complex: it consists of elaboration of a topic from the examination synopsis and marks from the continuous assessment in seminars training.

Morphology of the Contemporary Bulgarian Language

ECTS credits: 5 **Weekly classes:** 2lec+1sem+0labs+0ps+1se
Assessment: exam **Type of exam:** written
Department involved:
Department of Philological studies,
Silistra Branch
Lecturers:
Assoc. Prof. Todorka Yordanova Georgieva, MA, DSc, Dept. of Philological Studies,
tel.: 359 86 821 521, E-mail: tgeorgieva@fs.uni-ruse.bg
Abstract:
Morphology of Contemporary Bulgarian language is one of the main divisions of the Theory of Bulgarian language. It studies word and its formation, as well as the relevant grammar

meanings. It examines in detail the structure of the word and the smallest meaning units-morphemes.

Course content:

The lectures are based on the latest achievements in Linguistics, which give detailed descriptions of how morphological structures function. All parts of speech are studied but priority is given to the Verb because of its complex modal and temporal nature. The practical training is based on theoretical topics.

Teaching and assessment:

The instruction is based on lectures and seminars and practice work be latter help the student in their creative mastery of theory and implementation of their knowledge in practical training at school. The instruction ends up with oral exam. Visual aids are use to support the presentation and comprehension of the various notions and categories. Interdisciplinary approach is chosen to reflect the relationship of Linguistics with other sciences, i.e. Literary theory. Students solve various linguistic problems in the seminars which helps them brush their reading and writing skills; expand their knowledge about punctuation.

Syntax of the Contemporary Bulgarian Language

ECTS credits: 6 **Weekly classes:** 2lec+2sem+0labs+0ps+1cw
Assessment: exam **Type of exam:** written

Department involved:

Department of Philological Studies
Silistra Branch

Lecturers:

Assoc. Prof. Todorka Yordanova Georgieva, MA, DSc, Dept. of Philological Studies,
tel.: 359 86 821 521, E-mail: tgeorgieva@fs.uni-ruse.bg
Prof. Ivan Enev Nedev, 086 821 521, retiree

Abstract:

Syntax of the Contemporary Bulgarian language reveals regularities which define the structure of word groups, simple sentences, compound sentences and direct speech patterns. It studies the complex relationships between the objects and phenomena in reality; between language and thought. The subject helps the mastery of punctuation, while its relation with intonation encourages the construction of precise and accurate speech act.

Course content:

The lectures present major topics concerning structural-semantic analysis of syntactic units. They are revealed in comparison different points of view, stating various arguments in support of the wider-spread statement. Students get convinced that the units of the Contemporary Bulgarian language are miscellaneous and polyvalent.

Teaching and assessment:

The instruction is organized in lectures and seminars. Lectures give the theoretical input, while in seminars students discuss the general syntactic regularities and seek their confirmation in fictional examples, or speech acts, or folklore.

Stylistics and Text Linguistics

ECTS credits: 5
Weekly classes: 2lec+1sem+0labs+0ps+1cw
Assessment: exam
Type of exam: written

Department involved:
Department of Philological studies,
Silistra Branch

Lecturer:
Lecturer: Silvia Georgieva Angelova, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: silvijabg@yahoo.com

Abstract:
The subject Stylistics is theoretically bound with Stylistics of the Contemporary Bulgarian language and Text linguistics. The instruction in Stylistics considers important themes from the functional and theoretical stylistics. Functional stylistics is related to the communicative aspect of language. That is why the regularities of the function of language are well-presented in the course of instruction in respect to the spheres of communication (political, scientific, official, aesthetic).
The thematic area covers the basic characteristics of language text and its main constituents. The text is presented as integral unity.

Course content:
Official style. Public style. Genres of the public style. Colloquial style. Stylistic dimensions of language on different language levels. Language norms. Stylistic norms. Types of stylistic errors.

Teaching and assessment:
The instruction in Stylistics and Text linguistics is organized in lectures and practical training. The active part of the instruction is the seminars students compose texts from different spheres of communication. They are taught to edit the text also. The instruction in the seminars and the practical training aim at building skills for making stylistic analyses and interpretations.
The final exam is written and tests the theoretical knowledge and the practical skills.

Old Bulgarian Literature

ECTS credits: 3
Weekly classes: 1lec+1sem+0labs+0ps+se
Assessment: exam
Type of exam: oral

Department involved:
Department of Philological Studies
Silistra Branch

Lecturers:
Assoc. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: glecheva@fs.uni-ruse.bg

Abstract:
The subject presents the major themes relevant to the peculiarities and the main trends in the development of Bulgarian literature during the Middle Ages – from the beginning of VIIIc. till the middle of XVIIIc. The topics in the syllabus are structured regarding the chronology of the main periods of Old Bulgarian literature. It includes theoretical themes as well as detailed

characteristic of the most prominent Old Bulgarian literature schools – in Okhrid, Preslav, Turnovo, Sofia.

Course content:

Literary trends, literary methods and tendencies in Old Bulgarian literature and outstanding writers and their literary creation from IX till XVIII-th century.

Teaching and assessment:

The instruction is based on lectures and seminars. Students are encouraged to give their point of view in the seminars, where they themselves give presentations for their colleagues. During the term there are three tests. The exam is a free discussion over two topics from the examination synopsis.

Literature of The Bulgarian Renaissance

ECTS credits: 4
Weekly classes: 1lec+1sem+0labs+0ps+se
Assessment: exam
Type of exam: oral

Department involved:

Department of Philological studies,
Silistra Branch

Lecturers:

Assoc. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: glecheva@fs.uni-ruse.bg

Abstract:

The subject considers major topics relevant to the specifics of the Bulgarian Revival Period and the literary processes that accompany it. The different stages in the development of the Bulgarian literature are presented in detail. Students are acquainted with the works of the outstanding authors, who lived and created in this period, in respect of their literary, cultural and political contributions.

Course content:

Emergence, development, main periods of the Bulgarian literature during the Renaissance. Old Bulgarian literature. Renaissance influences. Balkan historical context.

Teaching and assessment:

The instruction is based on lectures and seminars. Students are encouraged to give their point of view in the seminars, where they themselves give presentations for their colleagues. The exam is a free discussion over two topics from the examination synopsis.

Dialectology

ECTS credits: 2
Weekly classes: 0lec+ 2sem+0labs+0ps
Assessment: defence
Type of exam: written

Department involved:

Department of Philological Studies
Silistra Branch

Lecturers:

Lecturer: Maria Tomova-Mihneva, MA, Dr, Dept. of Philological Studies, Silistra Branch,

tel.: 086/821521, E-mail: tomovam@abv.bg

Abstract:

Dialectology is a branch of Linguistics, which studies dialects, i.e. all the linguistic means for communication. The course aims at acquainting the students from the specialty Pedagogy of Bulgarian language and Foreign Language Teaching with the various dialects in the Bulgarian language on the basis of their geographical and linguistic features. This will contribute to the general professional knowledge of the students – future teachers in the primary and secondary schools.

Course content:

The instruction is organized in seminars. The topics of the seminars acquaint the students with the basic theoretical issues and principles of Dialectology, the origin of dialects, their distribution in the Bulgarian language, geographical and historical characteristics of the Bulgarian dialectology.

Teaching and assessment:

The instruction is carried out in the classical way. Visual aids are used when appropriate – foligrams, maps from the Bulgarian dialects atlas, as way as authentic records of Bulgarian dialects. Students validate their attendance according to the internal regulations of the University of Ruse. The instruction is finalized with a defence.

Sociolinguistics

ECTS credits: 2 **Weekly classes:** 0lec+ 2sem+0labs+0ps

Assessment: defence **Type of exam:** written

Department involved:

Department of Philological Studies
Silistra Branch

Lecturers:

Lecturer: Maria Tomova-Mihneva, MA, Dr, Dept. of Philological Studies, Silistra Branch,
tel.: 086/821521, E-mail: tomovam@abv.bg

Abstract:

Sociolonguistics is a branch of Linguistics which studies contemporary sociolinguistics thery for communication. The course aims at acquainting the future students from the specialty Pedagogy of Bulgarian language and Foreign Language Teaching with the modern knowledge of sociolinguistics. This will contribute to the general professional knowledge of the students – future teachers in the primary and secondary schools. It presents the relation between the linguistic phenomena and unlinguistic facts as well as linguistic competence from the social environment.

Course content:

The instruction is organized in seminars. The topics of the seminars acquaint the students with the basic theoretical issues and principles of Sociolinguistics: Social nature of Speech, Forms of management of Speech, Language and Socialization, Speech and Socialization, Social and Language inequality, Subjective inequality, Real Language inequality, Communicative inequality, Language incompetence, Theory of deficit, Idiolect, etc.

Teaching and assessment:

The instruction is carried out in the classical way. Visual aids are used when it is appropriate Students validate their attendance according to the internal regulations of the University of Ruse. The instruction is finalized with a defence.

Modern Bulgarian Literature

ECTS credits: 2(IV sem.), 3(V sem.) **Weekly classes:** IV sem:1l+1s+0lab+0ws V sem:1l+1s +0lab+0ws+1ca

Assessment: exam **Type of the exam:** oral

Department involved: Department of Philological studies, Silistra Branch, University of Rousse "Angel Kanchev"

Lecturer:

Assoc. Prof. Roumyana Dimitrova Lebedova, PhD, Department of Philological studies, Silistra Branch, tel. 086/821521, E-mail: lebedova@abv.bg

Abstract:

The subject Modern Bulgarian Literature presents the main problem areas of the Bulgarian literature during the period 1878-end of WWI. The representatives of this literary epoch are presented with their prominent works; in the cultural and social context of the time. Students are acquainted with different methodological approaches for literary analysis, as well as with matrix interpretation of one and the same text. Individual literary interpretation is encouraged and stimulated.

Course content:

Main periods in Modern Bulgarian literature. Representatives and their literary works. Thematic guidelines. Critical reflections. Transformational processes regarding genres and aesthetic views/ Vazov`s circle "Thought", symbolism/.

Teaching and assessment:

Attendance to the lectures and the practical training is compulsory. Each student is assigned topical paper work. The exam is oral interpretation of a topic from the examination synopsis; the final mark includes the assessment of the assignment.

Children's Literature – specialized seminars

ECTS credits: 3 **Weekly classes**: 0lec+2sem+0labs+0ps+1se

Assessment: defence **Type of exam:** oral

Department involved: Department of Philological studies Silistra Branch

Seminar tutor:

Lecturer: Ginka Milanova, MA, , Department of Philological studies, Silistra Branch, tel. 086/821521

Abstract:

The subject acquaints the students with the ever-green Bulgarian and foreign children's literature. The study of the works of foreign and Bulgarian poets and writers aims at giving knowledge and building skills for interpretation of literary pieces of art; and active critical reflection with individual point of view.

Course content:

Literary trends, literary and aesthetic methods and tendencies in infant and teenagers` literature.
Outstanding writers and poets and their literary creation.

Teaching and assessment:

The instruction is presented in seminars where students discuss certain topics. Active participation and interpreting literary texts is encouraged. The instruction ends up with a defence.

Old Bulgarian Language

ECTS credits: 6 **Weekly classes:** 2lec+1sem+0labs+0ps+1cw

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological Studies
Silistra Branch

Lecturers:

Assoc. Prof. Todorka Yordanova Georgieva, MA, PhD, Dept. of Philological Studies, Silistra Branch
tel.: 086/821521, E- mail: tgeorgieva@fs.uni-ruse.bg

Abstract:

Old Bulgarian Language is the first subject to be taught from the Historical Linguistics module. The aim of the instruction is to get the students acquainted with the earliest Slavonic language with recorded written evidences. Old languages are studied by written evidences, created in Cyrilic during the classic Old Bulgarian period (IX-Xc.). The informative value of Old Bulgarian language helps to trace the development of the Bulgarian language during its long and rich history; to study its unity in past and present days, to study its influence on the Slavonic literary languages.

Course content:

Importance of Old Bulgarian language for Bulgarian and Slavonic studies. Origin of Old Bulgarian orthography and Old Bulgarian language. Composition and character of the alphabets; the language of the parchment books and pages. The subject acquaints with the phonetic, morphologic and syntactic structure as well as the lexis of Old Bulgarian language.

Teaching and assessment:

The instruction is carried out in lectures and seminars. The aim of the lecture course is to give the bases of the Bulgarian studies theory – main trends in the development of the phonetic structure and the grammar, inherited from Proto-Slavonic language; phonetics and grammar of Old Bulgarian language. These main topics help the explanation of many phonetic, grammar and lexical facts in Old Bulgarian literature as well as in Contemporary Bulgarian language. The syntactic and lexical phenomena are studied from original written evidences in literary analysis classes. The exam consists of two parts – theoretical and practical.

Bulgarian Folklore

ECTS credits: 6 **Weekly classes:** 2lec+1sem+0labs+0ps+0,5r

Assessment: exam **Type of exam:** written

Department involved:
Department of Philological studies, Silistra Branch
Lecturers:
Assoc. Prof. Rumyana Dimitrova Lebedova PhD, Department of Philological studies, Silistra Branch
tel.: 086 831 521, E-mail: Lebedova@abv.bg
Abstract:
The subject considers the development of Folklore studies in The European ethnocultural region, history, and the corresponding stages of Bulgarian folklore. Ritual folklore, the different genres of folksongs, and the folktale as narrative are studied in detail .The folk texts (narratives and songs) are examined in connection with the relation myth-folklore-literature during the separate periods of the Bulgarian cultural development.
Course content:
General characteristics of the folklore culture as a result of a secondary mythological influence; the song as a component of the ritual; the Bulgarian ritual calendar as an interference between pagan and Christian rituals. Folklore motives, plots and characters are interpreted as constituents of the idea about the Bulgarian ethnocultural community.
Teaching and assessment:
The instruction is based on lectures and seminars. The lecture material presents the history of European and Bulgarian folklore - representatives and their works.
The seminar material is focused on folklore works, studied at Bulgarian school. Students are encouraged to express their own opinion in the seminars, where they themselves give presentations for their colleagues. The final mark is formed as average mark from the test mark, the report mark and the examination mark.

Phonetics of the Contemporary Foreign Language (English Language)

ECTS credits: 3 **Weekly classes:** 1lec+0sem+0labs+1ps
Assessment: exam **Type of exam:** written
Department involved:
Department of Philological Studies
Silistra Branch
Lecturers:
Assoc.Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological Studies, Silistra Branch, University of Ruse, Silistra Branch
tel.: 086/821521, E-mail:dianazhelezova@abv.bg
Abstract:
The aim of the theoretical course is to acquaint the students with the phonetic system of the Contemporary Foreign language, the main phonetic laws, the combinatory phonetic phenomena; acquisition of received orthoepic norms and skills for using corrective phonetic tools when teaching beginners and low-intermediate students at school.
Course content:

Phonetics. Phonology. Phoneme. Phonation and articulation. Phonetic transcription. Combinatory Phonetic phenomena. Vocal system. Consonant system. Stress, rhythm, intonation.

Teaching and assessment:

The instruction is based on lectures. The exam is oral interpretation of two topics from the examination synopsis.

Phonetics of the Contemporary Foreign Language (Romanian Language)

ECTS credits: 3 **Weekly classes:** 1lec+0sem+0labs+1ps

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological Studies
Silistra Branch

Lecturers:

Lecturer:Alina Costea, Tomis, MA, PhD, University, Constanta, Romania, tel.: 0040 723 198585, email: alinaspinucostea@yahoo.com

Abstract:

The aim of the theoretical course is to acquaint the students with the phonetic system of the Contemporary Foreign language, the main phonetic laws, the combinatory phonetic phenomena; acquisition of received orthoepic norms and skills for using corrective phonetic tools when teaching beginners and low-intermediate students at school.

Course content:

Phonetics. Phonology. Phoneme. Phonation and articulation. Phonetic transcription. Combinatory Phonetic phenomena. Vocal system. Consonant system. Stress, rhythm, intonation.

Teaching and assessment:

The instruction is based on lectures. The exam is oral interpretation of two topics from the examination synopsis.

Lexicology of the Contemporary Foreign Language (English Language)

ECTS credits: 3 **Weekly classes:** 2lec+0sem+0labs+0ps

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological Studies
Silistra Branch

Lecturers:

Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological Studies, Silistra Branch, University of Ruse, Silistra Branch
tel.: 086/821521, E-mail: dianazhelezova@abv.bg

Abstract:
The subject Lexicology of the Contemporary Foreign language acquaints the students with the historical development of the foreign language lexis; the structure of lexical units; the formal and semantic relationships among words; with typology of the phrases; sources for enriching vocabulary; Lexicography as part of Lexicology.
Course content:
Object of study. Basic terminology and notions – language unit, lexeme, vocabulary systems. Changes in the structure of words. Changes in the lexical meaning of words. Semantic changes. Neology. Phraseology.
Teaching and assessment:
The instruction is organized in lectures. There are no seminars or practical exercises, that is why lectures are accompanied by structured tests. The final exam is written interpretation on two topics.

Lexicology of the Contemporary Foreign Language (Romanian Language)

ECTS credits: 3 Weekly classes: 2lec+0sem+0labs+0ps
Assessment: exam Type of exam: written
Department involved: Department of Philological Studies,Silistra Branch
Lecturers:
Assoc.Prof. Kiril Yovchev Tsankov, MA, PhD, University of Turnovo
Abstract:
The subject Lexicology of the Contemporary Foreign language acquaints the students with the historical development of the foreign language lexis; the structure of lexical units; the formal and semantic relationships among words; with typology of the phrases; sources for enriching vocabulary; Lexicography as part of Lexicology.
Course content:
Object of study. Basic terminology and notions – language unit, lexeme, vocabulary systems. Changes in the structure of words. Changes in the lexical meaning of words. Semantic changes. Neology. Phraseology.
Teaching and assessment:
The instruction is organized in lectures. There are no seminars or practical exercises, that is why lectures are accompanied by structured tests. The final exam is written interpretation on two topics.

Morphology of the Contemporary Foreign Language (French Language)

ECTS credits: 6 **Weekly classes**: 3lec+0sem+0labs+1ps+1r
Assessment: validation **Type of exam**: written
Department involved:Department of Philological studies-Silistra Branch
Lecturer:
Assoc.Prof Veska Kirilova Dimitrova, MA, PhD,q University of Turnovo,

Abstract:
The subject presents basic theoretical issues regarding Morphology of the foreign language. Basic skills are taught also in respect of implementation of theory into practice.
Course content:
Object of instruction of Morphology. Levels of grammar analysis. Verb – grammatical categories. Noun – person and number. Adjective - grammatical categories. Adverb – types, use. Pronouns-types, use.
Teaching and assessment:
The instruction is based on lectures and practical sessions. Active participation in the sessions on the part of the students is demanded and later assessed. The exam is oral interpretation of two topics from the examination synopsis.

Morphology of the Contemporary Foreign Language (English Language)

ECTS credits: 6
Weekly classes: 3lec+0sem+1ps+1se
Assessment: exam
Type of exam: written
Department involved:
Department of Philological studies
Silistra Branch
Lecturers:
Assoc.Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological Studies, Silistra Branch, University of Ruse, Silistra Branch
tel.: 086/821521, E-mail:dianazhelezova@abv.bg
Abstract:
The subject presents basic theoretical issues regarding Morphology of the foreign language. Basic skills are taught also in respect of implementation of theory into practice.
Course content:
Object of instruction of Morphology. Levels of grammar analysis. Verb – grammatical categories. Noun – person and number. Adjective - grammatical categories. Adverb – types, use. Pronouns-types, use.
Teaching and assessment:
The instruction is based on lectures and practical sessions. Active participation in the sessions on the part of the students is demanded and later assessed. The exam is oral interpretation of two topics from the examination synopsis.

Morphology of the Contemporary Foreign Language (Romanian Language)

ECTS credits: 6
Weekly classes: 3lec+0sem+1ps+1se
Assessment: exam
Type of exam: written
Department involved:
Department of Philological studies

Silistra Branch

Lecturers:

Assoc.Prof. Kiril Yovchev Tsankov, MA, PhD, University of Turnovo

Abstract:

The subject presents basic theoretical issues regarding Morphology of the foreign language. Basic skills are taught also in respect of implementation of theory into practice.

Course content:

Object of instruction of Morphology. Levels of grammar analysis. Verb – grammatical categories. Noun – person and number. Adjective - grammatical categories. Adverb – types, use. Pronouns-types, use.

Teaching and assessment:

The instruction is based on lectures and practical sessions. Active participation in the sessions on the part of the students is demanded and later assessed. The exam is oral interpretation of two topics from the examination synopsis.

Cultural Studies (English)

ECTS credits: 4

Weekly classes: 0lec+3s+0labs+0ps+1se

Assessment: continuous assessment

Type of exam: written

Department involved:

Department of Philological studies
Silistra Branch

Lecturers:

1. Lecturer. Ivelina Bobcheva Zhechkova, MA, Dept. of Philological Studies, University of Ruse, Silistra Branch
E-mail:ivelina.zhechkova@abv.bg, tel.: 086/821521

Abstract:

The aim of the subject is to acquaint the students with the social, political and historical life of the corresponding foreign country. Along side with this students improve their skills in reading, writing, listening and communication in the foreign language.

Course content:

Historical review. Geography. Political institutions and parties. Administrative and voting system. Agriculture. Industry. Educational system. Social security. Way of life. Theater. Cinema. Art.. Music.

Teaching and assessment:

The instruction is organized in seminars. Students are involved actively in the teaching process – they assigned project works and investigate various topics. The evaluation is complex – the results of at least three progress tests.

Cultural Studies (French)

ECTS credits: 4

Weekly classes: 0lec+3s+0labs+r

Assessment: continuous assessment

Type of exam: written

Department involved:
Department of Philological studies
Silistra Branch
Lecturer:
Senior Lecturer. Viliana Yordanova Raycheva, MA, Dept. of Philological Studies, Silistra Branch , University of Rousse- Silistra Branch tel.: 086/821521, E-mail: viliana_ss@abv.bg
Abstract:
The aim of the subject is to acquaint the students with the social, political and historical life of the corresponding foreign country. Along side with this students improve their skills in reading, writing, listening and communication in the foreign language.
Course content:
Historical review. Geography. Political institutions and parties. Administrative and voting system. Agriculture. Industry. Educational system. Social security. Way of life. Theater. Cinema. Art.. Music.
Teaching and assessment:
The instruction is organized in seminars. Students are involved actively in the teaching process – they assigned project works and investigate various topics. The evaluation is complex – the results of at least three progress tests.

Practical Course in Foreign language 1

ECTS credits: : 9 (I сем.), 10 (II сем.), Weekly classes: 0lec+0sem+0labs+9ps (I sem.) 0lec+0sem+0labs+7ps(II sem.)
Assessment: exam Type of exam: written/oral
Department involved: Department of Philological Studies Silistra Branch
Lecturers:
1. Assoc. Prof. Diana Petrova Zhelezova-Mindizova, PhD, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: dianazhelezova@abv.bg
2.Lecturer;. Ivelina Bobcheva Zhechkova, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: ivelina.zhechkova@abv.bg
3.Senior Lecturer. Viliana Yordanova Raicheva, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: viliana_ss@abv.bg
4. Lecturer: Silvia Georgieva Angelova, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: silvijabg@yahoo.com
Abstract:
The aim of the instruction is the acquisition of the foreign language from "beginner" to "upper-intermediate" level, and development of the four major skills – reading, writing, listening and speaking. The training of these skills is simultaneous with the teaching of grammar, lexis, translation.
Course content:
Grammar, lexis, reading and writing activities with major themes: Articles – type, use; Verbs and Verbal tenses; Nouns and Adjectives; Pronouns; Adverbs; Interjections; Prepositions; Simple and compound sentences; Word order; Family; School; Food; Traveling; Months; Seasons; Shopping, etc.
Teaching and assessment:

The instruction in I semesters ends up with a written grammar and lexis final tests, while in II semester – with written and oral final exams. The written exam consists of dictation, translation to and from the foreign language, retelling (essay).The oral exam consists of oral translation of a book in the foreign language and a topic from the nominal lexis. The final mark is complex – including the continuous evaluation during the semester, the oral and the written exam.

Practical Course in Foreign language 2

ECTS credits: 7 (III сем.), 8 (IV сем.)

Weekly classes: 0lec+0sem+0labs+7ps (III сем.), 0lec+0sem+0labs+6ps (IV сем.)

Assessment: exam

Type of exam: written/oral

Department involved: Department of Philological Studies, Silistra Branch

Lecturers:

1. Assoc. Prof. Diana Petrova Zhelezova-Mindizova, PhD, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: dianazhelezova@abv.bg

2.Lecturer;. Ivelina Bobcheva Zhechkova, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: ivelina.zhechkova@abv.bg

3.Senior Lecturer. Viliana Yordanova Raicheva, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: viliana_ss@abv.bg

4. Lecturer: Silvia Georgieva Angelova, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: silvijabg@yahoo.com

Abstract:

The aim of the instruction is the acquisition of the foreign language from "beginner" to "upper-intermediate" level, and development of the four major skills – reading, writing, listening and speaking. The training of these skills is simultaneous with the teaching of grammar, lexis, translation.

Course content:

Grammar, lexis, reading and writing activities with major themes: Articles – type, use; Verbs and Verbal tenses; Nouns and Adjectives; Pronouns; Adverbs; Interjections; Prepositions; Simple and compound sentences; Word order; Family; School; Food; Traveling; Months; Seasons; Shopping, etc.

Teaching and assessment:

The instruction in III semester ends up with a written grammar and lexis final tests, while in IV semester – with written and oral final exams. The written exam consists of dictation, translation to and from the foreign language, retelling (essay).The oral exam consists of oral translation of a book in the foreign language and a topic from the nominal lexis. The final mark is complex – including the continuous evaluation during the semester, the oral and the written exam.

Practical Course in Foreign language 3

ECTS credits: : 3 (V сем.), 4 (VI сем.)

Weekly classes: 0lec+0sem+0labs+4ps (V sem.)

0lec+0sem+0labs+3ps (VI sem.)

Assessment: exam **Type of exam:** written/oral

Department involved: Department of Philological Studies Silistra Branch

Lecturers:

1. Assoc. Prof. Diana Petrova Zhelezova-Mindizova, PhD, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: dianazhelezova@abv.bg

2.Lecturer;. Ivelina Bobcheva Zhechkova, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: ivelina.zhechkova@abv.bg

3.Senior Lecturer. Viliana Yordanova Raicheva, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: viliana_ss@abv.bg

4. Lecturer: Silvia Georgieva Angelova, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: silvijabg@yahoo.com

Abstract:

The aim of the instruction is the acquisition of the foreign language from "beginner" to "upper-intermediate" level, and development of the four major skills – reading, writing, listening and speaking. The training of these skills is simultaneous with the teaching of grammar, lexis, translation.

Course content:

Grammar, lexis, reading and writing activities with major themes: Articles – type, use; Verbs and Verbal tenses; Nouns and Adjectives; Pronouns; Adverbs; Interjections; Prepositions; Simple and compound sentences; Word order; Family; School; Food; Traveling; Months; Seasons; Shopping, etc.

Teaching and assessment:

The instruction in V semester ends up with a written grammar and lexis final tests, while in IV semester – with written and oral final exams. The written exam consists of dictation, translation to and from the foreign language, retelling (essay).The oral exam consists of oral translation of a book in the foreign language and a topic from the nominal lexis. The final mark is complex – including the continuous evaluation during the semester, the oral and the written exam.

Practical Course in Foreign language 4

ECTS credits: : 6 (VII сем.), 6 (VIII сем.) **Weekly classes:** 0lec+0sem+0labs+4ps (VII сем.)
0lec+0sem+0labs+6ps (VIII сем.)

Assessment: exam **Type of exam:** written/oral

Department involved: Department of Philological Studies Silistra Branch

Lecturers:

1. Assoc. Prof. Diana Petrova Zhelezova-Mindizova, PhD, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: dianazhelezova@abv.bg

2.Lecturer;. Ivelina Bobcheva Zhechkova, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: ivelina.zhechkova@abv.bg

3.Senior Lecturer. Viliana Yordanova Raicheva, MA, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: viliana_ss@abv.bg

4. Lecturer: Silvia Georgieva Angelova, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 359 86 821521, E-mail: silvijabg@yahoo.com

Abstract:

The aim of the instruction is the acquisition of the foreign language from "beginner" to "upper-intermediate" level, and development of the four major skills – reading, writing, listening and speaking. The training of these skills is simultaneous with the teaching of grammar, lexis, translation.

Course content:

Grammar, lexis, reading and writing activities with major themes: Articles – type, use; Verbs and Verbal tenses; Nouns and Adjectives; Pronouns; Adverbs; Interjections; Prepositions; Simple and compound sentences; Word order; Family; School; Food; Traveling; Months; Seasons; Shopping, etc.

Teaching and assessment:

The instruction in VII semester – with written and oral final exam and in VIII semester with verification. The written exam consists of dictation, translation to and from the foreign language, retelling (essay).

English 1

ECTS credits: 3 **Weekly classes:** 0lec+0sem+0labs+2P

Assessment: continuous assessment **Type of exam**: written and oral

Department involved:

Department of Philological studies, Silistra Branch

Lecturers:

Senior Lecturer Tsvetanka Pavlova, Dept. of Philological Studies, Silistra Branch,
tel.: 086/821521, email: cvetanka_pavlova@mail.ru

Abstract:

The subject *English language* is aimed at achieving communicative competence in the area of the subject specialism and the future job. The teaching objectives comprise the development of reading comprehension skills to handle specialist texts and the acquisition of communication skills to interact successfully in professional settings and everyday situations.

Course content:

Meeting people. Talking about the present and the past. Plans. Describing objects and places. Comparing things. Searching for information in the Internet. Linking facts and ideas. Geometrical figuresq matematical formulae.The grammar material is connected with the lexical topics and situations.

Teaching and assessment:

To acquire the necessary language knowledge and to develop skills in using the language as a means of communication. A wide range of authentic and specially constructed texts (i. e. articles, diagrams and tables, brochures, catalogues, manuals, etc.) as well as audio, video, and multimedia materials are used. Students are offered lessons in computer laboratories, in which multimedia learning packages and on-line materials on the Internet are used according to the modern trends in foreign language teaching. Key elements are the motivation factors. In class students participate in role-plays, pair and group activities.. The continuous assessment involves a written test and creating a Power Point presentation.

English 2

ECTS credits: 5 **Weekly classes:** 0lec+0sem+0labs+4ps
Assessment: continuous assessment **Type of exam**: written and oral
Department involved:
Department of Philological studies, Silistra Branch
Lecturers:
Senior Lecturer Tsvetanka Pavlova, Dept. of Philological Studies, Silistra Branch,
tel.: 086/821521, email: cvetanka_pavlova@mail.ru
Abstract:
The foreign language module 2 like module 1 is aimed at achieving communicative competence in the area of the subject specialism and the future job. The teaching objectives comprise the development of reading comprehension skills to handle specialist texts and the acquisition of communication skills to interact successfully in professional settings and everyday situations.
Course content:
Higher education and the exchange of students. History of the computer systems.
Computer devices. Storage devices. In the world of the Internet.Basic software. Creative software. New technologies WAP, UMTS, Bluetooth. Applying for work.
Teaching and assessment:
As in module 1a wide range of authentic texts (i. e. articles, diagrams and tables, brochures, catalogues, manuals, etc.) as well as audio

English 2

ECTS credits: 5 **Weekly classes:** 0lec+0sem+0labs+4ps
Assessment: continuous assessment **Type of exam**: written and oral
Department involved:
Department of Philological studies, Silistra Branch
Lecturers:
Senior Lecturer Tsvetanka Pavlova, Dept. of Philological Studies, Silistra Branch,
tel.: 086/821521, email: cvetanka_pavlova@mail.ru
Abstract:
The foreign language module 2 like module 1 is aimed at achieving communicative competence in the area of the subject specialism and the future job. The teaching objectives comprise the development of reading comprehension skills to handle specialist texts and the acquisition of communication skills to interact successfully in professional settings and everyday situations.
Course content:
Higher education and the exchange of students. History of the computer systems.
Computer devices. Internet. Storage devices. In the world of electricity. Light as a physical phenomenon. Energy resources in the changing world. Household appliances (Manual for use. Troubleshuting) Applying for work.

Teaching and assessment:
As in module 1a wide range of authentic texts (i.e. articles, diagrams and tables, brochures, catalogues, manuals, etc.) as well as audio, video, and multimedia materials are used to acquire the necessary language knowledge and to develop skills in using the language as a means of communication They are encouraged to work independently on their translation assignment. The final mark is formed as average of the test mark and the submitted translation, video, and multimedia materials are used to acquire the necessary language knowledge and to develop skills in using the language as a means of communication They are encouraged to work independently on their translation assignment. The final mark is formed as average of the test mark and the submitted translation.

History and Literature

ECTS credits: 3 **Weekly classes**: 1l+ 1s+0lab+0ws
Assessment: exam **Type of exam:** written
Department involved: Department of Philological studies, Silistra Branch, University of Ruse
Lecturer:
Assoc. Prof. Rumyana Dimitrova Lebedova, PhD, Dept. of Philological Studies, Silistra Branch,
tel.: 086/821521
E-mail: lebedova@abv.bg
Abstract:
The aim of the instruction (both lectures and seminars) in History and Literature is to represent the correlation between history and literature, emphasizing the peculiarities of the literary narrative about historic events. Thus key images and notions, emblematic for the national myth, are presented in detail.
Course content:
Some aesthetic devices are observed , which constitute cultural, genre, imagery models, connected with the idea of the local, native in literature. The mutual interrelation between action and deed determine the role of the individual historically and culturally, because of the paramount place of the intelligent people in society.The course upgrades in content the course in Modern Bulgarian Literature.
Teaching and assessment:
The instruction is organized in lectures and seminars. The training in the seminars is focused on interpretation of literary works with different approaches – historical, biographical, structural, semantic, contrastive. Analytical observations are based on different types of narration with thematic and structural unity. The active part of the instruction is the course project. It aims at interpretation of a literary problem. It is validated if evaluated with a positive mark. There are at least three tests during each semester. The instruction is finalized with a written exam.

Cultural Issues in the Foreign Literature for children

ECTS credits: 2 **Weekly classes:** 0lec+ 2sem+0l+0ps

Assessment: defence **Type of exam:** oral

Department involved: Department of Philological studies Silistra Branch

Seminar tutor:

Lecturer: Ginka Milanova, MA, high school, Silistra

Abstract:

The instruction in this course includes topics which develop student`s ability to analyze values, implied in the foreign literature for children. Students are encouraged to discuss foreign literary texts. Their skills are developed in relation to the literary trends in different kinds of texts. Students are encouraged to look for the modern and traditional details in each literary work.

Course content:

The instruction is organized in two seminars on major topics and authors from the foreign literature. It develops student`s abilities to make literary analyses and draw conclusions on the basis of their observations over a particular piece of literary work.

Teaching and assessment:

Cultural Issues in the Foreign Literature for children is organized in specialized seminars and the instruction is presented in seminars.Students are encouraged to discuss pieces of foreign literary texts for childten and discussions aim at developing the productive skills of the students. The attendance is obligatory. Continuous tests are assigned regularly as well as individual tasks.

Methodology of Teaching Bulgarian Language and Literature

ECTS credits: 6 **Weekly classes:** 2lec+2sem+0labs+0ps+1cw

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological Studies Silistra Branch

Lecturers:

Assoc. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: Lina_Lecheva_bg@abv.bg

Abstract:

The aim of the instruction in Methodology of Teaching Bulgarian Language is the students to get acquainted with the theoretical background of teaching and learning Bulgarian language and literature; with the basic didactic and methodological principles and its implementation in classroom reality.

Course content:

Methodology and other pedagogical sciences Basic principles of teaching Bulgarian language and Literature. Methodology of teaching Bulgarian language and Literature..Types of lessons. Formation of language notionsTeaching phonology, lexicology morphology and syntax at school. Aims, principles and methods of teaching literature.

Teaching and assessment:

The instruction includes lectures, seminars and observation of lessons The instruction in Literature is organized in lectures, seminars and observation of lessons at school. The attendance of the observations is obligatory. The final exam is interpretation on two topics and course work.

Methodology of Teaching a French Language

ECTS credits: 6 **Weekly classes:** 2lec+2sem+0labs+0ps+1cw
Assessment: exam **Type of exam:** written

Department involved:
Department of Philological Studies, Silistra Branch

Lecturers:
Asscs. Prof. Diana Petrova Zhelezova-Mindizova, MA,PhD, Dept. of Philological Studies, Silistra Branch ,
tel.: 086/821521, E-mail:dianazhelezova@abv.bg

Abstract
The aim of the instruction in Methodology of Teaching a Foreign Language is the students to get acquainted with the theoretical background of teaching and learning a foreign language. Students are equipped with rich methodological tools – strategies, activities, formats of didactic communication .

Course content:
Methodology and other pedagogical sciences Basic principles of teaching a foreign language. Language and communication. . Pronunciation. Reading. Writing. Speaking. Listening. Errors, testing and assessment. Primary foreign language teaching. Foreign language teaching in secondary schools. Types of lessons. Project work.

Teaching and assessment:
The instruction includes lectures, practical exercises and observation of lessons. Lectures ensure the theoretical basis, practical exercises build skill for implementing knowledge into practice, during observations students monitor and analyze how all this works in real. The evaluation is complex

Methodology of Teaching a Foreign Language (English)

ECTS credits: 6 **Weekly classes:** 2lec+2sem+0labs+0ps+1cw
Assessment: exam **Type of exam:** written

Department involved:
Department of Philological Studies
Silistra Branch

Lecturers:
Assc. Prof. Diana Petrova Zhelezova-Mindizova, MA,PhD, Dept. of Philological Studies, Silistra Branch ,
tel.: 086/821521, E-mail:dianazhelezova@abv.bg

Abstract:
The aim of the instruction in Methodology of Teaching a Foreign Language is the students to get acquainted with the theoretical background of teaching and learning a foreign language.

Students are equipped with rich methodological tools – strategies, activities, formats of didactic communication .

Course content:

Methodology and other pedagogical sciences Basic principles of teaching a foreign language. Language and communication. . Pronunciation. Reading. Writing. Speaking. Listening. Errors, testing and assessment. Primary foreign language teaching. Foreign language teaching in secondary schools. Types of lessons. Project work.

Teaching and assessment:

The instruction includes lectures, practical exercises and observation of lessons. Lectures ensure the theoretical basis, practical exercises build skill for implementing knowledge into practice, during observations students monitor and analyze how all this works in real. The evaluation is complex

Methodology of Teaching a Foreign Language (Romanian)

ECTS credits: 6 **Weekly classes:** 2lec+2sem+0labs+0ps+1cw

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological Studies
Silistra Branch

Lecturers:

Assc. Prof. Diana Petrova Zhelezova-Mindizova, MA,PhD, Dept. of Philological Studies, Silistra Branch ,
tel.: 086/821521, E-mail:dianazhelezova@abv.bg

Abstract:

The aim of the instruction in Methodology of Teaching a Foreign Language is the students to get acquainted with the theoretical background of teaching and learning a foreign language. Students are equipped with rich methodological tools – strategies, activities, formats of didactic communication .

Course content:

Methodology and other pedagogical sciences Basic principles of teaching a foreign language. Language and communication. . Pronunciation. Reading. Writing. Speaking. Listening. Errors, testing and assessment. Primary foreign language teaching. Foreign language teaching in secondary schools. Types of lessons. Project work.

Teaching and assessment:

The instruction includes lectures, practical exercises and observation of lessons. Lectures ensure the theoretical basis, practical exercises build skill for implementing knowledge into practice, during observations students monitor and analyze how all this works in real. The evaluation is complex

Observations of lessons in Bulgarian Language

ECTS credits: 1 **Weekly classes:** 0lec+0sem+0labs+2ps
Assessment: defence **Type of exam:** written
Department involved:
Department of Philological Studies, Silistra Branch
Lecturers:
Assoc. Prof. Galina Ruseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: Lina_Lecheva_bg@abv.bg , ☎ 086/821521
Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. Students develop their psychological and pedagogical skills and competences as future teachers . School practice is simultaneous with the instruction at the University.
Course content:
Applying methodological methods and other pedagogical sciences Basic principles of teaching Bulgarian language. Methodology of teaching Bulgarian language. Types of lessons. Formation of language notions Teaching phonology, lexicology. morphology and syntax at school. Aims, principles and methods of teaching. Analyzing different lessons. Developing pedagogical skills.
Teaching and assessment:
The first weeks are devoted to organizational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the school practice in the students` books.

Observations of lessons in Bulgarien Literature

ECTS credits: 1 **Weekly classes:** 0lec+0sem+0labs+2ps
Assessment: defence **Type of exam:** written
Department involved: Department of Philological Studies, Silistra Branch
Lecturers:
Assoc. Prof. Galina Ruseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: Lina_Lecheva_bg@abv.bg , ☎ 086/821 521
Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. Students develop their psychological and pedagogical skills and competences as future teachers . School practice is simultaneous with the instruction at the University.
Course content:
Applying methodological methods and other pedagogical sciences Basic principles of teaching

Bulgarian language. Methodology of teaching Bulgarian language. Types of lessons. Formation of language notions Teaching phonology, lexicology. morphology and syntax at school. Aims, principles and methods of teaching. Analyzing different lessons. Developing pedagogical skills.

Teaching and assessment:

The first weeks are devoted to organizational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the school practice in the students` books.

Observations of lessons french

ECTS credits: 2 **Weekly classes:** 0lec+0sem+0labs+2ps

Assessment: defence **Type of exam:** written

Department involved: Department of Philological Studies Silistra Branch

Lecturers:

Senior Lecturer Viliana Yordanova Raycheva, Dept. of Philological Studies, Silistra Branch , University of Rousse- Silistra Branch
tel.: 086/821521, E-mail: viliana_ss@abv.bg

Abstract:

Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. Students develop their psychological and pedagogical skills and competences as future teachers . School practice is simultaneous with the instruction at the University.

Course content:

Applying methodological methods and other pedagogical sciences Basic principles of teaching French language. Methodology of teaching Bulgarian language. Types of lessons. Formation of language notions Teaching phonology, lexicology. morphology and syntax at school. Aims, principles and methods of teaching. Analyzing different lessons. Developing pedagogical skills.

Teaching and assessment:

The first weeks are devoted to organizational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis

session in the presence of the mentor. The teacher-trainer registers the school practice in the student`s books.

Observations of lessons Romanian

ECTS credits: 2 **Weekly classes:** 0lec+0sem+0labs+2ps
Assessment: defence **Type of exam:** written
Department involved: Department of Philological Studies Silistra Branch
Lecturers:
Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological Studies, Silistra Branch,
tel.: 086/821521, E-mail: dianazhelezova@abv.bg , ☎ 086/821521
Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. Students develop their psychological and pedagogical skills and competences as future teachers . School practice is simultaneous with the instruction at the University.
Course content:
Applying methodological methods and other pedagogical sciences Basic principles of teaching Bulgarian language. Methodology of teaching Bulgarian language. Types of lessons. Formation of language notions Teaching phonology, lexicology. morphology and syntax at school. Aims, principles and methods of teaching. Analyzing different lessons. Developing pedagogical skills.
Teaching and assessment:
The first weeks are devoted to organizational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the school practice in the students` books.

Observations of lessons English

ECTS credits: 2 **Weekly classes:** 0lec+0sem+0labs+2ps
Assessment: defence **Type of exam:** written
Department involved: Department of Philological Studies Silistra Branch
Lecturers:
Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological Studies, Silistra Branch,
tel.: 086/821521, E-mail: dianazhelezova@abv.bg , ☎ 086/821521

Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. Students develop their psychological and pedagogical skills and competences as future teachers . School practice is simultaneous with the instruction at the University.
Course content:
Applying methodological methods and other pedagogical sciences Basic principles of teaching Bulgarian language. Methodology of teaching Bulgarian language. Types of lessons. Formation of language notions Teaching phonology, lexicology. morphology and syntax at school. Aims, principles and methods of teaching. Analyzing different lessons. Developing pedagogical skills.
Teaching and assessment:
The first weeks are devoted to organizational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the school practice in the students` books.

Teacher-Training Practice in Bulgarian Language

ECTS credits: 1 **Weekly classes:** 0lec+0sem+0labs+1ps
Assessment: defence **Type of exam:** oral
Department involved:
Department of Philological Studies
Silistra Branch
Lecturers:
Assos. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: Lina_acad.bg@abv.bg
Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. Students develop their psychological and pedagogical skills and competences as future teachers . School practice is simultaneous with the instruction at the University.
Course content:
Applying methodology methods and other pedagogical sciences Basic principles of teaching Bulgarian language. Methodology of teaching Bulgarian language. Types of lessons. Formation of language notions Teaching phonology, lexicology. morphology and syntax at school. Aims, principles and methods of teaching. Analyzing different lessons. Developing pedagogical skills.
Teaching and assessment:

The first weeks are devoted to organizational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the school practice in the students` books.

Teacher-Training Practice in Literature

ECTS credits: 1
Weekly classes: 0lec+0sem+0labs+1ps
Assessment: defence
Type of exam: oral

Department involved:
Department of Philological Studies
Silistra Branch

Lecturers:
Assos. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: Lina_Lecheva_bg@abv.bg

Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. Students develop their psychological and pedagogical skills and competences as future teachers . School practice is simultaneous with the instruction at the University.

Course content:
Applying methodology methods and other pedagogical sciences. Basic principles of teaching Literature. Methodology of teaching Literature. Types of lessons. Formation of language notions. Aims, principles and methods of teaching. Analyzing different lessons. Developing pedagogical skills.

Teaching and assessment:
The first weeks are devoted to organizational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the school practice in the students` books.

Teacher-Training Practice in Foreign Language (English Language)

ECTS credits: 2 Weekly classes: 0lec+0sem+0labs+2ps
Assessment: defence Type of exam: practical
Department involved:
Department of Philological Studies, Silistra Branch
Lecturers:
Assos. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological Studies, Silistra Branch , University of Rousse- Silistra Branch
tel.: 086/821521, E-mail:dianazhelezova@abv.bg
Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. School practice is simultaneous with the instruction at the University.
Teaching and assessment:
It is organized throughout the entire 7th semester; during one day from the week program. The first two weeks are devoted to organizational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the school practice in the students` books

Teacher-Training Practice in Foreign Language (French)

ECTS credits: 2 **Weekly classes:** 0lec+0sem+0labs+2ps
Assessment: defence **Type of exam:** practical
Department involved:
Department of Philological Studies
Silistra Branch
Lecturer:
Assos. Prof.Viliana Raycheva, Dept. of Philological Studies, Silistra Branch , University of Rousse- Silistra Branch
tel.: 086/821521, E-mail: viliana_ss@abv.bg
Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. School practice is simultaneous with the instruction at the University.

Teaching and assessment:
It is organized throughout the entire 7th semester; during one day from the week program. The first two weeks are devoted to organizational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the school practice in the students` books

Teacher-Training Practice in Foreign Language (Romanian Language)

ECTS credits: 2 Weekly classes: 0lec+0sem+0labs+2ps
Assessment: defence Type of exam: practical
Department involved:
Department of Philological Studies, Silistra Branch
Lecturers:
Silvia Georgieva Angelova, MA, PhD, Dept. of Philological Studies, Silistra Branch,
tel.: 359 86 821521, E-mail: silvijabg@yahoo.com
Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. School practice is simultaneous with the instruction at the University.
Teaching and assessment:
It is organized throughout the entire 7th semester; during one day from the week program. The first two weeks are devoted to organizational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the school practice in the students` books

History of the Contemporary Bulgarian Language

ECTS credits: 2 **Weekly classes:** 1lec+0sem+0labs+0ps+1ce
Assessment: defence **Type of exam:** written/oral

Department involved:
Department of Philological studies
Silistra Branch

Lecturers:
Assoc. Prof. Todorka Yordanova Georgieva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: tgeorgieva@fs.uni-ruse.bg

Abstract:
The subject acquaints the students with the development of the Bulgarian language from the Bulgarian revival period till today; with the formation of the language norms; with the emergence and improvement of the language styles and the various means of expression.

Course content:
Basic periods in the development of the Contemporary Bulgarian language. Dialects. Contemporary language norms. Sources for enrichment. The input of outstanding Bulgarian writers and poets for formation of the Contemporary Bulgarian language.

Teaching and assessment:
The instruction is organized in lectures. The final assessment is a test.

Contemporary Bulgarian Literature

ECTS credits:2(VI sem.),6(VII sem.) **Weekly classes:** VIsem:1l+1s+0lab+0ps
VII sem:2l+2s+0lab+0ps+1ca

Assessment: exam **Type of the exam:** oral

Department involved:
Department of Philological studies, Silistra Branch, University of Rousse "Angel Kanchev"

Lecturer:
Assoc. Prof. Roumyana Dimitrova Lebedova,,PhD, Department of Philological studies, Silistra Branch, tel. 086/821521, E-mail: lebedova@abv.bg

Abstract:
The subject Modern Bulgarian Literature presents the main problem areas of the Bulgarian literature during the period WW till present days. The representatives of this literary epoch are presented with their prominent works; in the cultural and social context of the time. Cultural and historical dynamics of literary consciousness is traced. Students are acquainted with different methodological approaches for literary analysis, as well as with matrix interpretation of one and the same text. Individual literary interpretation is encouraged and stimulated.

Course content:
Main periods in Contemporary Bulgarian literature. Representatives and their literary works. Thematic guidelines. Critical reflections. Transformational processes regarding genres and aesthetic views in the period WWI till present days.

Teaching and assessment:
Attendance to the lectures and the practical training is compulsory. Each student is assigned topical paper work. The deadline for the assignment is before the end of the semester. The

exam is oral interpretation of a topic from the examination synopsis; the final mark includes the assessment of the assignment.

Pre-graduation Teacher-Training Practice in Bulgarian Language

ECTS credits: 2 **Weekly classes:** total 25
Assessment: continuous assessment **Type of exam:** oral
Department involved:
Department of Philological Studies
Silistra Branch
Lecturers:
Assos. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: Lina_Lecheva_bg@abv.bg
Abstract:
Pregraduation teacher-training practice is teaching practice at school after the academic instruction at the University. Students are in charge of the teaching of the corresponding subjects in one class for a certain period of time. Students are obliged to attend the lessons of their colleagues and the lessons of his/her mentor too.
Course content:
Pregraduation teacher-training practice is teaching practice at school and it improves students' ability to use didactic materials and additional sources of information. Students are in charge of the elaboration of precise and adequate criteria for analysis and assessment of the practice. They develop their psychological and pedagogical skills and competence as future teachers . School practice is simultaneous with the instruction at the University.
Teaching and assessment:
It is organized throughout the 8th semester for the period of six weeks. The teacher-trainer works out a schedule for the schools, classes, mentors and a timetable for the practice exam with fixed topics of the exam lessons. He defines tutorial hours. He is in charge of the elaboration of precise and adequate criteria for analysis and assessment of the practice. The pre-graduation teacher-training practice ends with a practical exam including presentation of lesson, and analysis, assessment and critical reflection on the part of both the mentor and the teacher-trainer.

Pre-graduation Teacher-Training Practice in Literature

ECTS credits: 2 **Weekly classes:** total 25
Assessment: continuous assessment **Type of exam:** oral
Department involved:
Department of Philological Studies
Silistra Branch
Lecturers:
Assos. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: glecheva@gmail.com

Abstract:
Pregraduation teacher-training practice is teaching practice at school after the academic instruction at the University. Students are in charge of the teaching of the corresponding subjects in one class for a certain period of time. Students are obliged to attend the lessons of their colleagues and the lessons of his/her mentor too.

Course content:
Pregraduation teacher-training practice is teaching practice at school and it improves students' ability to use didactic materials and additional sources of information. Students are in charge of the elaboration of precise and adequate criteria for analysis and assessment of the practice. They develop their psychological and pedagogical skills and competence as future teachers . School practice is simultaneous with the instruction at the University.

Teaching and assessment:
It is organized throughout the 8th semester. The teacher-trainer works out a schedule for the schools, classes, mentors and a timetable for the practice exam with fixed topics of the exam lessons. He defines tutorial hours. He is in charge of the elaboration of precise and adequate criteria for analysis and assessment of the practice. The pre-graduation teacher-training practice ends with a practical exam including presentation of lesson, and analysis, assessment and critical reflection on the part of both the mentor and the teacher-trainer.

Pre-graduation Teacher-Training Practice in English

ECTS credits: 2
Weekly classes: total 50
Assessment: continuous assessment
Type of exam: practical

Department involved:
Department of Philological Studies
Silistra Branch

Lecturer:
Assos. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological Studies, Silistra Branch , University of Rousse- Silistra Branch
tel.: 086/821521, E-mail:dianazhelezova@abv.bg

Abstract:
Pregraduation teacher-training practice is teaching practice at school after the academic instruction at the University. Students are in charge of the teaching of the corresponding subjects in one class for a certain period of time. Students are obliged to attend the lessons of their colleagues and the lessons of his/her mentor too.

Teaching and assessment:
It is organized throughout the 8th semester for the period of six weeks. The teacher-trainer works out a schedule for the schools, classes, mentors and a timetable for the practice exam with fixed topics of the exam lessons. He defines tutorial hours. He is in charge of the elaboration of precise and adequate criteria for analysis and assessment of the practice. The pre-graduation teacher-training practice ends with a practical exam including presentation of lesson, and analysis, assessment and critical reflection on the part of both the mentor and the teacher-trainer.

Pre-graduation Teacher-Training Practice in French

ECTS credits: 2 **Weekly classes:** total 50
Assessment: defence **Type of exam:** practical
Department involved:
Department of Philological Studies
Silistra Branch
Lecturer:
Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological Studies, Silistra Branch , University of Rousse- Silistra Branch
tel.: 086/821521, E-mail:dianazhelezova@abv.bg
Pr. Assist. Prof Viliana Yordanova Raycheva, Dept. of Philological Studies, Silistra Branch , University of Rousse- Silistra Branch
tel.: 086/821521, E-mail: viliana_ss@abv.bg

Abstract:
Pregraduation teacher-training practice is teaching practice at school after the academic instruction at the University. Students are in charge of the teaching of the corresponding subjects in one class for a certain period of time. Students are obliged to attend the lessons of their colleagues and the lessons of his/her mentor too.
Teaching and assessment:
It is organized throughout the 8th semester for the period of six weeks. The teacher-trainer works out a schedule for the schools, classes, mentors and a timetable for the practice exam with fixed topics of the exam lessons. He defines tutorial hours. He is in charge of the elaboration of precise and adequate criteria for analysis and assessment of the practice. The pre-graduation teacher-training practice ends with a practical exam including presentation of lesson, and analysis, assessment and critical reflection on the part of both the mentor and the teacher-trainer.

Communication in Contemporary Bulgarian language

ECTS credits: 5 Weekly classes: 1lec+2sem+0labs+0ps+1cw
Assessment: exam Type of exam: written
Department involved: Department of Philological Studies, Silistra Branch
Lecturer
Assoc. Prof. Todorka Yordanova Georgieva, MA, PhD, Dept. of Philological Studies,
tel.: 086 / 821 521, E-mail: tgeorgieva@fs.uni-ruse.bg
Abstract:
The subject is the last to come in the series of subjects from the Contemporary Bulgarian language module – Phonetics. Lexicology, Morphology, Syntax, Stylistics, Historical linguistics. These subjects, presented in this sequence, ensure a solid theoretical background for building practical skills in the use and production of oral and written speech.
Course content:
Meaning of language and language proficiency. Principles of spelling of the Bulgarian written "word" – phonetic, morphological, historical, syntactic. Pronunciation and spelling of the non-

stressed syllables in the Bulgarian language. Spelling of words ending with a voiced consonants. Spelling of compound words. Use of capital letters.
Teaching and assessment:
The final exam is written and consists of a test in Bulgarian grammar (rules and their interpretation) and a topical task (composition of a text).

Audio-Visual and Information Technologies in Teacher- Training 2

ECTS credits: 3
Weekly classes: 1lec+0sem+0labs+1ps
Assessment: continuous assessment
Type of exam: written
Department involved:
Department of Technical and Natural Sciences
Silistra Branch
Lecturers:
Assoc. Prof. Temenuzhka Bogdanova Buhcheva, MA. PhD; Dept. of Technical and Natural Sciences, Silistra Branch;tel. 086/821521, E-mail: betina93@abv.bg

Abstract:
The subject acquaints the students with the use of audio- visual aids and informational technologies in the teaching process, and their multi-media and telecommunication implementation – video text, video conference systems, e-mail, Internet, etc. Students acquire skills for elaboration of various didactic materials – posters, slides, flipcharts, computer presentations.

Course content:
Audio technologies Visual technologies for static and dynamic screen images. Audio-visual technologies. Computer-based technologies Multimedia and telecommunication technologies Complex implementation of audio-video technologies Communication – verbal and non-verbal. Presentations Structure and presentation of information in front of audience.

Teaching and assessment:
Students are organized in micro groups in the seminars. Each micro group acquaints with the theoretic background for the fulfillment of a certain task. The teacher summarizes the information and facilitates the elaboration of didactic materials. At the end of the seminar students from each micro group make a structured reflection on their work. The presentation of each student is assessed continuously throughout the whole course of instruction.

School legislation

ECTS credits: 1
Weekly classes: total 20
Assessment: defence
Type of exam: oral
Department involved:
Department of Philological Studies
Silistra Branch

Lecturers:
Assoc. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, ext 130, E-mail: glecheva@uni-ruse.bg
Abstract:
The subject is presented to students from the specialty Bulgarian language and foreign language. The aim of the instruction is to get the students acquainted with the main principles of the education and their application in the statutory instruments and legislative acts- constitutional, special, Bulgarian, foreign and international.
The course aims to prepare students- future teachers for working with legislative acts, essential for managing in the institution (in the system of education) and necessary for their professional realization.
Course content:
The aim of the lecture course is to give the bases of the knowledge for common and specific laws, some regulations for their application and school decrees The instruction helps the students acquire basic legislative acts, essential for managing an institution (in the system of education).
Teaching and assessment:
The instruction is presented only in lectures. Attendance to the lectures is compulsory. Active participation is encouraged. The instruction ends up with a defence. Students are encouraged to solve some problems related to legislative acts casuses at school. The final exam is oral**.**

Pedagogical Ethics

ECTS credits: 2 **Weekly classes:** 2lec+0sem+0labs+0ps
Assessment: defence **Type of exam:** written
Department involved:
Department of Philological Studies
Silistra Branch
Lecturers:
Assoc. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological Studies, Silistra Branch, tel.: 086/821521, E-mail: glecheva@gmail.com
Abstract:
The course is designed for students from the specialty Pedagogy of Bulgarian language and Foreign language at the University of Ruse -Silistra Branch .The course aims to decipher the key aspects of ethical knowledge represented in theoretical and historical perspective. Upon completion of the course students will be able to vary the level of everyday moral consciousness of the theoretical level of ethical consciousness and will know the contents of the main ethical components of applied and professional ethics They will also develop competence to resolve conflicts.
Course content:
Teaching ethics as a kind of professional ethics. Categories of teaching ethics. Nature and functions of teaching moral. Moral norm, moral choice and moral conflict. Moral character of a teacher. Moral activity of a teacher.
Teaching and assessment:
The training is organized in lectures. In view of the of teaching-oriented specialty, the lecture

course is presented in interactive formats ("enhanced lecture", "questions to the author," "reciprocal teaching", etc..) to initiate active learning and critical thinking and the development of professional psycho-pedagogical competences for future teachers. The training is finalized with a defence.

Psychology of communion

ECTS credits: 2 **Weekly classes:** 2lec
Assessment: colloquium **Type of exam:** oral

Department involved:
Department of Philological studies Silistra Branch
Lecturers
Pr. Assist. Prof Valentina Vasileva, MA, PhD, Universitu of Ruse
Abstract:
The course „Psychology of communication" is oriented toward development of components and features of the process of interpersonal communication. Various forms and means for positive interaction between the partners in the communication in the light of pedagogical practice. On the basis of modern research in psychology and psychiatry explain some common phenomena in human communication - signs of subjectivity, tips barriers in communication, the impact of individual differences and others.
Course content:
The program includes curriculum related to verbal and non-verbal communication, communication styles, the characteristics of the process of interpersonal communication and others.
Teaching and assessment:
Teaching is conducted in the form of lectures. During the lectures be planned computer presentations and multimedia to visualize the teching. During the lectures students are offered for interpretation and case studies that are real problems in practice.
Teaching methods: advanced interactive methods - presentation, discussion, lectures and case studies, and case studies. Solving cases and case studies developed in students skills for independent work, stimulate professional growth and creative activity.
The final result is based on a colloquium on predetermined conspectus, including all the material studied.

Problems of deviant behavior and psychotherapeutic methods

ECTS credits: 2 **Weekly classes: 2**lec
Assessment: colloquium **Type of exam:** oral
Department involved: Department of Philological studies Silistra Branch
Lecturers:
Pr. Assist. Prof. Valentina Vasileva, MA, PhD, Universitu of Ruse
Abstract:

The course of deviant behavior of children and adolescents and psychotherapeutic method of correcting this behavior introduces the students - future teachers with an integrated approach in the study of deviant behavior of children and adolescents, the reasons for its occurrence and the main types of deviant behavior, and thus to acquire the necessary theoretical knowledge in their work.

Course content:

The program includes educational content related to the main types of deviant behavior, its causes and prevention, and more.

Teaching and assessment:

Teaching is conducted in the form of lectures. During the lectures, be planned computer presentations and multimedia to visualize the teching and students are offered for interpretation and case studies that are real problems in practice.

Teaching methods: advanced interactive methods - presentation, discussion, lectures and case studies, and case studies. Solving cases and case studies developed in students skills for independent work, stimulate professional growth and creative activity.

The final result is based on a colloquium on predetermined conspectus, including all the material studied.

National identity and Literature

ECTS credits: 3 **Weekly classes:** 1l+1sem+0lab+0ps

Assessment: exam **Type of the exam:** written

Department involved:

Department of Philological studies, Silistra Branch ,

Lecturers:

Assoc Prof. Rumyana Dimitrova Lebedova, PhD, Dept. of Philological Studies, Silistra Branch,
tel.: 086/821521
E-mail: lebedova@abv.bg

Abstract:

The instruction is carried out in lectures and seminars. The aim is to present the correlation between history and literature, emphasizing the peculiarities of the literary narrative about historic events. Thus key images and notions are presented in detail.

Course content:

Types of identity. Aspects and strategies which form national identity.

Teaching and assessment:

Each student is assigned topical paper work and five tests during the semester. The training ends with a written exam.

Pedagogy (Theory of training)

ECTS credits:6 **Weekly classes:** 2lec+2sem+0labs+0ps+0,5ce

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological studies,
Silistra Branch

Lecturers:

Principal Assist. Prof. Valentina Vasileva,MA, PhD, Department of Pedagogy, Psychology and History, Faculty of Natural Sciences and Education,
Tel.: 082/888 209

Abstract:

The aim of the theoretical course is to give the students the necessary psychological culture, to acquaint them with the latest issues in the contemporary psychological sciences, to build skills for analysis of the main psychological phenomena, characteristic for the children in the corresponding age-range.

Course content:

Theoretical problems of Psychology – general review. Object of instruction of General Psychology Aims, purposes and historical development of Psychology. Skills, habits. Motives. Motivation. Psychology of the social individual. Formation of personality. Memory. Imagination. Psychology of the senses. Character. Pedagogical psychology. Learning and teaching in contemporary Psychology. Psycho-linguistic aspects of the role of the teacher.

Teaching and assessment:

The instruction is based on lectures and seminars. The latter help the student in their creative mastery of theory and implementing their knowledge in practical training at school The instruction ends up with oral exam.

Guidelines to the Literature of the Foreign Language

ECTS credits: 4 **Weekly classes:** 3lec+ 0s+0labs+0ps+2ca
Assessment: defence **Type of exam:** written

Department involved:

Department of Philological studies, Silistra Branch

Lecturers:

Assoc. Prof. Diana Zhelezova Mindizova, MA, PhD, ,
tel.:086 821 521

Abstract:

The instruction in this course includes topics which develop students` ability to analyze values, implied in the English and French literature. Contrastive analyses skills are developed in relation to the literary trends and their major representatives. The comparison is drawn on the basis of cultural and historical differentiation, as well as with other European masterpieces of literary work. Students are encouraged to look for the modern and traditional details in each literary work.

Course content:

The instruction is organized in three seminars during the seventh semester on major topics and authors from the English and French literature. A course paper is assigned as an active form of instruction. It develops students` abilities to make literary analyses and draw conclusions on the basis of their observations over a particular piece of literary work.

Teaching and assessment:

The instruction is in the corresponding foreign language and conforms to the level of foreign language knowledge and skills of the students as well as to their basic knowledge of Bulgarian, East European and Russian literature. The analysis of the literary works is preceded by pre-teaching of the unknown lexis. Discussions aim at developing the productive linguistic skills of the students. The final evaluation consists of the defence mark, the results from the two tests and the mark from the course paper in relation 50%:20%:30%.

Pedagogical Psychology

ECTS credits: 4
Assessment: exam
Weekly classes: 2lec +1ems+0labs+0ps+ 0.5ce
Type of exam: written

Department involved:
Department of Technical and Natural Sciences
Silistra Branch

Lecturers:
Principal Assist. Prof. Vania Dineva, MA.; PhD, Dept. of Pedagogy, Psychology and History, Faculty of Natural Sciences and Education
tel.: 082/841 609

Abstract:
The aim of the theoretical course is to give the students the necessary psychological culture, to acquaint them with the latest issues in the contemporary psychological sciences, to build skills for analysis of the main psychological phenomena, characteristic for the children in the corresponding age-range.

Course content:
Theoretical problems of Psychology – general review. Object of instruction of General Psychology Aims, purposes and historical development of Psychology. Skills, habits. Motives. Motivation. Psychology of the social individual. Formation of personality. Memory. Imagination. Psychology of the senses. Character. Pedagogical psychology. Learning and teaching in contemporary Psychology. Psycho-linguistic aspects of the role of the teacher.

Teaching and assessment:
The instruction is based on lectures and seminars. The latter help the student in their creative mastery of theory and implementing their knowledge in practical training at school The instruction ends up with oral exam

Syntax of the Contemporary Foreign Language

ECTS credits: 3
Assessment: exam
Weekly classes: 2lec+0sem+0labs+0ps
Type of exam: written

Department involved:
Department of Philological Studies, Silistra Branch

Lecturer:
Assoc. Prof. Diana Zhelezova, MA, PhD

Abstract:
The subject Syntax of the Contemporary Foreign language gives the students profound and extensive theoretical and practical knowledge from The Theory of Linguistics area. The themes present classic and modern, innovative, trends in successful combination. The instruction is conducted especially for pre-service teacher training.
Course content:
Object of study. Structure of the Simple sentence. Logic and semantic classification of the sentence. Main and secondary parts of the sentence.. Compound sentence. Subordination, coordination, asyndetic links.
Teaching and assessment:
Lectures follow the traditional methodology of teaching. The practice work is the active part of the instruction, where students are encouraged to discuss freely theoretical issues and their implementation. The exam is written and includes two topics.

Historical Grammar

ECTS credits: 5 **Weekly classes:** 2lec+1sem+0labs+0ps+1ca

Assessment: exam **Type of exam:** written

Department involved:
Department of Philological Studies
Silistra Branch
Lecturers:
Assoc.Prof. Todorka Yordanova Georgieva, MA, PhD, Dept. of Philological Studies, Silistra Branch
tel.: 086/821521, E-mail: tgeorgieva@fs.uni-ruse.bg
Abstract:
The aim of the instruction is to get the students acquainted with the historical development of the Bulgarian language from the time it emerged till today. The object of instruction of the subject are the major changes in Phonetics, Morphology, Lexicology and the syntactical structure of the Bulgarian language., which brought about its new quality. The subjects equips the students with the necessary skills to interpret and comprehend the specific phenomena and forms of the Bulgarian language.
Course content:
Development of the Bulgarian language history. Main periods. Characteristics of the pre-writing, old Bulgarian, middle Bulgarian, and modern Bulgarian period. Tendencies in vocalism and consonantism. Changes in the verbal system. Reasons for the near extinction of the case forms and the analytical tendency in the development of the language as its main syntactic feature. Characteristics of the main lexical units.
Teaching and assessment:
The instruction is carried out in lectures and seminars. The aim of the lecture course is to give the bases of the Historical Grammar: the main trends in the development of the phonetic structure and the grammar of the middle Bulgarian language. These main topics help the explanation of many phonetic, grammatical and lexical facts in Old Bulgarian literature as well as in Contemporary Bulgarian language. The syntactic and lexical phenomena are studied

from original written evidences in Literary analysis classes. The activities, primarily, are reading, translation, analysis. The exam consists of two parts – theoretical and practical.

SPECIALTY

1.3.4. Pedagogy of Teaching

IN

PHYSICS

and

INFORMATICS

educational qualification degree
BACHELOR

PROFESSIONAL STANDARDS

OF A BACHELOR IN

PEDAGOGY OF TEACHING PHYSICS AND INFORMATICS

SUBJECT: Pedagogy of Teaching **Physics and Informatics**
Educational level: **Bachelor**
Professional qualification: **Teacher of Physics and Informatics**
Duration: **4 years**
Form of training: **full-time**

The main purpose of the specialty "Pedagogy of Physics and Informatics Teaching" is to prepare the students to meet the requirements of becoming teachers of the above mentioned school subjects in the secondary school. The graduates can occupy any office, where pedagogical qualification is necessary - social structures as well as cultural, educational, methodological, governmental organizations.

In the course of training the students acquire general, special subject, psychological pedagogical knowledge. They get practical skills for teaching in school and upbringing.

The general groundwork includes: mathematical courses that are fundamental for studying the special subjects; good language literacy which is achieved through the courses in Bulgarian grammar and English for computers; Information and communication technologies in training and work in digital environment without which it is not possible for future teachers to apply modern technologies.

Special subject qualification in Physics aims at having the studentsmaster fundamental physical theories. This can enable students to develop research skills for making experiments, analyzing, and summarizing, making out of the mentioned above useful approaches for independently getting knowledge supporting the physical theories.

Special subject qualification in Informatics aims at building into the future teachers active computer literacy, skills in using procedure and object-oriented and visual languages for programming as well as in communicating in a network, and also making complicated designs, including for the web-space.

Through the Psychological pedagogical preparation students acquire knowledge about general and age psychology, about the theory of upbringing, about the basic and specific didactic means of teaching physics, informatics and information technologies.

The practical preparation makes sure that the students, as future teachers, have precious contacts with their working place, the school, where they are to become useful to the society. Through various forms of practical exercises, students get useful skills for their future job as well as personal characteristics that make them fit for the job of teacher.

CURRICULUM

of the degree course in

PEDAGOGY OF TEACHING PHYSICS AND INFORMATICS

First year

Code	*First term*	*ECTS*	*Code*	*Second term*	*ECTS*
SB10210	Computer Technologies	3	SB10217	Object-oriented Programming	8
SB10211	Introduction of Programming	8	SB14767	Informational and Communicational Technologies in Teaching and Working in Digital Environment 1	3
SB10212	Higher Mathematics I part	4	SB10219	Foreign Language (English)	5
SB10213	General Physics 1	7	SB10220	General Physics 2	8
SB10214	Computer Architectures	5	SB10221	Higher Mathematics I I Part	5
SB10215	Foreign Language (English)	3	SB14768	Traning in solving physical problems	1
	Total for the term:	**30**		***Total for the term:***	**30**
SB15251	Sports	1	SB15251	Sports	1
	Optional subjects			*Optional subjects*	
SB15236	Foreign language (English)	4	SB15237	Foreign language (English)	4
SB10216	Preparatory Course in Physics and Astronomy	1			

Second year

Code	*Third term*	*ECTS*	*Code*	*Fourth term*	*ECTS*
SB10223	Visual Programming in MS Office	5	SB14770	Pedagogical Psychology	5
SB10224	Data Bases	6	SB10232	Data Structures and Programming	6
SB10225	Computer Graphics and Image Processing	5	SB10233	Computer Networks and Communications	6
SB14769	General Physics 3	7	SB10234	General Physics 4	8
SB10227	Higher Mathematics III	4	SB14771	Pedagogy	5
	Elective courses (students choose one course from each group)				
SB10228	Training in Geophysics and Atmosphere	3			
SB10229	Training in Geophysics	3			
	Total for the term::	**30**		***Total for the term::***	**30**
SB15251	Sports	1	SB15251	Sports	1
	Optional subjects			*Optional subjects*	
SB10222	Tasks from the School Course in Physics and Astronomy	1	SB15250	Foreign Language (English)	4
SB15238	Foreign Language (English)	4			

Third year

Code	*Fifth term*	*ECTS*	*Code*	*Sixth term*	*ECTS*
SB10237	Multimedia Systems and Web Design	7	SB10245	Methodology of Teaching Informatics and Information Technologies	8
SB10238	School Course in Informatics and Information Technologies	5	SB10246	Methodology of Teaching Physics and Astronomy	8
SB14772	School Course in Physics and Astronomy	5	SB14774	Observation of Lessons in Informatics and Information Technologies	1
SB14773	Methodology and Techniques of School Experiment in Physics –Part 1	3	SB14775	Observation of Lessons in Physics and Astronomy	1
SB10241	General Mathematical Methods in Physics	4	SB14776	Atomic and Nuclear Physics	3
SB10242	Operating Systems	3	SB14777	Methodology and Techniques of School Experiment in Physics – Part II	4
			SB10255	Component Oriented Programming	5
	Elective courses (students choose one course from each group)				
SB10243	Training in Electrical Engineering	3			
SB10244	Training in Optoelectronics	3			
	Total for the term::	**30**		***Total for the term::***	**30**
	Optional subjects			*Optional subjects*	
SB10230	Distance and e_Learning Education	2	SB10236	Training in Approaches for Testing	2
SB15239	Speech Culture	1			

Fourth year

Code	*Seventh term*	*ECTS*	*Code*	*Eighth term*	*ECTS*
SB14778	Astronomy	8	SB10264	Pre-graduation Pedagogical Practice in Informatics and Information Technologies	5
SB14779	Informational and Communicational Technologies in Teaching and Working in Digital Environment 2	3	SB10263	Pre-graduation Pedagogical Practice in Physics and Astronomy	5
SB14780	Teacher-Training Practice in Informatics and Information Technologies	2	SB10265	Self graduation	4
SB14781	Teacher-Training Practice in Physics and Astronomy	2			
SB14782	Theoretical Physics	6			
SB14783	Inclusive Education	1			

	Elective courses (students choose one course from each group)			*Elective courses (students choose one course from each group)*	
SB14784	Visual Programming Environment (Delphi)	5	SB14787	Problems of Deviant Behavior and Psychotherapeutic Methods	3
SB14785	Visual Programming Environment (VC++)	5	SB14788	Psychology of Communication	3
SB14786	Publishing systems	5			
	Elective courses (students choose one course from each group)			*Elective courses (students choose one course from each group)*	
SB10260	History and Methodology of Natural Sciences	3	SB14789	School Legislation	3
SB10261	Philosophy of the Sciences Picture of the World	3	SB14790	Pedagogical Ethics	3
				Total obligotory courses for 8th semster:	**20**
				Graduation	
			SB10270	State Practice-applied Exam	2
			SB10271	State Exam in Informatics and Information Technologies	4
			SB10272	State Exam in Physics	4
				or	
			SB10273	State Practice-applied Exam	2
			SB10274	State Exam in Informatics and Information Technologies	4
			SB10275	Bachelor Thesis in Physics	4
			SB10276		2
			SB10278	**or**	4
			SB10277	State Practice-applied Exam Bachelor Thesis in Informatics and Information Technologies State Exam in Physics	4
	Total for the term:	**30**		*Total for the term:*	**30**

Total for the course of study: 240 ECTS credits

SB10210 Computer Technologies

ECTS credits: 3 **Weekly classes:** 0lec+0sem+0lab+2ps
Assessment: continuous assessment **Type of exam:** written
Department involved:
Department of Philologically and Natural Sciences
Silistra Branch
Lecturers:
Assoc. Prof. Valentina Voinohovska, PhD – Dept. of IIT, tel. 888 490, Email: vvoinohovska@uni-ruse.bg
Pr. Assist. Prof. Evgenia Goranova, PhD, Dept. of Philologically and Natural Sciences, Silistra Branch, tel.: 821521, E-mail: e_deneva@abv.bg
Abstract:
The course is taught to students - future teachers of information technology, therefore seeks to deepen their knowledge to work with the operating system Microsoft Windows, with a specific program for word processing program table data.
Course content:
Operating system with graphical interface - Microsoft Word, organization of information on external memory, work with Windows Explorer, Control panel, Start menu tab and Accessories. Computer word processing program. Program for working with tabular data (spreadsheets).
Teaching and assessment:
At the beginning of the session are released 5 minutes to update the knowledge and skills. By supporting didactic material for the course is designed multimedia application, which is largely efficiency in teaching. Its use allows for self-fulfillment and the information function of applied learning. Through the students' simulation environment in practical tasks and receive immediate feedback on the correctness of its implementation and success. Students receive certification in the discipline, if present at workshops and assigned tasks. To create the final evaluation is conducted two tests and protects the tasks of the exercises.

SB10211 Introduction of Programming

ECTS credits: 8 **Weekly classes:** 2lec+0sem+0lab+3ps+1ca
Assessment: exam **Type of exam:** written
Department involved:
Department of Philologically and Natural Sciences, Silistra Branch
Lecturers:
Prof. Tzvetomir Vassilev PhD, Deptartment of IIT, tel. 888 475, Email: tvassilev@ami.uni-ruse.bg
Pr. Assist. Prof. Evgenia Goranova, MEng, PhD, Dept. of Philologically and Natural Sciences, Silistra Branch,tel.: 821521, E-mail: e_deneva@abv.bg
Abstract:
The course objective is students to be equipped with knowledge for developing algorithms and programmes in C++ programming language. The course focuses on the main data structures processed in the programming language C++ and on the main operations with that data. Special attention is paid to algorithm development being the basic step for writing programmes. The practice sessions aim at acquiring skills for developing algorithms and programmes.
Course content:
Algorithms development. Main data types and operation in C++ programs. Controlling structures – branches,
choosing a variant, cycles. Arrays and arrays of arrays, pointers, one-dimensional dynamic and multidimensional arrays, character strings. Functions.
Teaching and assessment:

The lectures concentrate on the process of algorithm development, testing and verification and their implementation in C++. Students are given suitable examples and independent tasks to practise writing programs and develop new programs. At the practice sessions students write programs and do tests. Each student prepares a course work including tasks and presents them to the lecturer.

SB10212 Higher Mathematics I

ECTScredits: 4 **Work load per week:** 2l+1s+0lab +0p+0ca
Assessment: exam **Type of exam**: written
Departments involved: Department 50 Nature and philological sciences, tel. 086 821521
Lecturers:

1. Assoc.Prof. Antoaneta Tileva Mihova, PhD, Department 27Mathematics, phone (082) 888 727, E-mail: amihova@uni-ruse.bg
2. Pr. Assist.Anna Simeonova Lecheva, PhD, Department 27Mathematics, phone (082) 888 453, E-mail: alecheva@uni-ruse.bg

Summary:
Higher mathematics 1 is fundamental to students - future teachers of informatics, information technology, physics and astronomy, and is compulsory for acquiring a professional qualification as a "teacher". It is fundamental and is based on the study of mathematics from the middle course. It serves the students' education in other mathematical disciplines, as well as theoretical physics, mathematical methods in physics and other compulsory and elective subjects provided in the curriculum of the specialty which are related to physics.
The course includes topics from Linear algebra and analytical geometry, Differential and integral calculus of function of a variable.
Course syllabus:
Linear algebra: matrices, determinants, system of linear equations; Vector algebra: vector operations and it's applications; Plane analytical geometry: line in plane; Differential calculus of function of single variable: derivative of function and applications; Integral calculus: basic integration techniques, integration of rational functions.
Teaching and assessment:
The students get acquainted via lectures with basic mathematical notions. By rule, the theorems do not include proofs but there are many examples and applications given. The seminars develop the students' technical ability for practical problem solving. Students are allowed to use formulas during classes, tests and exam. Students should prepare for the seminars by learning the lecture course materials and examples. The exam is considered passed only if the student has solved at least two problems. One of those problems should be chosen from the Linear algebra, Vector algebra and Analytical geometry sections. The other one should be chosen from the Differential and integral calculus of a function of a variable. The final mark if formed after a talk with the student.

SB10213 General Physics - Part 1

ECTS credits: 7 **Weekly classes:** 3ec +0sem +1labs +0ps +1ca
Assessment: exam **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc. Prof. P.Mashkov, PhD, Department of Physicsp e-mail: pmashkov@uni-ruse.bg
Assoc. Prof. T. Bogdanova PhD, e-mail: tbuhcheva@uni-ruse.bg
Abstract:

The course includes lectures and laboratory experiments. The aim of the instruction is students to get acquainted with the main physical phenomena; basic classic theories in Physics and practical examples from the contemporary technological achievements. Laboratory experiments help students to acquire skills and experimental knowledge.

Course content:

Kinematic of mass point. Dynamics. Impulse. Work and energy. Laws for conservations. Mechanics. Mechanics of fluids. Mechanic vibrations and waves.

Teaching and assessment:

The lecture course introduces the main divisions of Mechanics.

SB10214 Computer Architectures

ECTS credits: 5 **Weekly classes:** 2lec+1sem+0labs+0ps+0.5r

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological and Natural Sciences
Silistra Branch

Lecturers:

Assoc. Prof. DSc Georgi Krastev, Department of Computer Systems and Technologies, tel. 888 672, E-mail: gkrastev@ecs.uni-ruse.bg

Assistant MSc Professor Stanimir Stanev, Department of Philological and Natural Sciences - Silistra Branch, 08888 42 515, stanss@mail.bg

Abstract:

The course on Computer Architectures aims at getting students acquainted with the principles of building and functioning of computer systems. It also gives basic knowledge about various kinds of computer structures, the operation systems and the different ways of adding periphery units.

Course content:

Arithmetic and logic bases of functioning of the computers. Introduction to computer architecture and functioning of the operation system. Basic elements of the computer system and interaction between them. Input - output system. Periphery devices.

Teaching and assessment:

Students have four lectures and four practical exercises every other week. The practical exercises are held in rooms equipped with personal computers. The exercises are on the topics mentioned above.
There is an exam at the end of the course. Students have to do an individual test with questions and exercises based on the material taught. After the tests are marked students answer oral questions and then the final mark can be put.

SB10215 Foreign Language (English)

ECTS credits: 3 **Weekly classes:** 0lec+0sem+0labs+2ps

Assessment: continuous assessment **Type of exam:** written/oral

Department involved:

Department of Philological and Natural Studies
Silistra Branch

Lecturers:

Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological and Natural Studies, Silistra Branch,
tel.: 086/821521, E-mail: dianazhelezova@abv.bg
Silvia Angelova, PhD, Dept. of Philological and Natural Studies, Silistra Branch, tel.: 086/821521, silvijabg@yahoo.com

Abstract:
The aim of the instruction is the acquisition of the foreign language from "beginner" to "upper-intermediate" level, and development of the four major skills – reading, writing, listening and speaking. The training of these skills is simultaneous with the teaching of grammar, lexis, translation.
Course content:
Grammar, lexis, reading and writing activities with major themes: Articles – type, use; Verbs and Verbal tenses; Nouns and Adjectives; Pronouns; Adverbs; Interjections; Prepositions; Simple and compound sentences; Word order; Family; School; Food; Traveling; Months; Seasons; Shopping, etc.
Teaching and assessment:
The instruction in I semesters ends up with a written grammar and lexis final test.The written exam consists of dictation, translation to and from the foreign language, retelling (essay).The oral exam consists of oral translation of a book in the foreign language and a topic from the nominal lexis. The final mark is complex – including the continuous evaluation during the semester, the oral and the written exam.

SB10216 Preparatory Course in Physics and Astronomy

ECTS credits: 1 **Weekly classes:** 0lec+0sem+0labs+2ps
Assessment: exam **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc.Prof. B. Todorova, PhD, Department of Public Health and Social work
e-mail: btodorova@uni-ruse.bg
Assoc.Prof. T. Bogdanova, PhD
e-mail: tbuhcheva@uni-ruse.bg
Abstract: The training aims to update the preparation of students in the school course of training in physics and astronomy. The knowledge gained in this discipline forms the basis for upgrading the conceptual physical apparatus at the university level. All physical laws, postulates, principles and physical ideas are recalled in the hours for practical exercises. Quality practical applications from different sections of the subject physics and astronomy are solved in both levels of secondary school. The training in the discipline is especially useful because it is consistent with the fact that the students apply for the graduation of language schools and vocational high schools, whose training in physics is completed at an earlier stage. Exercises in the course allow students to develop skills for working with nonfiction, for teamwork.
Course content: Material point kinematics. Material point dynamics. Principles of Mechanics. Gravity. Work, power, energy. Laws of conservation in mechanics. Mechanical vibrations. Mechanical waves. Static and fluid dynamics. Fundamentals of thermodynamics. Transmission phenomena. Construction and properties of liquids and solids. Phase transitions of states of bodies and substances. Electric field in vacuum and in material environment. Direct current. Current in different environments. Magnetic field in vacuum and in substance. Electromagnetic induction. Geometric optics. Spherical mirrors and lenses. Interference, diffraction and dispersion of light. Light scattering.
Teaching and assessment: During the classes, each of the mentioned topics in the curriculum is developed. Exemplary tasks are illustrated to illustrate the physical dependencies identified.
At the beginning of each class, a test is made to test the knowledge of the previous topic. All students who attend all of the classes receive a certificate of discipline. The final grade is summarized as the sum of all the grades.

SB15236 Foreign Language (English)

ECTS credits: 4 **Weekly classes:** 0lec+0sem+0labs+6ps
Assessment: exam **Type of exam:** written/oral

Department involved:
Department of Philological and Natural Studies
Silistra Branch
Lecturers:
Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological and Natural Studies, Silistra Branch,
tel.: 086/821521, E-mail: dianazhelezova@abv.bg
Silvia Angelova, PhD, Dept. of Philological and Natural Studies, Silistra Branch,tel.: 086/821521, silvijabg@yahoo.com
Abstract:
The aim of the instruction is the acquisition of the foreign language from "beginner" to "upper-intermediate" level, and development of the four major skills – reading, writing, listening and speaking. The training of these skills is simultaneous with the teaching of grammar, lexis, translation.
Course content:
Grammar, lexis, reading and writing activities with major themes: Articles – type, use; Verbs and Verbal tenses; Nouns and Adjectives; Pronouns; Adverbs; Interjections; Prepositions; Simple and compound sentences; Word order; Family; School; Food; Traveling; Months; Seasons; Shopping, etc.
Teaching and assessment:
The instruction with written and oral final exams. The written exam consists of dictation, translation to and from the foreign language, retelling (essay).The oral exam consists of oral translation of a book in the foreign language and a topic from the nominal lexis. The final mark is complex – including the continuous evaluation during the semester, the oral and the written exam.

SB10217 Object-oriented Programming

ECTS credits: 8 **Weekly classes:** 2lec+0sem+0lab+3ps+1ca
Assessment: exam **Type of exam:** written
Department involved:
Department of Philologically and Natural Sciences, Silistra Branch
Lecturers:
Prof. Tzvetomir Vassilev PhD, Deptartment of IIT, tel. 888 475, Email: tvassilev@ami.uni-ruse.bg
Assoc. Prof. Rumen Ivanov Rusev, MEng, PhD, Dept. of Informatics and Information Technologies, tel.: +354 82/ 888 326, E-mail: rir@ami.uni-ruse.bg
Assist. Prof. Sergei Antonov, MEng, PhD, Deptartment of IIT, tel. 888 475, Email: santonov@uni-ruse.bg
Abstract:
The course is a continuation of the course Introduction to programming. It focuses on the main concepts of the object-oriented programming. The programming language C++ is studied in detail and especially the object-oriented part. Since they are the main categories, classes and objects are studied, as well as the main concepts for working with them. The practice sessions aim at acquiring skills for developing object-oriented programs. The programs are implemented using Borland C++.
Course content:
Classes and objects. Components of classes – data members, functions' members, constructors and destructors. Objects and functions. Friends of classes. Derivatives of classes, inheritance. Streams. Predefinition of operators.
Teaching and assessment:
The lectures give the principles for development of algorithms using classes and objects, as well as their implementation in C++. They are supported with lots of model programmes and students have to modify independently the examples and write similar programs for training in programming. At the practice sessions students write programmes, verify them and do tests. Student course work includes

two problems for independent work and is to be defended and evaluated on submission. The semester is validated for students who defend the course work successfully.

SB14767 Informational and Communicational Technologies in Teaching and Working in Digital Environment I

ECTS credits: 3 **Weekly classes:** 0lec+0sem+0abs+2ps+ 0,5r
Assessment: continuous assessment **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc. Prof. Valentina Voinohovska, PhD – Dept. of IIT, tel. 888 490, Email: vvoinohovska@uni-ruse.bg
Pr.Assist.Prof. Evgenia Deneva Goranova , MEng.;Dept. of Technical and Natural Sciences, Silistra Branch, tel. 086/821521, E-mail e_deneva@abv.bg
Abstract:
The course is taught by students - future teachers of informatics, information technology, physics and astronomy and is compulsory for acquiring the professional qualification "teacher". It aims to enrich the students' digital literacy skills acquired in the study of Computer Technology. Therefore, its content includes topics related to the presentation of information to the audience through Power Point and Prezi Presentation programs, as well as the creation of visual objects (algorithmic blocks, optical drawings, mechanical and electrical circuits) with the Microsoft Visio program and their integration in documents with other formats (* .pptx, * .docx., etc.).
Course content:
Purpose of the Power Point program. Ways to create and present a presentation. Translating slides and animating elements. Create hyperlinks in slides. Working with the Prezi Presentation program. Create and present a presentation with Prezi. Purpose of Microsoft Visio . Create schematics and drawings and import them into Microsoft Word.
Teaching and assessment:
The discipline ends with an on-going assessment. The final grade is based on the results shown in three practical assignments and the defense of the 1: 1: 1: 1 individual reference assignment.

SB10219 Foreign Language (English)

ECTS credits:5 **Weekly classes:** 0lec+0sem+0labs+4ps
Assessment: continuous assessment **Type of exam:** written/oral
Department involved:
Department of Philological and Natural Studies
Silistra Branch
Lecturers:
Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological and Natural Studies, Silistra Branch, tel.: 086/821521, E-mail: dianazhelezova@abv.bg
Silvia Angelova, PhD, Dept. of Philological and Natural Studies, Silistra Branch,tel.: 086/821521, silvijabg@yahoo.com
Abstract:
The aim of the instruction is the acquisition of the foreign language from “beginner” to “upper-intermediate” level, and development of the four major skills – reading, writing, listening and speaking. The training of these skills is simultaneous with the teaching of grammar, lexis, translation.
Course content:
Grammar, lexis, reading and writing activities with major themes: Articles – type, use; Verbs and Verbal

tenses; Nouns and Adjectives; Pronouns; Adverbs; Interjections; Prepositions; Simple and compound sentences; Word order; Family; School; Food; Traveling; Months; Seasons; Shopping, etc.

Teaching and assessment:

The instruction in II semester ends with written and oral final exams. The written exam consists of dictation, translation to and from the foreign language, retelling (essay).The oral exam consists of oral translation of a book in the foreign language and a topic from the nominal lexis. The final mark is complex – including the continuous evaluation during the semester, the oral and the written exam.

SB10220 General Physics - Part 2

ECTS credits: 8 **Weekly classes:** 3l +0s +2lab +0ps +1ca

Assessment: exam **Type of exam:** oral and written

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Lecturers:

Assoc. Prof. P.Mashkov, PhD, Department of Physics, e-mail: pmashkov@uni-ruse.bg

Assoc. Prof. T. Bogdanova PhD, e-mail: tbuhcheva@uni-ruse.bg

Abstract:

The course includes lectures and laboratory experiments. The aim of the instruction is students to get acquainted with the main physical phenomena; basic classic theories in Physics and practical examples from the contemporary technological achievements. Laboratory experiments help students to acquire skills and experimental knowledge.

Course content:

Fundamentals of molecular physics. Fundamentals of thermodynamics. Physics of solids.

Teaching and assessment:

The lecture topics allows students to become acquainted with the main sections of Thermodynamics and molecular physics. At the laboratory sessions students build practical skills to measure thermodynamic parameters. The final mark is formed as an average of laboratory session and course work mark and examination mark.

SB10221 Higher Mathematics II

ECTScredits: 5 **Work load per week:** 2l+2s+0lab +0p+0cw

Assessment: exam **Type of exam**: written

Departments involved: Department 50 Nature and philological sciences, tel. 086 821521

Lecturers:

1. Assoc.Prof. Antoaneta Tileva Mihova, PhD, Department 27Mathematics, phone (082) 888 727, E-mail: amihova@uni-ruse.bg
2. Pr. Assist. Anna Simeonova Lecheva, PhD, Department 27Mathematics, phone (082) 888 453, E-mail: alecheva@uni-ruse.bg

Annotaion:

The subject Higher Mathematics II is a basic for mathematical education in Physics and Informatics sciences. It gets the students acquainted with the basic notions of the mathematical analysis such as definite integrals, partial derivatives, and gives them computational abilities to solve ordinary differential equations, to find extrema of functions of two variables, to integrate functions of complex variable. This knowledge is necessary for further study of physics, computing sciences and other special subjects.

Course syllabus:

Basic themes: definite integrals and applications, functions of two variables, ordinary differential equations, functions of complex variable, series.

Teaching and learning methods:

The educational process is realized by lectures and seminar exercises. The educational material is theoretically presented and demonstrated by proper example problems in the lectures. The basic themes understanding are controlled and skills for solving practical problems are developed in the seminar exercises. The exam test includes 6-8 practical problems for solving.

SB14768 Training in Solving Physical Problems

ECTS credits: 1 **Weekly classes:** **0**lec+0sem+0lab+2ps

Assessment: continuous assessment **Type of exam:** written

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Lecturers:

Assoc. Prof. Vladimir Mateev PhD, Department of Physics, E-mail: vmateev@uni-ruse.bg

Assoc. Prof. Temenuzhka Bogdanova, PhD, e-mail: tbuhcheva@uni-ruse.bg

Abstract:

The course familiarizes the students with the classification of the physical problems, and their place in the different stages of the implementation of the teaching activities, their role for increasing the personnel motivation of the students. Different approaches to solving the physical problems and possibilities for realization of integrative links with mathematics, chemistry and biology are discussed. Skills to solve physical tasks from different sections of the school course in Physics for compulsory training are built during the course.

Course content:

Classifications of physical problems. Didactic features of the physical problems in the learning process. Main stages of the problem solving activity. Qualitative and quantitative tasks in Physics - features and methods for solving them. Didactic purpose. Unconventional and creative tasks. Types of creative tasks. Tasks-paradoxes. Characteristics of physical problems. Olympiads and competitions. Methodology of solving and use of experimental tasks. Physical problems, realizing integrative links with Mathematics, Chemistry, Biology, and Ecology. Test examination for diagnosis and control of knowledge and skills.

Teaching and assessment:

On the basis of an in-depth analysis during the practical sessions the students conceptualize the options for the using different problems at a lesson in Physics and Astronomy in the secondary school. The final mark is formed on the base of the results of two tests on physical problems from different sections of Physics.

SB15237 Foreign Language (English)

ECTS credits: 4 **Weekly classes:** 0lec+0sem+0labs+6ps

Assessment: exam **Type of exam:** written/oral

Department involved:

Department of Philological and Natural Studies
Silistra Branch

Lecturers:

Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological and Natural Studies, Silistra Branch, tel.: 086/821521, E-mail: dianazhelezova@abv.bg

Silvia Angelova, PhD, Dept. of Philological and Natural Studies, Silistra Branch,t el.: 086/821521, silvijabg@yahoo.com

Abstract:

The aim of the instruction is the acquisition of the foreign language from "beginner" to "upper-intermediate" level, and development of the four major skills – reading, writing, listening and speaking .The training of these skills is simultaneous with the teaching of grammar, lexis, translation.

Course content:

Grammar, lexis, reading and writing activities with major themes: Articles – type, use; Verbs and Verbal tenses; Nouns and Adjectives; Pronouns; Adverbs; Interjections; Prepositions; Simple and compound sentences; Word order; Family; School; Food; Traveling; Months; Seasons; Shopping, etc.

Teaching and assessment:

The instruction ends with written and oral final exams. The written exam consists of dictation, translation to and from the foreign language, retelling (essay).The oral exam consists of oral translation of a book in the foreign language and a topic from the nominal lexis. The final mark is complex – including the continuous evaluation during the semester, the oral and the written exam.

SB10223 Visual Programming in MS Office

ECTS credits: 5 **Weekly classes:** 2lec+0sem+0lab+2ps+1ca

Assessment: continuous assessment **Type of exam:** written

Department involved:

Department of Philologically and Natural Sciences, Silistra Branch

Lecturers:

Assoc. Prof. Svetlozar Stefanov Stankov, MEng, PhD, Dept. of Informatics and InformationTechnologies,tel.: +354 82/ 888 645; E-mail: stsankov@uni-ruse.bg

Pr. Assist. Prof. Evgenia Goranova, MEng, PhD, Dept. of Philologically and Natural Sciences, Silistra Branch,tel.: 086 821521, E-mail: e_deneva@abv.bg

Abstract:

The course objective is students to get familiar with MS Office package and be prepared for programming with Visual Basic for Application; they become able to use the applications in MS Office environment efficiently and develop their own applications. Prerequisites for attending the course are students' preparation in Mathematics gained during the first yea rand the knowledge from studying Object-oriented Programming. The knowledge and skills acquired from studying Visual Programming in MS Office are the basis for developing course assignments, course works and projects and they can be successfully used for diploma projects and students' further work.

Course content:

Introduction. Office programming. Object-oriented programming. VBA and objects in Office. Data types. Macros creation and editing. Constants, variables. Integrated functions and statements. Assignment statements. Control statements. Arrays. Introducing to objects and collections. Procedures and functions. Projects and modules. Interaction design. Menu. Dialogue windows. Dialogue window elements. Events .Methods. Files management. Office applications host control.

Teaching and assessment:

The continuous assessment is implemented for controlling students' progress through two tests. The course assignment given to students is the active form of testing their skills for working independently and they get adequate grade. For estimating students' involvement in the course studies students may get a maximum score of 110. Semester continuous assessment is obtained after student's regular attendance at lectures, active participation in workshop sessions, a minimum score of 70 and successfully presented course assignment. The final assessment is formed as an average of the two tests and the course assignment, the grade from the entry test and the student's performance during workshop sessions.

SB10224 Data Bases

ECTS credits: 6 **Weekly classes**: 2lec+0sem+0labs+2ps+0,5r

Assessment: exam **Type of exam**: written

Department involved:

Department of Philologically and Natural Sciences, Silistra Branch

Lecturers:

Assoc. Prof. Galina Evgenieva Atanasova, PhD, Department of Informatics and Information Technologies
tel. 888 464, 888 326, E-mail: gatanasova@uni-ruse.bg

Pr.Assist.Prof. Evgenia Deneva Goranova, MEng.; PhD, Dept. of Philologically and Natural Sciences, Silistra Branch, tel.086/821521, E-mail: e_deneva@abv.bg

Pr.Assist.Prof. Magdalena Hristova Andreeva, MEng.; PhD, Dept. of Informatics and Informational technologies, tel: 082/ 888 470, E-mail magie@ami.ru.acad.bg

Abstract:

The purpose of this course is to familiarize students with the main principles of organising, creating and implementing of databases (DBs), database management systems (DBMS), and the information systems building. Students gain knowledge on important topics of database theory, the physical and logical organisation of DB, existing data models and the specificity of the models. The emphasis is on the relational database model.

Course content:

Main terminology in the DB theory, DBMS. Data models. Logical models. DB schema. Relational model. Relational DB schema. Relational algebra and relational calculus. Main operations with the data in the BD. Data manipulation languages. SQL. Queries. Interaction. Functional dependencies. Relational schema analysis. Normalisation and normal forms. DBMS. Operating principles. Information systems.

Teaching and assessment:

The course comprises lectures, practice sessions and a paper. The lectures introduce important issues from DB organization, designing, building and application. During seminar classes students discuss problems related to DB theory and examine the practical applications. The practice sessions are intended to contribute to students' skills for designing individual DB and learn how to work in teams. The course work target is students to build up skills for DB designing. The course ends with exam. The final grade is formed on the basis of the results from the exam, a paper, and student's activity during the term.

SB10225 Computer Graphics and Image Processing

ECTS credits: 5 **Weekly classes:** 2lec+0sem+0lab+2ps

Assessment: exam **Type of exam:** written

Department involved:

Department of Philologically and Natural Sciences, Silistra Branch

Lecturers:

Prof. Tzvetomir Vassilev PhD, Deptartment of IIT, tel. 888 475, Email: tvassilev@ami.uni-ruse.bg

Assoc. Prof. Rumen Ivanov Rusev, MEng, PhD, Dept. of Informatics and Information Technologies, tel.: +354 82/ 888 326, E-mail: rir@ami.uni-ruse.bg

Abstract:

Basic principles of developing and working with interactive computer graphic systems, development ofsoftware for geometrical modeling of objects and graphical documents by using computers. Main principlesand approaches of 2D and 3D objects visualisation, realistic images of spacious objects and scenes.Methods of developing graphical user interface. Image processing focuses on practically essential issues –obtaining digit images and basic processing – improving images, recovering, segmenting, recognizing, etc.

Course content:

General information about computer graphics and image processing. Vector and raster graphics. Computer graphics colour. Colour models. Peripheral devices for computer graphics and image processing. Objectdescription in graphic systems – models. Graphic data bases. Basic geometric

transformations in a plane.Approximation and modeling of plain curves – interpolation, Besie's curves, cubic splines, B-splines, basicgeometric transformations in the space. 3D objects plain projections. Methods of 3D realistic image creation.Basic principles for creating computer animation. Main characteristics of digit images. Image improvement.Image recovering. Image segmentation. Image recognition and interpretation.

Teaching and assessment:

The workshops objective is students to enhance the knowledge obtained from lectures and their self study.Special attention is paid to students' independent work. They learn how to create programme modules with the methods taught and apply the specialised software in practice. The current student performance is rated with two tests evaluated using a score scale of 100. The final grade takes into consideration the continuous assessment of the students' results.

SB14769 General Physics - Part III

ECTS credits: 7 **Weekly classes: 3**ec +0sem +2labs +0ps +0,5r

Assessment: exam **Type of exam:** oral and written

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Lecturers:

Assoc. Prof. Vladimir Mateev, PhD, Department of Physics, vmateev@uni-ruse.bg

Assoc. Prof. Temenuzka Bogdanova, PhD, E-mail: tbuhcheva@uni-ruse.bg

Abstract:

The course includes lectures and laboratory sessions. The aim of the instruction is students to get acquainted with the main physical phenomena; basic classic theories in Physics and practical examples from the contemporary technological achievements. Laboratory experiments help students to acquire skills and experimental knowledge.

Course content:

Electric field. Direct current. Contact phenomena. Magnetic field. Electromagnetic induction. Alternating current. Electromagnetic field and electromagnetic waves.

Teaching and assessment:

The lecture topics allows students to become acquainted with the main theoretical material. At the laboratory sessions students work independently and investigate particular physical phenomena. The final mark is formed as an average of laboratory session and course work mark and examination mark.

SB10227 Higher Mathematics III

ECTS credits: 4 **Weekly classes:** 2l + 1se+0lab+0ps

Assessment: continuous assessment **Type of exam:** written

Department involved:

Department of Philologically and Natural Sciences, Silistra Branch

Lecturers:

Prof. Velizar Pavlov, MSc (Math), PhD (Math), Department of Applied Mathematics and Statistics, Phone: 888-466, e-mail: vpavlov@uni-ruse.bg

Abstract:

This discipline is essentially a course in applied statistics, focusing on the applications of statistics in experimental work in the fields of pedagogy and physics. The main objective of the course is to acquaint students with the use of basic methods for data collection, processing and analysis in pedagogical and some physical studies. The curriculum is consistent with similar courses at Bulgarian and leading universities abroad.

Course content:
Nature of statistical learning. Measuring scales. Statistical monitoring. Statistical group. Statistical analysis. Graphical statistical images. Empirical statistical distributions. Numerical characteristics. Established representative statistical study. Statistical evaluation. Point and interval estimates. Sampling error. Determination of sample size. Statistical hypothesis testing. Analysis of variance. Correlation analysis. Regression analysis. Verification of statistical significance of the coefficients of the regression model. Adequacy of the model. Multiple regression and correlation. Evaluation of the model. Factor analysis. Applications. Empirical studies in Pedagogy.
Teaching and assessment:
The teaching process is realized through lectures and seminar exercises. Topics discussed during lectures are to be illustrated and given meaning additionally through seminar exercises.

SB10228 Training in Geophysics and Atmosphere

ECTS credits: 3 **Weekly classes:** 0lec+0sem+0labs+2ps+0,5r
Assessment: continuous assessment **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc. Prof. P.Mashkov, PhD, Department of Physics, e-mail: pmashkov@uni-ruse.bg
Assoc. Prof. T. Bogdanova PhD, e-mail: tbuhcheva@uni-ruse.bg
Abstract:
The proposed modules of the subject Training in Geophysics and Atmosphere originate from the standard subject units in the curriculum for the school subjects Man and Nature for 5th and 6th grade and Physics and Astronomy for the 7th and 12th grade. The information in Geophysics explains the notion of the origin, structure and development of the Earth. Earthquakes and volcanoes.
Course content:
The origin, age, form, size and composition of the Earth. Mass and density of the Earth. Gravitation. Earthquakes-geographical allocation and reasons for them. Prognostication of the earthquakes. Magnetic field of the Earth. Thermal field of the Earth. Volcanoes. Electric field. Meteorological phenomena. Composition and structure of the atmosphere. Thermal regime of the earth surface and atmosphere. Winds. Circulation of the atmosphere. Local circulations in the atmosphere. Clouds. Rainfall. Humidity. Optical phenomena in the atmosphere. Electric phenomena in the atmosphere. Synoptic meteorology. Climate.
Teaching and assessment:
The themes of the course works comprise all the problems in the curriculum. Students may choose to present their course work as a multimedia presentation. They may visualize different processes and phenomena using multimedia simulation. Students defend their course works at the end of the term.

SB10229 Training in Geophysics

ECTS credits: 3 **Weekly classes:** 0lec+0sem+0labs+2ps+0,5 r
Assessment: continuous assessment **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturer:
Assoc. Prof. P.Mashkov, PhD, Department of Physics, e-mail: pmashkov@uni-ruse.bg
Assoc. Prof. T. Bogdanova PhD, e-mail: tbuhcheva@uni-ruse.bg
Abstract:
The proposed modules of the subject Training in Geophysics and Atmosphere originate from the standard subject units in the curriculum for the school subjects Man and Nature for 5th and 6th grade and Physics and

Astronomy for the 8th and 10th grade. The information in Geophysics explains the notion of the origin, structure and development of the Earth. Earthquakes and volcanoes.

Course content:

The origin, age, form, size and composition of the Earth. Mass and density of the Earth. Gravitation. Earthquakes-geographical allocation and reasons for them. Prognostication of the earthquakes. Magnetic field of the Earth. Winds. Circulation of the atmosphere. Local circulations in the atmosphere. Clouds. Rainfall. Humidity.

Teaching and assessment:

The themes of the course works comprise all the problems in the curriculum. Students may choose to present their course work as a multimedia presentation. They may visualize different processes and phenomena using multimedia simulation. Students defend their course works at the end of the term.

SB10222 Tasks from the School Course in Physics and Astronomy

ECTS credits: 1 **Weekly classes:** 0lec+0sem+0labs+2ps

Assessment: continuous assessment **Type of exam:** written

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Lecturers:

Assoc. Prof. P.Mashkov, PhD, Department of Physics, e-mail: pmashkov@uni-ruse.bg

Assoc. Prof. T. Bogdanova PhD, e-mail: tbuhcheva@uni-ruse.bg

Abstract: The training aims to update the preparation of students in the school course of training in physics and astronomy. The knowledge gained in this discipline forms the basis for upgrading the conceptual physical apparatus at the university level. All physical laws, postulates, principles and physical ideas are recalled in the hours for practical exercises. Quality practical applications from different sections of the subject physics and astronomy are solved in both levels of secondary school. The training in the discipline is especially useful because it is consistent with the fact that the students apply for the graduation of language schools and vocational high schools, whose training in physics is completed at an earlier stage.

Course content: Material point kinematics. Material point dynamics. Principles of Mechanics. Gravity. Work, power, energy. Laws of conservation in mechanics. Mechanical vibrations. Mechanical waves. Static and fluid dynamics. Fundamentals of thermodynamics. Transmission phenomena. Construction and properties of liquids and solids. Phase transitions of states of bodies and substances. Electric field in vacuum and in material environment. Direct current. Current in different environments. Magnetic field in vacuum and in substance. Electromagnetic induction. Geometric optics. Spherical mirrors and lenses. Interference, diffraction and dispersion of light. Light scattering.

Teaching and assessment: During the classes, each of the mentioned topics in the curriculum is developed. Exemplary tasks are illustrated to illustrate the physical dependencies identified.

At the beginning of each class, a test is made to test the knowledge of the previous topic. All students who attend all of the classes receive a certificate of discipline. The final grade is summarized as the sum of all the grades.

SB15238 Foreign Language (English)

ECTS credits: 4 **Weekly classes:** 0lec+0sem+0labs+6ps

Assessment: exam **Type of exam:** written*oral

Department involved:

Department of Philological and Natural Studies
Silistra Branch

Lecturers:

Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological and Natural Studies,

Silistra Branch,
tel.: 086/821521, E-mail: dianazhelezova@abv.bg
Silvia Angelova, PhD, Dept. of Philological and Natural Studies, Silistra Branch,tel.: 086/821521, silvijabg@yahoo.com
Abstract:
The aim of the instruction is the acquisition of the foreign language from "beginner" to "upper-intermediate" level, and development of the four major skills – reading, writing, listening and speaking .The training of these skills is simultaneous with the teaching of grammar, lexis, translation.
Course content:
Grammar, lexis, reading and writing activities with major themes: Articles – type, use; Verbs and Verbal tenses; Nouns and Adjectives; Pronouns; Adverbs; Interjections; Prepositions; Simple and compound sentences; Word order; Family; School; Food; Traveling; Months; Seasons; Shopping, etc.
Teaching and assessment:
The instruction ends up with an exam. Two tests are provided during the semester, including exercises for listening comprehension, reading comprehension and grammatical structures. The final grade for the discipline is the arithmetic mean of the two tests.

SB 14770 Pedagogical Psychology

ECTS credits: 5 **Weekly classes:** 2lec+2sem+0labs+0ps
Assessment: exam **Type of exam:** written
Department involved:
Department of Pedagogy, Psychology and History
Faculty of Natural Science and Education
Lecturers:
1. Assoc. Prof. Yuliya Doncheva, PhD, „Angel Kanchev" University of Ruse, Dept. of Pedagogy, Psychology and History, tel.: +359 82 888 219, E-mail: jdoncheva@uni-ruse.bg
2. Pr. Ass. Vanya Dineva, PhD, "Angel Kanchev" University of Ruse, Department of Pedagogy, Psychology and History", tel. 082 888 566, E-mail: vdineva@uni-ruse.bg
Abstract:
The aim of the course:
- raising the level of theoretical and practical knowledge in the field of social psychology;
- forming a complete picture of the psychic phenomena peculiarities, patterns and mechanisms in the personality formation process
Course content:
The program includes lectures and seminars on topics –
- the pedagogical psychology science, the pedagogical psychology development, the pedagogical psychology subject matter, object, tasks and conceptual apparatus;
- the methodology, principles, approaches and research methods of the pedagogical psychology;
- the psychological specifics of the education, the upbringing, the teaching, the pedagogical communication;
- the conceptual bases of applied pedagogical readiness, perspectives and professional self-determination.
Teaching and assessment:
The training is done through lectures and seminars. Requirement - 50% lecture attendance; 100% seminars attendance. Appraisement - according to current student activity, paper defense and exam test.

SB10232 Data Structures and Programming

ECTS credits: 6
Weekly workload: 2lec+0sem+0lab+2ps+cw
Assessment: exam
Type of exam: written

Department involved:
Department of Philologically and Natural Sciences, Silistra Branch

Lecturer:
Assoc. Prof. Galina Evgenieva Atanasova, PhD, Department of Informatics and Information Technologies
tel. 888 464, 888 326, E-mail: gatanasova@uni-ruse.bg

Abstract:
The course objective is to provide knowledge on complex data structures, algorithms design and maintenance, application of data structures in software development. Examples of data structures applied in practical cases for problem solving are explained to students. At first, data structures and processing algorithms are discussed conceptually and then students proceed to implement the programs in C++. The focus is placed on the algorithm complexity and program execution time. At practice sessions students have the possibility to write test programs for the algorithms presented at lectures, to modify them and create new ones. Students have to do individual assignments applying the studied data structures.

Course content:
Sorting and searching algorithms. Stack implementation and processing. Queue implementation and processing. Linear linked lists. Sorted lists. Binary searching tree. Graphs. Presentations. Algorithms and applications.

Teaching and assessment:
The lectures focus on data structures in accordance with the syllabus. The accent is placed on the methods of data structure presentation, the applied basic operations and types of problems solved with the created data structure. Program implementation is performed in C++. At practice sessions students write and test concrete practical tasks which require the application of complex data structures. The course assignment is carried out individually in two stages as homework and it is presented in a pre-set time. During the semester students do 3 tests including questions on theory and practice. The course ends with exam. The grade is formed on the basis of the results from the exam, course assignment and tests.

SB10233 Computer Networks and Communications

ECTS credits: 6
Weekly classes: 2lec+0sem+0labs+2ps+cw
Assessment: continuouse assessment
Type of exam: written

Department involved:
Department of Philological and Natural Sciences
Silistra Branch

Lecturers:
Prof. DSc Georgi Krastev, Department of Computer Systems and Technologies, tel. 888 672, E-mail: gkrastev@ecs.uni-ruse.bg

Abstract:
The course objective is students to be familiarized with the principles and ways of connecting computers in networks as well as with the implementation of intercommunication between different levels of connections.

Course content:
Devices and topologies used in computer networks. Networks types. Physical level in networks. Theoretical bases and media for distance data transfer. Channel communication in networks – basic characteristics. Protocols. HDLC and PPP. Ethernet channel. Routine algorithms. Data streams loading and control within a network. Network level with IP protocol. Transformation of IP and MAC addresses. Class-free addressing. Routines in IP networks. Interior protocols – RIP and OSPF. Gateway protocol BGP. Group routine. Transport level. Protocols with sockets – procedures. Transport protocols TCP and UDP. DNS and NetBIOS systems for domain names in networks. DNS and NetBIOS server and clients. Name resolving. Session level in Internet – file transfer and FTP protocol. Application level.

SMTP and POP3 protocols. WEB technologies in Internet. Hypertext and HTTP protocol. Security and authenticity in networks. Symmetric and asymmetric encoding. Public key and digital signature.

Teaching and assessment:

The lectures are 2 classes per week. Each student works independently on a course assignment that is evaluated. At the end of the course students make a test covering the lecture topics. The final grade is formed as 0.7 of the continuouse assessment, 0.1 of student's work during the practice sessions and 0.2 of the course assignment mark.

SB10234 General Physics - Part 4

ECTS credits: 8 **Weekly classes:** 3l +1sem +2labs +0ps +1cw

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Lecturers:

Assoc. Prof. P.Mashkov, PhD, Department of Physics, e-mail: pmashkov@uni-ruse.bg

Assoc. Prof. T. Bogdanova PhD, e-mail: tbuhcheva@uni-ruse.bg

Abstract:

The course includes lectures, seminars and laboratory sessions. The aim of the instruction is students to get acquainted with the main physical phenomena; basic classic theories in Physics and practical examples from the contemporary technological achievements. Laboratory experiments help students to acquire skills and experimental knowledge.

Course content:

Interference and diffraction of the light. Refraction of the light. Dispersion. Natural and polarized light. Quantum properties of the light. Lasers. Concept of holography.

Teaching and assessment:

The lecture topics allows students to become acquainted with the main theoretical material. At the laboratory sessions students work independently and investigate particular physical phenomena. The final mark is formed as an average of laboratory session and course work mark and examination mark.

SB14771 Pedagogy

ECTS credits: 5 **Weekly classes:** 2lec+2sem+0labs+0ps

Assessment: exam **Type of exam:** written

Department involved:

Department of Pedagogy, Psychology and History

Faculty of Natural Sciences and Education

Lecturers:

Assoc. Prof. Valentina Nikolova Vasileva, MA, PhD, Dept. of Pedagogy, Psychology and History, tel.: 888268, E-mail: vvasileva@uni-ruse.bg

Abstract:

The course is designed to introduce students to the basic theoretical fundamentals and main practical methods for putting into practice the educational and upbringing processes in the contemporary secondary school system.

Course content:

Common problems of the pedagogical science. Basic pedagogical concepts. Theory of upbringing – principles and methods of instruction. Theory of education (didactics) – principles of education, methods of education, forms of education, problem and programmed education, differentiation and individualization of education and basic features of the teacher's profession.

Teaching and assessment:
The course is delivered in the form of lectures and seminars.
The students are acquainted with the peculiarities of the didactic activity of the teacher, with the education as a social phenomenon and its specific social functions. Practical examples are introduced in the course of the training. The lecture course is shaped according to the requirements foreseen for the teaching profession in the field of Pedagogical Sciences. Traditional themes are defined according to the problems of the classical pedagogy and the contemporary requirements for the content and organization of the education in the Bulgarian school. Seminar exercises are conducted on the basis of applied dialogue methods, using scientific papers by leading specialists and published articles in periodicals.

SB15250 Foreign Language (English)

ECTS credits: 4 **Weekly classes:** 0lec+0sem+0labs+6ps
Assessment: exam **Type of exam:** written/oral
Department involved:
Department of Philological and Natural Studies
Silistra Branch
Lecturers:
Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological and Natural Studies, Silistra Branch, tel.: 086/821521, E-mail: dianazhelezova@abv.bg
Silvia Angelova, PhD, Dept. of Philological and Natural Studies, Silistra Branch,tel.: 086/821521, silvijabg@yahoo.com
Abstract:
The aim of the instruction aims at the development of the four major skills – reading, writing, listening and speaking at intermediate level. The training of these skills is simultaneous including teaching of grammar, lexis, translation.
Course content:
Grammar, lexis, reading and writing activities with major themes: Articles – type, use; Verbs and Verbal tenses; Nouns and Adjectives; Pronouns; Adverbs; Interjections; Prepositions; Simple and compound sentences; Word order; Family; School; Food; Traveling; Months; Seasons; Shopping, etc.
Teaching and assessment:
The instruction ends up with written and oral exam. The written exam consists of dictation, translation to and from the foreign language, retelling (essay).The oral exam consists of oral translation of a book in the foreign language and a topic from the nominal lexis. The final mark is complex – including the continuous evaluation during the semester, the oral and the written exam.

SB10237 Multimedia Systems and Web Design

ECTS credits: 7 **Weekly classes:** 2lec+0sem+0lab+3ps+1ca
Assessment: exam **Type of exam:** written
Department involved:
Department of Philologically and Natural Sciences
Lecturers:
Assoc. Prof. Svetlozar Stefanov Stankov, MEng, PhD, Dept. of Informatics and InformationTechnologies, tel.: +354 82/ 888 645; E-mail: stsankov@uni-ruse.bg
Pr. Assist. Prof. Evgenia Goranova, MEng, PhD, Dept. of Philologically and Natural Sciences, Silistra Branch,tel.: 086 821521, E-mail: e_deneva@abv.bg
Abstract:

The course objective is students to get familiar with the main components of multimedia systems, the stages
and models for developing e-learning resources, languages and environments for creating multimedia applications and Web-based applications.

Course content:

Introduction to multimedia. Areas of application. Requirements, stages and technology for creating. Basicelements of multimedia. Author's systems for creating multimedia applications and systems for developmentand management of e-Learning courses. Animation – nature, types, purpose, elements, characteristics. Animation application in education, multimedia and web design. Models and environments for developing electronic educational resources. Web design with HTML and CSS. Development of web-based multimedia applications. Computer Based Training. Videoconferencing. Virtual reality.

Teaching and assessment:

Lectures are held 2 hours per week and the practice sessions and 3 hours per week. Five minutes at thebeginning of the lesson is devoted to examination of students' knowledge. The course assignment included eveloping multimedia application with author's system or web based application. Semester validation isgiven for more than 50 percent-attendance at lectures and lack of unreasonable absence from workshops.The number of reasonably missed classes must not be more than 70% of the total classes despite of thecauses. The course ends with exam that is formed as 0.5 of the exam result, 0.1 of the workshop participation and 0.4 of the course assignment.

SB10238 School Course in Informatics and Information Technologies

ECTS credits: 5 **Weekly classes:** 2lec+0sem+0labs+1ps+1ca

Assessment: exam **Type of exam:** written

Department involved:

Department of Philologically and Natural Sciences, Silistra Branch

Lecturers:

Assoc. Prof. Valentina Voinohovska, PhD – Dept. of IIT, tel. 888 490, Email: vvoinohovska@uni-ruse.bg
Pr. Assist. Prof. Evgenia Goranova, PhD, Dept. of Philologically and Natural Sciences, Silistra Branch, tel.: 821521, E-mail: e_deneva@abv.bg

Abstract:

The course gives the students general knowledge of the basic tendencies of teaching Informatics and Information Technologies in school. It also deals with specific program and technical means that are used in teaching. It discusses the methodology and the study program of the school course. Bulgarian achievements are mentioned in the course. The published textbooks and study programs are analyzed. Students learn about the latest directions of MES (Ministry of Education and Science) regarding the teaching of Informatics and Information Technologies.

Course content:

Main trends in computer science education in schools. Methods, approaches, learning content and software for informatics training. Methods, resources, training content and IT training software. Organization of extracurricular work in informatics and information technologies.

Teaching and assessment:

During the exercises students work on tasks from the school course. They also write a semester paper on a topic selected by them from the study program in Informatics or Information Technologies. Students have the opportunity to use modern computer techniques and software with graphic interface: MS Windows, MS Access, MS Word, MS Excel, MS Power Point, MS Visio, Visual Studio, Visual Basic Express 2010 etc. Students get their semester signature after they have handed in their semester paper.

SB14772 School Course of Physics and Astronomy

ECTS credits: 5 **Weekly classes:** 2lec+0sem+0labs+1ps+1ca
Assessment: exam **Type of exam:** written
Department involved:
Department of Philologically and Natural Sciences, Silistra Branch
Lecturers:
Assoc.Prof. B. Todorova, PhD, Department of Public Health and Social work, e-mail: btodorova@uni-ruse.bg,
Assoc.Prof. T. Bogdanova, PhD, e-mail: tbuhcheva@uni-ruse.bg
Abstract:
A main component in the training in Physics is Astronomy physical theory with its basic structure- basis, nucleus, deduction and implementation. All the physical theories are generalized in the subject. The students analyze the role of the models in Physics and their functions, the problem how the physical experiment is implied in the components of one physical theory and how theory interacts with a physical experiment. On the basis of a critical analysis students get acquainted with the methodological structure of the school content in secondary schools. Students attend lessons at school during the semester.
Course content:
Physical theory in the school content of Physics. Newtonian, relative and quantum mechanics. Energy and its preservation. Main thermodynamic concepts and principles. Fundamental concepts, phenomena and laws in thermodynamics. Methodological approaches in developing the concepts oscillation and wave. Symmetries and the laws of preserving. Fundamental physical ideas. Method of model hypothesis. Experimental methods in Physics. Fundamental experiments.
Teaching and assessment:
The continuous assessment is complex from the participation in the workshops and the course work. Students are invited to give multimedia presentations, which correlates with their preparation and instruction in the course Audio-visual and informational technologies in education. The subjects in the curriculum from the methodological init generalize the knowledge of the students and prepare them for the school practice.

SB14773 Methodology and Techniques of School Experiment in Physics Part 1

ECTS credits: 3 **Weekly classes:** 0lec+0sem+3labs+0ps+1ca
Assessment: validation **Type of exam:**
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc. Prof. Vladimir Mateev, PhD, Department of Physics, vmateev@uni-ruse.bg
Assoc. Prof. Temenuzka Bogdanova, PhD, E-mail: tbuhcheva@uni-ruse.bg
Abstract:
According to Curriculum the discipline is studied in the fifth semester. Laboratory sessions include physical experiments and laboratory work from 5-8 school grades. Students of the fifth and sixth grade study the subject "Man and nature" and those of seventh and eighth grade - the subject "Physics and astronomy". The exercises are aimed to acquaint students with the methods for preparation and conduction of the school's physical experiment. The curriculum allows the students to be acquainted with the system of preparing and carrying out the front laboratory work and demonstration experiments in early grades of the secondary school.
Course content:
Solids and substances. Thermal phenomena. Statics of the fluids. Types of movements. Principles of mechanics. Types of forces. Action of the forces. Mechanical work and energy. Forces and pressure. Electrical current. Series and parallel connection of consumers. Joule–Lenz law. Magnetic field of the direct current. Geometric optics. Sound. Solar system.
Teaching and assessment:

Each student performs an experimental task, connected with practical measurements using certain laboratory plant.
The experimental results are plotted in a test record sheet, which is defended at the end of each session. The continious control includes: checking the results of the conducted experimental task and tests. The tests, providedto the students are contained in an educational manual, Issued by lecturers of the Ruse University. The content of the educational manual is based on the content of subject "Man and nature" - Fifth and Sixth grade. Control of the tasks of the subject ends with a mark, which participates in the forming of the final exam mark at the end of the second part of the subject in the next term.

SB10241 General Mathematical Methods in Physics

ECTS credits: 4
Weekly classes: 2lec +1sem +0labs +0ps
Assessment: exam
Type of exam: written
Department involved:
Department of Philological and Natural Sciences
Silistra Branch
Lecturers:
Assoc. Prof. Boryana Asenova Todorova, PhD, Dept. of Public Health and Social Activities,
tel: 082/821993, E-mail: btodorova@uni-ruse.bg
Assoc. Prof. Galina Zaharieva Krumova, PhD, Dept. of Mechanics, Machine Elements, Engineering Graphics and Physics, tel: 082/888 215, E-mail: gal@uni-ruse.bg
Abstract:
The course includes lectures and seminars. The aim is to provide students with the knowledge to solve different physical problems through basic mathematical methods, as well as to prepare them for the study of Atomic and Nuclear physics and Theoretical physics.
Course content:
Coordinate systems. Scalar and vector quantities and operations with them. Differential operators. Curvilinear, surface and volumetric integrals. Fourier series. Differential equations.
Teaching and assessment:
The lecture course gives a rigorous presentation of the material, clarifying the issues in question by means of proper examples. Seminar exercises illustrate the theoretical material through specific tasks. The results obtained shall be interpreted. The continuous assessment is carried out through two one-hour control works, and results shall be taken into account for the final examination grade. Attendance to lectures and seminars is obligatory. The examination is in a written form, but students defend their work orally, if necessary.

SB10242 Operating Systems

ECTS credits: 3
Weekly workload: 2lec+0sem+0lab+1ps+ca
Assessment: continuous assessment
Type of exam: written
Department involved:
Department of Philologically and Natural Sciences, Silistra Branch
Lecturers:
Assoc.Prof. Valentina Nikolaeva Voinohovska, Dept. of IIT
tel. 888 645, E-mail: voinohovska@ami.uni-ruse.bg
Abstract:
The course objective is to give students knowledge and skills about the main principles of design and functioning of the operating systems. At the lectures the theoretical material is illustrated with examples from different modern OS. The workshops are based on the two most widespread OS: Windows and UNIX. Their organization and way of operation are addressed and compared.
Course content:

Introduction to OS. OS classification. Structure of OS. Processes and threads. Interaction between processes. Parallel processes. Synchronisation. Solutions to classical problems. Mutual blocking. CPU management. Planning algorithms. Memory management. Virtual memory management and protection. Device management. Organization of I/O devices. File system management. Functions and structure of the file system. Multimedia OS. Distributed systems. Protection and security in OS.

Teaching and assessment:

The lectures are 2 hours per week and the theoretic material is delivered at the lectures. The workshops take place in computer-equipped labs under the lecturer's supervision on topics as listed. At the workshops the students can strengthen the knowledge given at the lectures by discussing the features of particular OS and running examples. The students' knowledge is continuously assessed at the workshops with tests. The course ends with a continuous assessment.

SB10243 Training in Electrical Engineering

ECTS credits: 3 **Weekly classes:** 0lec +0sem+0labs+2ps+1ca
Assessment: continuous assessment **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc. Prof. Vladimir Mateev, PhD, Department of Physics
vmateev@uni-ruse.bg
Assoc. Prof. Temenuzka Bogdanova, PhD
E-mail: tbuhcheva@uni-ruse.bg

Abstract: The training objective is to familiarise the students with the basis of Electrical Engiheering, Electrical measurments, main types of electrical machines. The workshops give students knowledge about the main elements of an electric circuit, main laws of electromechanics and their application for analysis of electric circuits, three-phase circuits, electrical machines and transformers.

Course content:

Electrical safety – main concepts. Electrical materials.Main parts and featufes of electrical circuits. Direct current electrical cicuits. Laws of Ohm and Kirhov, Jole-Lenz. Direct and alternating current. Measuring current and voltage, power and energy, resistance. Direct current- and alternating current machines. Electrical power supply.Transformers. Electrical power plants and electrical power stations. Electrical networks.

SB10244 Training in Optoelectronics

ECTS credits: 3 **Weekly classes:** 0l+0sem+0lab+2ps+1ca
Assessment: continuous assessment **Type of the exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturer:
Assoc. Prof. Vladimir Mateev, PhD, Department of Physics, vmateev@uni-ruse.bg
Assoc. Prof. Temenuzka Bogdanova, PhD, E-mail: tbuhcheva@uni-ruse.bg

Abstract:

Optoelectronics deals with transforming luminous energy into electromagnetic one and the latter into light. It studies the problems of generating, transmitting, transforming, saving and storing of information. Thus basic notions from the theory and practice of Optoelectronics are presented to the students.

Course content:

Physical basis of Optoelectronics. Photoelectric multipliers. Laser diode emitters. Photo resisters. Photodiodes. Phototransistors. Optocouplers. Solar semi-conducted elements (photovoltage)

Teaching and assessment:
Continuous assessment is exercised throughout the entire research work. Students elaborate certain aspects from a topic. The mark from the continuous assessment is complex, comprising students` active participation in elaborating the topic and their portfolios from the training.

SB10230 Distance and E_Learning Education

ECTS credits: 2 **Casses**: 1lec+0sem+0labs+1ps
Assessment: continuous assessment **Type of exam:** written
Department involved:
Department of Philologically and Natural Sciences, Silistra Branch
Lecturers:
Prof. Tzvetomir Vassilev PhD, Deptartment of IIT, tel. 888 475, Email: tvassilev@ami.uni-ruse.bg
Pr. Assist. Prof. Evgenia Goranova, MEng, PhD, Dept. of Philologically and Natural Sciences, Silistra Branch,tel.: 821521, E-mail: e_deneva@abv.bg
Abstract:
The course objective is for students to obtain a comprehensive understanding of distance and electron learning.
Course content:
Distance Learning – Definitions. Distance learning with Internet - Methods and Models. Learning goals, Interaction, Specific academic activities.Technologies. Computer-based Learning. Computer-Aided Learning. Web-Based Learning. Teleconference. Recording. Video-Distance Learning. Advantages and Disadvantages of Technologies Variety.Assessment. Kinds of Assessment. Modern Methods for Learners Assessment. Computer-Aided Test. Performance. Alternative Assessment Means. Assessment at Teleconference. Efficiency. Efficiency of Distance Learning. Motivation. Models and tools of e-learning
Teaching and assessment:
The study programme is presented through lectures and workshops. Students work in teams for accomplishing specific task. At the end of the term students present the completed assignment. The course ends up with continuous assessment. The final grade is based on students' achievements during the workshop.

SB15239 Speech Culture

ECTS credits: 1 **Weekly classes:** 0lec+1sem+0labs+0ps+0cw
Assessment: defence **Type of exam:** written
Department involved:
Department of Philological Studies
Silistra Branch
Assoc. Prof. Todorka Yordanova Georgieva, MA, DSc, Dept. of Philological and Natural Studies,
tel.: 086 / 821 521, E-mail: tgeorgieva@fs.uni-ruse.bg
Abstract:
The subject is the last to come in the series of subjects from the Contemporary Bulgarian language module – Phonetics. Lexicology, Morphology, Syntax, Stylistics, Historical linguistics. These subjects, presented in this sequence, ensure a solid theoretical background for building practical skills in the use and production of oral and written speech.
Course content:
Meaning of language and language proficiency. Principles of spelling of the Bulgarian written "word"

– phonetic, morphological, historical, syntactic. Pronunciation and spelling of the non-stressed syllables in the Bulgarian language. Spelling of words ending with a voiced consonants. Spelling of compound words. Use of capital letters.

Teaching and assessment:

The final exam is written and consists of a test in Bulgarian grammar (rules and their interpretation) and a topical task (composition of a text).

SB10245 Methodology of Teaching Informatics and Information Technologies

ECTS credits: 8 **Weekly classes:** 3lec+0sem+0labs+2ps+2cw

Assessment: exam **Type of exam:** written

Department involved:

Department of Philologically and Natural Sciences
Silistra Branch

Lecturers:

Assoc. Prof. Valentina Voinohovska, PhD – Dept. of IIT, tel. 888 490, Email: vvoinohovska@uni-ruse.bg
Pr. Assist. Prof. Evgenia Goranova, PhD, Dept. of Philologically and Natural Sciences, Silistra Branch, tel.: 821521, E-mail: e_deneva@abv.bg

Abstract:

Deals with the specific principles and methods related to private didactics of informatics and information technology on teaching modules in both subjects in school. In practical exercises addressing the kind of lessons used in training. Develop a plan and syllabus

Course content:

Compulsory documentation Informatics and Information Technology. Key competences. Teaching principles and methods in teaching computer science and information technology. Interactivity. Basic principles of distance and e-learning. Macrostructure and microstructure of the types of lessons.

Teaching and assessment:

Lectures explaining the theoretical foundations of the material that introduces the obligatory school documentation necessary to organize training in informatics and information technology in the school, didactic principles, methods and organization of type classes. Practical classes are two hours and are independent work under the guidance of a teacher to develop a syllabus of lessons on the syllabus of the two objects. Coursework students consists of developing two synopsis - informatics and information technologies.

SB10246 Methodology of Teaching Physics and Astronomy

ECTS credits: 8 **Weekly classes:** 3lec+0sem+0lab+2ps+2cw

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Lecturers:

Assoc.Prof. B. Todorova, PhD, Department of Public Health and Social work, e-mail: btodorova@uni-ruse.bg
Assoc.Prof. T. Bogdanova, PhD, e-mail: tbuhcheva@uni-ruse.bg

Abstract:

The course is divided in two parts – general and specific methodology. The general methodology considers the object of study of Methodology of teaching Physics and Astronomy and "Man and nature", and the specific one revealed the aims, contents, and technology of instruction. Specific methodological systems are presented too – problem-solving, interdisciplinary approach. Relevant examples are given from the syllabus for secondary school.

Course content:
Methods of didactic investigations. Study programs – contents, structure. Didactic principles of teaching. Methods of teaching Physics. Lesson models and structures. Testing and assessment. Contemporary formats of teaching Physics and Astronomy and "Man and nature"
Teaching and assessment:
Printed versions of the lectures are distributed among the students prior the lectures. Students update them during the lectures with relevant examples from Physics and Informatics. The course work is an individual methodological interpretation on a given methodological issue or unit. The subject is a natural extension of the previously taught in the curriculum subject Methodology and Techniques of the school experiment in Physics. The exam is written and oral. It comprises of topics from Methodology of teaching Physics and Methodology of teaching Informatics. The final assessment is complex – from the course work and the exam.

SB14774 Observation of Lessons in Informatics and Information Technologies

ECTS credits: 1 **Weekly classes:** 0lec+0sem+0lab+1ps
Assessment: validation **Type of exam:** practical
Department involved:
Department of Philologically and Natural Sciences,Silistra Branch
Lecturers:
Pr.Assist.Prof. Evgenia Deneva Goranova, MEng.; PhD, Department of Philologically and Natural Sciences, Silistra Branch, tel. 086/821521 , E-mail e_deneva@abv.bg
Abstract:
The observation is stage of practical teaching activities of students. It allows for an empirical summary of the theoretical basis derived from training in pedagogical and methodological subjects and prepares students for the transition from object of study - a subject in the conduct of current practice and pregraduation thecher traning practice.
Course content:
Different types of lessons are observed in real school realia. Lessons in the corresponding subjects are observed in lower secondary and upper secondary schools, tutored by different mentors. This makes possible for the students to analyze critically the macrostructure and the technology of the different types of lessons. Students organize their observations in a portfolio. The activities and the aims of the lessons and the teaching process as a whole are discussed with the mentor , the teacher-trainer and the students immediately after each observation.
Teaching and assessment:
The observation consists in observing lessons given by different mentors - in different classes in a real classroom. Lessons are prepared by the base teacher defined and agreed upon between him and methodologist topics. Each observation takes place within three academic hours - one hour for preparation of lessons, one for implementation and a discussion of the first two.

SB14775 Observation of Lessons in Physics and Astronomy

ECTS credits: 1 **Weekly classes:** 0lec+0sem+0lab+1ps
Assessment: Colloquium **Type of exam:** practical
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc.Prof. B. Todorova, PhD, Department of Public Health and Social work,e-mail: btodorova@uni-ruse.bg
Assoc.Prof. T. Bogdanova, PhD, e-mail: tbuhcheva@uni-ruse.bg

Abstract:
Course Observation in physics and astronomy is conducted in a real working environment - school. Its aim transform accumulated during the five semesters of theoretical knowledge in physics and astronomy at the professional competencies for teaching the subjects Physics and Astronomy and the Man and Nature in the Bulgarian School (V - XII class).
Course content:
Different types of lessons are observed in real school realia. Lessons in the corresponding subjects are observed in lower secondary and upper secondary schools, tutored by different mentors. This makes possible for the students to analyze critically the macrostructure and the technology of the different types of lessons. Students organize their observations in a portfolio. The activities and the aims of the lessons and the teaching process as a whole are discussed with the mentor , the teacher-trainer and the students immediately after each observation
Teaching and assessment:
Observation consists of observing lessons given by various mentors - in different classes in a real classroom. Lessons are prepared by the base teacher defined and agreed between him and the Methodist topics Man and Nature and Physics and Astronomy.
Monitoring conduct methodologist preparing forms, the student is required to complete during this observed lesson and used in a conferencing session.

SB14776 Atomic and Nuclear Physics

ECTS credits: 3 **Weekly classes:** 2lec +1sem +0labs +0ps
Assessment: exam **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc. Prof. Petko Hristov Mashkov, PhD, Dept. of Mechanics, Machine Elements, Engineering Graphics and Physics, tel: 082/888 218, E-mail: pmashkov@uni-ruse.bg
Assoc. Prof. Galina Zaharieva Krumova, PhD, Dept. of Mechanics, Machine Elements, Engineering Graphics and Physics, tel: 082/888 215, E-mail: gal@uni-ruse.bg
Abstract:
Atomic and Nuclear Physics are of an undeniable importance for a modern man. This course is useful in view of the specific pedagogy degree in Physics and Informatics. The aim is to introduce the structure and properties of the atom and its nucleus and the opportunities they provide in various fields. The course level is consistent with Physics and Mathematics knowledge from the secondary school and the expected Higher Mathematics and General Physics basic knowledge.
Course content:
The course consists of two parts - Atomic Physics and Nuclear Physics. The first traces the development of Atomic Physics, classical and contemporary models of the atom, some experimentally observed effects, the formation of mechanical and magnetic momenta of electrons and atoms, the occupation of the electron shells, the X-rays and spectra. The second part focuses on the structure and properties of atomic nuclei, characteristics of nuclear forces, modern nuclear models, types of radioactivity, nuclear reactions and corresponding technical problems.
Teaching and assessment:
The lectures rely on adequate knowledge of General Physics and Higher Mathematics. The seminars aim to illustrate the lecture material with appropriate tasks. They include independent work. A current assessment is formed and taken into account for the final examination grade. The exam is held in the form of writing a single question and solving a single problem in Atomic Physics, in combination with an **online** testing in Nuclear Physics.

SB14777 Methodology and Techniques of School Experiment in Physics Part II

ECTS credits: 4 **Weekly classes:** 0lec+0sem+3labs+0ps+2ca
Assessment: exam **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc. Prof. Vladimir Mateev, PhD, Department of Physics, vmateev@uni-ruse.bg
Assoc. Prof. Temenuzka Bogdanova, PhD, E-mail: tbuhcheva@uni-ruse.bg
Abstract:
According to Curriculum the discipline is studied in the sixth term. Laboratory sessions include physical experiments and laboratory work from 9-12 school grades. The exercises are aimed to acquaint students with the methodology and techniques for preparation and conduction of the school's physical experiment . The curriculum allows the students to be acquainted with the system of preparing and carrying out the front laboratory work and demonstration experiments in the high school.
Course content:
Determination of the specific resistance of metal wire. Determination of electromotive and the internal resistance of the chemical source of electromotive resistance.Experimental verification of Joule- Lenz law.
Determination of the electrochemical equivalent of copper. Work of a transformer. Determining inductance of a coil. Determining the terrestrial acceleration with a pendulum. Determining speed of sound in air. Studying the properties of electromagnetic waves. Determining inert moment of a solid. Determination of the length of the light wave with diffraction grating. Observation and study of spectra. Frontal and demonstration experiments from the educational content of 9- 10 grades.
Teaching and assessment:
Laboratory exercises are conducted as a training. Students do a test, consisting of qualitative and experimental questions and tasks. The final mark is formef as a complex of : test mark, course work assessment, assessment of the carried out and defended physical experiments and mark of the Part I of the discipline.

SB 10255 Component Oriented Programming

ECTS credits: 5 **Weekly classes:** 2lec+0sem+0labs+2ps+ca
Assessment: continuouse assessment **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences
Silistra Branch
Lecturers:
Prof. Tzvetomir Vassilev PhD, Deptartment of Informatics and information, tel. 888 475, Email: tvassilev@ami.uni-ruse.bg
Pr. Assist. Prof. Valentin Petrov Velikov, Ph.D. Informatics and information technology tel .: 082/888 326, E-mail: val@ami.uni-ruse.bg
Abstract:
The course is an introduction to programming with Java instruments and aims at building in students skills in making algorithms and programs of medium complexity.
Course content:
Introduction. Types of Data. Controlling structures. Introduction to classes, objects, methods. Arrays and strings. Inheriting and predefining. Packages and interface.

Teaching and assessment:
There are 30 lectures. The practical exercises are held in rooms equipped with computers and students practise the topics taught in the lectures. At the end of each section of the study material students' skills in working with the software are checked and marked.

SB10236 Training in Approaches for Testing

ECTS credits:2 **Weekly classes:** 1lec+ 0sem+0labs+1ps
Assessment: continuous assessment **Type of exam:** written
Department involved:
Department of Philologically and Natural Sciences, Silistra Branch
Lecturers:
Prof. Tzvetomir Vassilev PhD, Deptartment of IIT, tel. 888 475, Email: tvassilev@ami.uni-ruse.bg
Pr. Assist. Prof. Evgenia Goranova, MEng, PhD, Dept. of Philologically and Natural Sciences, Silistra Branch,tel.: 821521, E-mail: e_deneva@abv.bg
Abstract:
The course aims at acquainting the students with different approaches applied in didactics.The course objective is to give students knowledge and skills about different forms of testing and to define qualitative and quantitative indices. They are expected also to make up a scale and according to it to mark a paper.
Course content:
The science of different approaches for testing and marking a paper as an individual trend in didactics.Normative methods. Methods by criterion. The test as a device for marking. Different kinds of tests. Taxonomy of the school goals. Main stages in formation the tasks. Test analysis and different components- reliability, validity and standart for marking.
Teaching and assessment:
Students are encouraged to apply some main approaches in didactics and thus to be acquainted with the concrete modules in Informatics and Information technologies. They make test analysis and define qualitative and quantitative indices working individually. The final mark is formed as an average of the mark from the continuous assessment and from didactic test.

SB14778 Astronomy

ECTScredits: 8 **Weeklyclasses:** 3l +0s+0lab+2ws+ 1ca
Assessment: exam **Typeofexam**: oral/written
Departmentinvolved:
Department of Philologically and Natural Sciences, Silistra Branch, University of Rousse "Angel Kanchev"
Lecturer:
Assoc. Prof.Boryana Todorova, dept. of Public Health and Social Work, tel. +359 82821993,
E_mail: btodorova@uni-ruse.bg
Prof. TodorkaZhekovaStefanova PhD, tel. 086/821521, e_mail:dora@uni-ruse.bg
Abstract:
The science of Astronomy is of paramount importance in the field of natural sciences. Astronomy explains the main Physical laws and explores their implementation on a mega world scale. On the other side it rests on profound philosophical basis. All these features of the subject promote qualitative professional training and give didactic background to the future teachers of Physics and Astronomy.
Course content:
Classic Astronomy. Astrometry. Celestial Mechanics. Astrophysics. Celestial physics. Cosmology.

Teaching and assessment:
Lectures are theoretical basis of different sections of astronomy. Practical classes worked some important methods in astrophysics, as they adapt to the conditions of the learning process. And provide basic astronomical observations and work with the star map. The control procedure is exam.

SB14779 Informational and Communicational Technologies in Teaching and Working in Digital Environment II

ECTS credits: 3 **Weekly classes:** 1lec+0sem+0abs+1ps+ 1ca
Assessment: continuous assessment **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc. Prof. Valentina Voinohovska, PhD – Dept. of IIT, tel. 888 490, Email: vvoinohovska@uni-ruse.bg
Pr.Assist.Prof. Evgenia Deneva Goranova, MEng.;Dept. of Philological and Natural Sciences, Silistra Branch, Silistra Branch, tel. 086/821521, E-mail e_deneva@abv.bg
Abstract:
The course is taught by students - future teachers of informatics, information technologies, physics and astronomy, and is required for the acquisition of professional qualification "teacher". It aims to provide students with in-depth knowledge of modern educational information and communication technologies and their integration into the learning process, as well as skills in working with Adobe Captivate, Powtoon, Kahoot, Google Drive, QR codes.
Course content:
Educational technologies. Basic concepts and definitions. Place media and training tools in the educational process Models of training. Planning an active and interactive learning process using media in training Visual aids for advanced training. Cloud technologies. Methodological guidelines for integrating information and communication technologies in the educational process Methodological guidelines for using multimedia projectors. Interactive whiteboard. Basic principles for using an interactive whiteboard Introduction to the Adobe Captivate software interface, Powtoon cloud services, Google Drive, Kahoot and QR codes.
Teaching and assessment:
The learning process is based on lectures and practical exercises. During the course, students develop independently assigned assignments by a lecturer. The course ends with an ongoing assessment. The final evaluation is formed on the basis of the results of four practical tasks and the protection of the individual assignment.

SB14780 Teacher-Training Practice in Informatics and Information Technologies

ECTS credits: 2 **Weekly classes:** 0lec +0sem+0labs+2ps
Assessment: validation **Type of exam:** practical
Department involved:
Department of Philologically and Natural Sciences
Silistra Branch
Lecturers:
Pr.Assist.Prof. Evgenia Deneva Goranova, MEng PhD, Department of Philologically and Natural Sciences,, Silistra Branch tel .086/821521 , E-mail: e_deneva@abv.bg, GSM 0887411590
Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the lesson and to present a methodological comment on it later. School practice is simultaneous with the instruction at the University.
Course content:

Elaboration, presentation, attendance, discussion, making methodological comments of lessons by the students at school under the supervision of mentors and teacher-trainers.

Teaching and assessment:

It is organized throughout the entire 7th semester; during one day from the week program. The first two weeks are devoted to organisational activities in relation to the preparation of the students for their practice – acquaintance with the textbook contents, structure of the textbook for each subject; other resources and additional literature, major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by the whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-trainer attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are stored in the methodological studies. All the students participate in the commentaries and analyses of the lessons. School practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the school practice in the students` books.

SB14781 Teacher-Training Practice in Physics and Astronomy

ECTS credits: 2 **Weekly classes:** 0l +0sem+0lab+2ps
Assessment: Colloquium **Type of exam:** practical
Department involved:
Department Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc.Prof. B. Todorova, PhD, Department of Public Health and Social work,
e-mail: btodorova@uni-ruse.bg
Assoc.Prof. T. Bogdanova, PhD, e-mail: tbuhcheva@uni-ruse.bg
Abstract:
Every student elaborates and presents one lesson at school. All his/her colleagues are obliged to attend the l and to present a methodological comment on it later. School practice is simultaneous with the instruction at University.
Course content:
Elaboration, presentation, attendance, discussion, making methodological comments of lessons by the stud school under the supervision of mentors and teacher-trainers.
Teaching and assessment:
It is organized throughout the entire 7th semester; during one day from the week program. The first two we devoted to organizational activities in relation to the preparation of the students for their practice – acquain with the textbook contents, structure of the textbook for each subject; other resources and additional literatu major requirements for the lesson plans, elaboration lessons models. The lessons are elaborated jointly by th whole group of students. Each student presents at least one lesson at school. The mentor and the teacher-tra attest the lesson plans. The entire documentation – lesson plans, didactic materials, additional sources – are in the methodological studies. All the students participate in the commentaries and analyses of the lessons. practice ends up with a final analysis session in the presence of the mentor. The teacher-trainer registers the practice in the students` books.

SB14782 Theoretical Physics

ECTS credits: 6 **Weekly classes:** 3lec +1sem +0labs +0ps
Assessment: exam **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences
Silistra Branch

Lecturers:
Assoc. Prof. Vladimir Mateev Mateev, PhD, Dept. of Mechanics, Machine Elements, Engineering Graphics and Physics, tel: 082/888 583, E-mail: vmateev@uni-ruse.bg
Assoc. Prof. Galina Zaharieva Krumova, PhD, Dept. of Mechanics, Machine Elements, Engineering Graphics and Physics, tel: 082/888 215, E-mail: gal@uni-ruse.bg
Abstract:
The development of Theoretical Physics has contributed to many discoveries and their practical application. This course of Theoretical Physics is useful because it gives an overall idea of the power of theoretical approaches to the description of physical phenomena. The course level is consistent with Physics and Mathematics knowledge of the secondary school and the expected minimum basic knowledge of Higher Mathematics, as well as the knowledge of the four courses in General Physics, Mathematical methods of Physics and Atomic and Nuclear Physics.
Course content:
The course consists of four parts - Theoretical Mechanics, Thermodynamics and Statistical Physics, Electrodynamics and Quantum Mechanics. Within the limited lecture classes key topics of the four areas are considered, such as the approaches of Lagrange and Hamilton, thermodynamic potentials, statistical ensembles and distributions, equations of electrostatic, stationary and alternating electromagnetic field in vacuum, linear harmonic oscillator, particle in a potential well and passing through a potential barrier.
Teaching and assessment:
The lectures rely on adequate knowledge of Mathematics. The limited seminars illustrate the lectures with appropriately chosen available tasks. Two tests are administered during the semester. The exam is held in the form of a written question from Electrodynamics or Quantum Mechanics combined with **online** testing in Theoretical Mechanics and Thermodynamics and Statistical Physics.

SB14783 Inclusive Education

ECTS credits: 1 **Weekly workload:** 1 lec+0sem+0labs+0p
Assessment: defence **Type of exam:** written
Department Involved:
Department of Pedagogy, psychology and history
Faculty of Natural sciences and education
Lectur:
Assoc. Prof. Yuliya Doncheva, PhD, Department of Pedagogic, Psychology and History;
tel: +359 82 888 219; e-mail: jdoncheva@uni-ruse.bg
Abstract:
The aim of the discipline is to understand and understand the philosophy, the whole process, the steps, the participants, their roles, the effectiveness and the good examples of interaction.
Course content:
Inclusive education is access to school, quality learning and guaranteed participation of absolutely all children. In order for this to happen, it is necessary for the general education institutions to be able to accept and meet the needs of not only the child with special needs but also every difference and not difference. Because inclusion does not only concern the education of children with disabilities, but quality education for all children.
Teaching and assessment:
The lecture course includes modules divided by hours. Students receive theoretical knowledge of the topics as well as practical experience by observing and commenting on good practices. The expected results are in the continuum of reach between all stakeholders in the process of inclusion. Inclusion and development of innovative practices in inclusive education, building and strengthening the capacity of learning communities to create an inclusive environment. The vision of how to organize training and

mentoring on topics related to inclusive education, global education, child protection and child participation, policymaking and strategic documents in the field of education, information campaigns and inclusive education studies.

SB14784 Visual Programming Environment (Delphi)

ECTS credits: 5 **Weekly classes:** 1lec+0sem+2labs+0ps+1ca
Assessment: exam **Type of exam:** written
Department involved:
Department of Philologically and Natural Sciences, Silistra Branch
Lecturers:
Prof. Tzvetomir Vassilev PhD, Deptartment of IIT, tel. 888 475, Email: tvassilev@ami.uni-ruse.bg
Pr. Assist.Prof. Magdalena Hristova Andreeva, MEng.; PhD, Faculty of Natural Sciences and Education, Dept. of Informatics and Informational technologies, tel: 082/ 888 470, E-mail magie@ami.uni-ruse.bg
Pr. Assist. Prof. Evgenia Goranova, MEng, PhD, Dept. of Philologically and Natural Sciences, Silistra Branch, tel.: 821521, E-mail: e_deneva@abv.bg
Abstract:
The course focuses on the main principles of the object-oriented programming and the event-oriented programming for Windows platform. The accent is laid on designing intuitional graphical interface, using the standard visual components in Windows – buttons, menus, tool bars, text fields, etc. Students study fundamental principles for developing simple applications, MDI applications and DB applications.
Course content:
Object-oriented programming and the event-oriented programming without instrumental device. Programming for Windows in Visual programming environment. Delphi and Object Pascal. Number types. Dynamic arrays. Character strings and variants. Pre-definition of functions in Delphi and default parameters. Object-oriented programming in Delhi. Program techniques with VCL. Methods of classes, indicators to methods, and pseudonyms of classes. Characteristics and events. The class T-object. Hierarchy of classes in VCL. Review of characteristics, methods and events in VCL. Usage of components – standard, extensional, Win32, system, etc.
Teaching and assessment:
The course includes lecturers, workshops and cource paper. The lectere topics give the main theoretical aspects of the considered problems. During the workshops students discuss study topics and implement application programmes in Delphi environment. At the end of the term students have to defend cource paper - an application programme in Delphi environment. The final mark is formed on the basis of result of the exam, the cource paper and the student's participation in the workshops.

SB14785 Visual Programming Environment (VC++)

ECTS credits: 5 **Weekly workload**: 1l+0sem+2labs+0ps+1ca
Assessment: exam **Type of exam**: written
Department involved: Department of Philologically and Natural Sciences
Silistra Branch
Lecturers:
Prof. Tsvetomir Ivanov Vassilev PhD, Dept. of Informatics and Information Technologies
Tel. 888 475, E-mail: tvassilev@ami.uni-ruse.bg
Abstract:
The course objective is students to gain knowledge and skills on fundamental principles for operating with component-based resources in visual programming environment. The focus is placed on .NET

Framework using the current version of C++ or C#. Starting the course students get general information about the technological aspects of .NET Framework. The access is laid on .NET Framework tools and on the practice-oriented approaches for program implementation. Prerequisites for attending the course are the knowledge and skills acquired from learning Mathematics, Object-oriented Programming, Resource-based programming and the English language command. The knowledge and skills gained from studying VC are further important for the State exam or Diploma thesis as well as the future career of the graduates.

Course content:

Component-orientated program development based on Microsoft technology. Basics of the .NET Framework and NET Framework 2 platform. Architecture of the neuro-web. One, two and multi-tier models. Criteria for choosing the right model. Two-tier architecture example. Architecture of the .NET Framework platform - operating system. Resources, processes ant services. Standard library-Framework Class Library of .NET Framework. FCL packets.

Teaching and assessment:

The course material is presented during lectures. The exercises are conducted in computer laboratories under the guidance of a teacher. The course ends with an exam. The final assessment is made based on estimates of current control (TC), course work (IC) and the result of the exam (e) by the formula O = 0.2 * TC+ 0.3 *e+ 0.5 * CA.

SB14786 Publishing systems

ECTS credits: 5 **Weekly classes:** 1lec+0sem+2lab+0ps+1ca

Assessment: exam **Type of exam:** written

Department involved:

Department of Philologically and Natural Sciences, Silistra Branch

Lecturers:

Assoc. Prof. Valentina Voinohovska, PhD – Dept. of IIT, tel. 888 490, Email: vvoinohovska@uni-ruse.bg

Pr. Assist. Prof. Evgenia Goranova, PhD, Dept. of Philologically and Natural Sciences, Silistra Branch, tel.: 821521, E-mail: e_deneva@abv.bg

Abstract:

Subject Publishing systems builds on students' knowledge and skills received at study Computer technologies, in particular Word processor MSWord. The subject acquaints the students with the sophisticated design and structure of the documents, used in publishing systems. Students acquire main skills to create and modify brochures, megazines, manuals and books by means of application programme QuarkXPress for Windows. Input links: Computer technologies and Multimedia systems and Web design, Computer graphics and Image processing

Course content:

QuarkXPress Programming Environment. Main concepts. Technical instruments of publishing systems. Structure of publishing systems. Preparing text materials. Main functions of text editors. Preparation of table information and formulas. Preparation of graphic materials for reproduction. Main functions of text formatters. Images and graphic tablets. Colour creating and editing. Printing documents, books, lists, indexing.

Teaching and assessment:

The lechers accent on the programming environment QuarkXPress. At the workshops students participate in detail preview of QuarkXPress environment and then they are taught how to develop program. The course paper is a brochures. The course ends with exam.

SB101260 History and Methodology of Natural Sciences

ECTScredits: 3 **Weeklyclasses:** 2l +0s+0lab+0ws
Assessment: continuous assessment **Type of exam**: written
Department involved:
Department of Philologically and Natural Sciences, Silistra Branch, University of Rousse "Angel Kanchev"
Lecturer:
Assoc. Prof.Boryana Todorova, dept. of Public Health and Social Work,, tel.+359 82821993,
E_mail: btodorova@uni-ruse.bg
Prof. TodorkaZhekovaStefanova PhD, tel. 086/821521, e_mail:dora@uni-ruse.bg
Abstract:
The course aims to provide a system of knowledge of the history and methodology of science.
Course content:
The content is structured in four-hour thematic modules, each module deploys certain problem. Modulite are focused on the historical development of the main categories in the natural history and the history of the development of natural science theories. Emphasis in the curriculum are the principles of knowledge, general science theories - theoretical and empirical methods of knowledge. The methodology is correlated to the specifics of the particular subject area prepone
Teaching and assessment:
Training is conducted through lectures and developed and protected coursework related to the theme of the lectures. For coursework are given instructions and contemporary literature. The control procedure is continuous assessment which is formed as the presence of lectures and the quality of the developed coursework.

SB101261 Philosophy of the Sciences Picture of the World

ECTScredits: 3 **Weeklyclasses:** 2l +0s+0lab+0ws
Assessment: continuous assessment **Typeofexam**: written
Departmentinvolved:
Department of Philologically and Natural Sciences, Silistra Branch, University of Rousse "Angel Kanchev"
Lecturer:
Assoc. Prof. Boryana Todorova, dept. of Public Health and Social Work, , tel. +359 82821993,
E_mail: btodorova@uni-ruse.bg
Prof. TodorkaZhekovaStefanova PhD, tel. 086/821521, e_mail:dora@uni-ruse.bg
Abstract:
The course aims to provide a system of knowledge about the stages of development of natural scientific picture of the world and its place in the scientific picture of the world
Course content:
The content is structured in four-hour thematic modules, each module deploys a particular problem. The modules are targeted at basic categories - space, time, matter that determine methodological framework of Sciences picture of the world. Is viewed evolutionists of Sciences picture of the world in different periods of development, both natural science and philosophical views.
Teaching and assessment:
Training is conducted through lectures and developed and protected coursework related to the theme of lectures. For coursework are given instructions and contemporary literature. The test is ongoing assessment, which is formed as the presence of lectures and the quality of the developed coursework.

SB10264 Pre-graduation Pedagogical Practice in Informatics and Information Technologies

ECTS credits: 5 **Weekly classes:** total 50 ps

Assessment: colloquium **Type of exam:** practical

Department involved:

Department of Philologically and Natural Sciences
Silistra Branch

Lecturers:

Pr.Assist.Prof. Evgenia Deneva Goranova, MEng PhD, Department of Philologically and Natural Sciences,, Silistra Branch tel .086/821521 , E-mail: e_deneva@abv.bg, GSM 0887411590

Abstract:

Pregraduation teacher-training practice is teaching practice at school after the academic instruction at the University. Students are in charge of the teaching of the corresponding subjects in one class for a certain period of time. Students are obliged to attend the lessons of their colleagues and the lessons of his/her mentor too.

Teaching and assessment:

It is organized throughout the 8th semester for the period of ten weeks. The teacher-trainer works out a schedule for the schools, classes, mentors and a timetable for the practice exam with fixed topics of the exam lessons. He defines tutorial hours. He is in charge of the elaboration of precise and adequate criteria for analysis and assessment of the practice. The pre-graduation teacher-training practice ends with a colloquium including presentation of lesson, and analysis, assessment and critical reflection on the part of both the mentor and the teacher-trainer.

SB10263 Pregraduation Pedagogical Practice in Physics and Astronomy

ECTS credits: 5 **Weekly classes:** total 50

Assessment: colloquium **Type of exam:** practical

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Lecturers:

Assoc.Prof. B. Todorova, PhD, Department of Public Health and Social work,e-mail: btodorova@uni-ruse.bg
Assoc.Prof. T. Bogdanova, PhD, e-mail: tbuhcheva@uni-ruse.bg

Abstract:

Pregraduation teacher-training practice is teaching practice at school after the academic instruction at the Univer
Students are in charge of the teaching of the corresponding subjects in one class for a certain period of time. Stud
are obliged to attend the lessons of their colleagues and the lessons of his/her mentor too.

Teaching and assessment:

It is organized throughout the 8th semester for the period of six weeks. The teacher-trainer works out a schedule f
schools, classes, mentors and a timetable for the practice exam with fixed topics of the exam lessons. He defines t
hours. He is in charge of the elaboration of precise and adequate criteria for analysis and assessment of the practi
pre-graduation teacher-training practice ends with a practical exam including presentation of lesson, and analysi
assessment and critical reflection on the part of both the mentor and the teacher-trainer.

SB14787 Problems of Deviant Behavior and Psychotherapeutic Methods

ECTS credits: 3 **Weekly classes:** 2lec+1sem+0labs+0ps

Assessment: Colloquium **Type of exam**: Oral

Departments involved:

Department of Pedagogy, Psychology and History
Faculty of Natural Sciences and Education

Lecturers:

Assos. Prof. Valentina Nikolova Vasileva, Msc. PhD Department of Pedagogy Psychology and History, tel.: + 359 82/ 888268: E-mail: vvasileva@uni-ruse.bg

Abstract:

The aim of the training in "problems of deviant behavior and psychotherapeutic methods" is to highlight the scientific status of the course in the theoretical knowledge and the practical field of realization. Basic knowledge of concepts such as deviant and deliquant behavior is given, the reasons for deviant behaviour are clarified-biological, psychological and social; for research methods with pedagogical focus.

Course content:

Through the training in the discipline "Problems of deviant behavior and psychotherapeutic methods" is formed value orientation to the profession of pedagogue, stimulating creative orientation, enriching the scientific-theoretical and practical-applied students ' knowledge and skills to work with the specific vulnerable groups with deviant and delinquent behavior. Students acquire theoretical and practical knowledge, skills and competencies for complex educational-preventive and corrective activities through the use of methods of diagnosis of behavior social manifestations in society and social groups. Emphasis is placed on mastering constructs and building skills to support clients in a risky situation.

Teaching and assessment:

The training in the discipline “Problems of deviant behavior and psychotherapeutic methods" is done through lectures and seminar exercises. The final evaluation is obtained after conducting a colloquium.

SB14788 Psychology of Communication

ECTS credits: 3
Weekly classes: 2lec+1sem+0labs+0ps
Assessment: Colloquium
Type of exam: Oral

Departments involved:

Department of Pedagogy, Psychology and History
Faculty of Natural Sciences and Education

Lecturers:

Assos. Prof. Valentina Nikolova Vasileva, Msc. PhD Department of Pedagogy Psychology and History, tel.: + 359 82/ 888268: E-mail: vvasileva@uni-ruse.bg

Abstract:

The purpose of the Psychology of communication training is to highlight the scientific status of the discipline in theoretical knowledge and the practical field of realization. The course is practically applied. At the same time, it is important for thinking about and explaining the provisions for the democratization and humanization of the pedagogical process at school. This process involves active and full pedagogical interaction and communication between teacher-student / child /, creating the necessary conditions for their realization as equal partners. This implies the need for every student - future teacher to learn the elements of communication psychology, to acquire knowledge and skills for purposeful and effective interaction and cooperation with adolescents.

Course content:

Through the training in the discipline "Psychology of Communication", a value orientation towards the profession of teacher is formed, the creative orientation is stimulated, the scientific-theoretical and practical-applied knowledge and skills of students for communication are enriched. Communication is a complex and multifaceted process of establishing and developing interaction between people, arising from their needs in working together. Communication involves not only the exchange of information, but also the development of a unified strategy for interaction, perception and understanding as equal partners in this process.

Teaching and assessment:

The course is taught through lectures and seminars, which are a continuation of the theoretical disciplines of the pedagogical and psychological cycle. The lectures are read in a stream. The specific

course has a specific applied and research focus. This approach is evident in both the lectures and the examination procedure in the form of an ongoing assessment. Various examples and facts from the work of educators are presented. Students are introduced to theoretical and empirical research conducted on this issue by well-known Bulgarian and foreign authors. Tests on the teacher's communication skills are introduced, initial knowledge is given to solve communication problems. The final grade is obtained after a colloquium.

SB14789 School Legislation

ECTS credits: 3 **Weekly classes:** total 30 = 20 lec+10 abs
Assessment: defence **Type of exam:** oral
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc. Prof. Galina Rouseva Lecheva, MA, PhD, Dept. of Philological & Natural Studies, Silistra Branch, e-mail glecheva@uni-ruse.bg;☎ +359 87 746 6707
Abstract:
The subject is presented to students from the specialty physics and informatics. The aim of the instruction is to get the students acquainted with the main principles of the education and their application in the statutory instruments and legislative acts- constitutional, special, physics and informatics.
The course aims to prepare students - future teachers for working with legislative acts, essential for managing in the institution (in the system of education) and necessary for their professional realization.
Course content:
The aim of the lecture course is to give the bases of the knowledge for common and specific laws, some regulations for their application and school decrees The instruction helps the students acquire basic legislative acts, essential for managing an institution (in the system of education).
Teaching and assessment:
The instruction is presented in lectures and seminars. Attendance to the lectures is compulsory. Active participation is encouraged. The instruction ends up with a defence. Students are encouraged to solve some problems related to legislative acts casuses at school. The final exam is oral**.**

SB14790 Pedagogical Ethics

ECTS credits: 3 **Weekly classes:** 2lec+1sem+0labs+0ps
Assessment: defence **Type of exam:** written
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc. Prof. Diana Petrova Zhelezova-Mindizova, MA, PhD, Dept. of Philological and Natural Studies, Silistra Branch, e-mail: dianazhelezova@abv.bg , ☎ 086/821521
Abstract:
The course is designed for students from the specialty Pedagogy of Physics and Informatics at the University of Ruse -Silistra Branch .The course aims to decipher the key aspects of ethical knowledge represented in theoretical and historical perspective. Upon completion of the course students will be able to vary the level of everyday moral consciousness of the theoretical level of ethical consciousness and will know the contents of the main ethical components of applied and professional ethics. They will also develop competence to resolve conflicts.
Course content:

Teaching ethics as a kind of professional ethics. Categories of teaching ethics. Nature and functions of teaching moral. Moral norm, moral choice and moral conflict. Moral character of a teacher. Moral activity of a teacher.

Teaching and assessment:

The training is organized in lectures. In view of the of teaching-oriented specialty, the lecture course is presented in interactive formats ("enhanced lecture", "questions to the author," "reciprocal teaching", etc.) to initiate active learning and critical thinking and the development of professional psycho-pedagogical competences for future teachers. The training is finalized with a defence.

SB10270 State Practice-applied Exam

ECTS credits: 2 **Weekly classes:** 0lec+0sem+0labs+0ps

Assessment: exam **Type of exam:** practical

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Lecturers:

Assoc.Prof. B. Todorova, PhD, Department of Public Health and Social work, e-mail: btodorova@uni-ruse.bg

Assoc.Prof. T. Bogdanova, PhD, e-mail: tbuhcheva@uni-ruse.bg

Pr.Assist.Prof. Evgenia Deneva Goranova, MEng PhD, Department of Philologically and Natural Sciences,, Silistra Branch tel .086/821521 , E-mail: e_deneva@abv.bg, GSM 0887411590

Abstract:

The purpose of the State Practice-applied Exam is in a real classroom setting for students to apply the theoretical knowledge they have acquired throughout their studies.

Course content:

In schools, trainee teachers teach lessons in Informatics, Information Technologies, Physics, Astronomy, and Human and Nature in classroom forms.

Teaching and assessment:

After conducting the lessons, the final assessment is made by the Chairman of the State Examination Committee in accordance with the assessments in both fields - Informatics and Physics, given by the observing specialists in Informatics, Information Technology, Physics, Astronomy and Nature.

SB10271 State Exam in Informatics and Information Technologies

ECTS credits: 4 **Weekly classes:** 0lec+0sem+0labs+0ps

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Abstract:

The state exam passes before the State Examination Committee on a pre-approved synopsis, which includes important issues in the Pedagogy of education in information and information technologies.

Course content:

The written state exam covers all major topics in Pedagogy of Teaching in Informatics and Information Technologies.

Teaching and assessment:

The graduating fourth-year students develop their questions before the State Examination Committee.

SB10272 State Exam in Physics

ECTS credits: 4 **Weekly classes:** 0lec+0sem+0labs+0ps

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Abstract:

The state exam passes before the State Examination Committee on a pre-approved synopsis, which includes important issues in the Pedagogy of Physics Education.

Course content:

The written state exam covers all major topics in Pedagogy of Physics Education.

Teaching and assessment:

The graduating fourth-year students develop their questions before the State Examination Committee.

SB10273 State Practice-applied Exam

ECTS credits: 2 **Weekly classes:** 0lec+0sem+0labs+0ps

Assessment: exam **Type of exam:** practical

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Lecturers:

Assoc.Prof. B. Todorova, PhD, Department of Public Health and Social work,e-mail: btodorova@uni-ruse.bg

Assoc.Prof. T. Bogdanova, PhD, e-mail: tbuhcheva@uni-ruse.bg

Pr.Assist.Prof. Evgenia Deneva Goranova, MEng PhD, Department of Philologically and Natural Sciences,, Silistra Branch tel .086/821521 , E-mail: e_deneva@abv.bg, GSM 0887411590

Abstract:

The purpose of the State Practice-applied Exam is in a real classroom setting for students to apply the theoretical knowledge they have acquired throughout their studies.

Course content:

In schools, trainee teachers teach lessons in Informatics, Information Technologies, Physics, Astronomy, and Human and Nature in classroom forms.

Teaching and assessment:

After conducting the lessons, the final assessment is made by the Chairman of the State Examination Committee in accordance with the assessments in both fields - Informatics and Physics, given by the observing specialists in Informatics, Information Technology, Physics, Astronomy and Nature.

SB10274 State Exam in Informatics and Information Technologies

ECTS credits: 4 **Weekly classes:** 0lec+0sem+0labs+0ps

Assessment: exam **Type of exam:** written

Department involved:

Department of Philological and Natural Sciences, Silistra Branch

Abstract:

The state exam passes before the State Examination Committee on a pre-approved synopsis, which includes important issues in the Pedagogy of education in information and information technologies.

Course content:

The written state exam covers all major topics in Pedagogy of Teaching in Informatics and Information Technologies.

Teaching and assessment:

The graduating fourth-year students develop their questions before the State Examination Committee.

SB10275 Bachelor Thesis in Physics

ECTS credits: 4 **Weekly classes:** 0lec+0sem+0labs+0ps
Assessment: defense **Type of exam:** written and oral
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Consultants:
All lecturers and physics experts involved in the training of students in the course.
Abstract:
The bachelor thesis is an independent creative task, which is developed under the supervision of a supervisor. The aim is to enable the graduate to show the acquired knowledge, skills, demonstrate independent work, initiative and professional competences, as well as to successfully present the development to the State Examination Committee.
Course content:
The bachelor thesis contains: explanatory note, which includes basic tasks, ideas, literary sources, existing solutions, explanations, conclusions and the project itself - the practical development.
Teaching and assessment:
Graduate supervisors monitor the work done by the students on a weekly basis. Students present, defend and demonstrate their bachelor thesis before the State Examination Committee

SB10276 State Practice-applied Exam

ECTS credits: 2 **Weekly classes:** 0lec+0sem+0labs+0ps
Assessment: exam **Type of exam:** practical
Department involved:
Department of Philological and Natural Sciences, Silistra Branch
Lecturers:
Assoc.Prof. B. Todorova, PhD, Department of Public Health and Social work,e-mail: btodorova@uni-ruse.bg
Assoc.Prof. T. Bogdanova, PhD, e-mail: tbuhcheva@uni-ruse.bg
Pr.Assist.Prof. Evgenia Deneva Goranova, MEng PhD, Department of Philologically and Natural Sciences,, Silistra Branch tel .086/821521 , E-mail: e_deneva@abv.bg, GSM 0887411590
Abstract:
The purpose of the State Practice-applied Exam is in a real classroom setting for students to apply the theoretical knowledge they have acquired throughout their studies.
Course content:
In schools, trainee teachers teach lessons in Informatics, Information Technologies, Physics, Astronomy, and Human and Nature in classroom forms.
Teaching and assessment:
After conducting the lessons, the final assessment is made by the Chairman of the State Examination Committee in accordance with the assessments in both fields - Informatics and Physics, given by the observing specialists in Informatics, Information Technology, Physics, Astronomy and Nature.

SB10270 Bachelor Thesis in Informatics and Information Technologies

ECTS credits: 4 **Weekly classes:** 0lec+0sem+0labs+0ps
Assessment: defense **Type of exam:** written and oral

Department involved:
Department of Philological and Natural Sciences, Silistra Branch

Consultants:
All IT lecturers and IT experts involved in the training of the students in the course.

Abstract:
The bachelor thesis is an independent creative task, which is developed under the supervision of a supervisor. The aim is to enable the graduate to show the acquired knowledge, skills, demonstrate independent work, initiative and professional competences, as well as to successfully present the development to the State Examination Committee.

Course content:
The bachelor thesis contains: explanatory note, which includes basic tasks, ideas, literary sources, existing solutions, explanations, conclusions and the project itself - the practical development.

Teaching and assessment:
Graduate supervisors monitor the work done by the students on a weekly basis. Students present, defend and demonstrate their bachelor thesis before the State Examination Committee

SB10277 State Exam in Physics

ECTS credits: 4 **Weekly classes:** 0lec+0sem+0labs+0ps
Assessment: exam **Type of exam:** written

Department involved:
Department of Philological and Natural Sciences, Silistra Branch

Abstract:
The state exam passes before the State Examination Committee on a pre-approved synopsis, which includes important issues in the Pedagogy of Physics Education.

Course content:
The written state exam covers all major topics in Pedagogy of Physics Education.

Teaching and assessment:
The graduating fourth-year students develop their questions before the State Examination Committee.

SPECIALTY

ELECTRICAL POWER ENGINEERING

educational qualification degree
BACHELOR

PROFESSIONAL STANDARDS

OF A BACHELOR

in ELECTRICAL POWER ENGINEERING

Degree course: Electrical Power Engineering
Degree awarded: BEng
Professional Qualification: Electrical Engineer
Duration: 4 years

The main goal of the **Electrical Power Engineering** Bachelor degree is to prepare electrical engineers with a wide profile of engineering knowledge and professional skills, who can find jobs in all the spheres of generation, transmission, distribution and effective use of electrical and other types of power.

The quality of training of students doing the Electrical Power Engineering Bachelor degree is

assured through:

- The use of modern laboratories and computer facilities;
- The availability of highly qualified academic staff;
- The subjects included in the curriculum which fall into the following categories:

***-fundamental subjects*:** Mathematics, Physics, Technical Documentation, Programming,Theory of Electrical Engineering, Electrical Measurements, Mechanics, Machine Elements, Hydraulics, Heat Engineering, Electronics and Microprocessor Engineering, Automation,

Foreign Languages, Economics and some others.

-general specialist subjects: Electrical Machines and Apparatuses, Electrical Networks and Systems, Short Cut Currents, High Voltage Technics, Automated Electrical Motion, Electrical Part of Electrical Power Plants and Electrical Power Stations, Relay Defence, Power Supply, Electrical Equipment, Power Engineering, Installation and Lighting Engineering, Management in Electrical Power Engineering, Exploitation of Electrical Devices and some others.

***-highly specialised subjects*:** in the last semester the students choose four subjects in either of the two specialist profiles: *Electrical Power Supply and Equipment in Industry*; and

Electrical Power Supply and Equipment in Agriculture and Food-processing Industry.

The engineer that has graduated in Electrical Power Engineering has to possess the following knowledge and skills: to design all types of electrical installations, circuits, devices, facilities and units; to mount, operate, repair and test electrical machines and apparatuses, cable and power lines, electrical power stations and transformers, electrical panels, power and lighting installations, and other electrical devices and equipment in industry, agriculture, public sector and everyday life; to organise and manage the power plants and departments in enterprises; to do research and design; to evaluate the economic and power efficiency in the generation, transmission and the use of electrical power; to deal with marketing and sales in the field of electrical power engineering, electrical equipment and all electrical devices and electrical equipment tools.

A Bachelor of Electrical Power Engineering can work as an expert or manager in: all enterprises in the field of electrical power engineering (National Electric Company,

generation, transmission and distribution companies); the power departments of industrial, agricultural, transport, construction and other enterprises; designer units; specialised electrical laboratories; and research units and training centres.

CURICULUM

First year

Code	First term	ECTS	Code	Second term	ECTS
	Obligatory courses			***Obligatory courses***	
SO2519	Higher mathematics - 1	7	SO0846	Higher mathematics - 2	5
SB15442	Material science	4	S00009	Physics	5
SO2306	Informatics	4	S02520	Programming and Computer Applications	5
SB11138	Practical Skills	4	SB15438	Theoretic Electrical Engineering - 1	6
SOO133	Electrical Safety	2	SB11141	Machine Science	4
	Elective courses (students choose one course from each group)			***Elective courses (students choose one course from each group)***	
SOO424	English- part - 1	3	SO2725	English- part - 2	5
SOO760	Russian - part - 1	3	S02729	Russian - part - 2	5
SB11832	Technical Documentation	6			
SB11833	Computer application for Technical Documentation	6			
	Total for the term:	***30***		**Total for the term:**	***30***
S00072	Sports	**1**	S00072	Sports	**1**

Second year

Code	First term	ECTS	Code	Second term	ECTS
	Obligatory courses			***Obligatory courses***	
S03035	Higher Mathematics - 3	4	SB11147	Electrical Machines	7
SB15439	Theoretic Electrical Engineering - 2	5	SB11835	Analog Devices	5
SB15440	Electrical Measurements	5	SO3237	Electrical Apparatuses	6
S03147	Semiconductor Devices	5	SB11148	Signals and Data Processing	5
SB11834	Engineering Mechanics	5	SB11149	Introduction to Automatic Control Theory	7

SB11834	*Technical Documentation Using CAD Systems*	6	SB11150	Manufacturing practice	3
	Total for the term:	***30***		**Total for the term:**	***30***
S00072	Sports	**1**	S00072	Sports	**1**

Third year

Code	First term	ECTS	Code	Second term	ECTS
	Obligatory courses			***Obligatory courses***	
SB11153	Computer Architectures	5	SO3167	Control of Electromechanical Systems	7
SB11154	Electromechanical Systems	4	SO3172	Process Control	8
SB11155	Electrical Networks	6	SB11158	Elemets of Automation Systems	6
SB11156	Electrical Substations	4	SB11145	Hydraulics and Thermotechnics	5
SB11157	Digital Electronics	6	SB16291	Economics	4
	Power electronic converters	5		Manufacturing practice	3
	Total for the term:	***30***		**Total for the term:**	***30***
S00072	Sports	**1**	S00072	Sports	**1**

Fourth Year

Code	First term	ECTS	Code	Second term	ECTS
	Obligatory courses			***Obligatory courses***	
SB11164	Automated control of tools and systems	5	SB11164	Heavy- Current Power Suplies	5
SB11165	Programmable logic controllers	7	SB11165	Self Graduation	4
	Elective courses GROUP A			***Elective courses GROUP A***	
SB11836	Electrical Power Supply	7	SB11836	The Industrial Electrical Power Equipment Maintenance	4
SO3249	Electrical Power Supply – course project	4	SO3249	Electrical Power Equipment	4

SO3243	Lightening and Installation Equipment	7	SO3243	Renewable Energy Resources and Energy Technologies	3
	Elective courses GROUP B	7		***Elective courses GROUP B***	
SB11837	Process Control Systems Design	4	SB11178	Automatic Control Theory	4
SO3180	Process Control Systems Design - Project	7	SB11179	Intelligent Systems and Sensors	4
SO3171	Sensor Systems	7	SB11180	Industrial networks to computer networks management	3
	Elective courses GROUP C			***Elective courses GROUP C***	
SB11168	*Special Microprocessor Devices*	4	SB11181	Electromagnetic Waves Propagation, Antennas and Microwaves Technique	4
SO3180	*Course Project Special Microprocessor Devices*	7	SO3217	Broadcasting Technique	4
SO3171	Sensor Systems		SB11182	Television and Video Technique	3
	Total for the term:	***30***		**Total for the term:**	***30***
S00072	Sports	**1**	S00072	Sports	**1**
				Graduation Thesis	**10**

Total for the course of study: 240 ECTS credits

Higher mathematics – 1

ECTS credits: 7 **Weekly classes:** 2lec + 2sem + 0labs+ 0ps + 1cw
Assessment: exam **Type of exam:** written
Departments involved:
Department of Algebra and Geometry
Faculty of Natural Sciences and Education
Lecturers: 1. Assoc. Prof. Tsetska Grigorova Rashkova, MSc, PhD, Dept. Algebra and Geometry, phone 082 888 489, E-mail: tcetcka@ami.uni-ruse.bg.
2. Principal Assistant Milena Panova Kostova, MSc, PhD, Dept. Algebra and Geometry, phone 082 888 453,
E- mail: mpk@ami.uni-ruse.bg
Abstract: The course is a basic one in the mathematical education. It uses the mathematical knowledge given in secondary schools and repeats some of it on a higher level. It is essential for the next mathematical subjects, Physics, Theoretical Mechanics, Control Theory and others.
Course content: Equivalent transformations. Complex numbers. Matrix calculus. Determinants. Systems of linear equations. Line in the plane. Lines and planes in space – forms of determining and common positions. Linear spaces and linear operators. Functions - limits and derivatives. Applications of derivatives for investigating functions. Indefinite integral – definitions and basic properties; methods of calculation - integration by parts, integration by substitution, integration of rational functions. Elementary number theory.
Teaching and assessment: Initial testing on 10 problems is performed. A students' course work is included. Two control works take place. The final mark takes them into account and it is well defined in the program. It is possible this final mark to be defined before the session time.

Material science

ECTS credits: 4 **Weekly classes:** 2l + 0 s + 1 l a b + 0 p
Assessment: exam **Type of exam:** written
Departments involved: Department of Materials & Manufacturing Engineering (M&ME)
Faculty of Mechanical and Manufacturing Engineering (FMME)
Lecturers:
1. Assoc. Prof. Diana Vassileva Tzaneva, MSc (Chemistry), PhD, Dept, of Materials & Manufacturing Engineering (M&ME), tel. 082 888 307, E-mail: dvc@uni-ruse.bg
2. Prof, assistant Mariana Dimitrova llieva, PhD (Materials science and Technology)., Dept, of Materials & Manufacturing Engineering (M&ME)), tel. 082 888 307, E-mail: mdilieva@uni-ruse.bg
Abstract:
The discipline is devoted to the metal and non-metal engineering materials used in automobile industry. The discipline is based on Physics and Chemistry knowledge and it is a base for "Engineering Chemistry", "Manufacturing technology", "Engineering Design I", "Materials strength", "Engineering Design II", „Workshop - Industrial Placement".
Course content:
Classification of the engineering materials. Structure and methods for its investigation. Phase diagrams and phase transformations. Metallic materials - irons; steels; Cu-, Zn-, AI-, Mg-, Ti-based alloys. Modifying materials properties to achieve maximum efficiency and performance

- process alloying, heat and thermochemical treatments and coatings deposition. Materials destruction caused by fatigue, wear, deformation and corrosion. Nonmetallic inorganic materials - technical ceramics and glasses. Nonmetallic organic materials - technical polymers and elastomers. Composites.

Teaching and assessment:

The subject of the study program is presented to students as lectures and laboratory practices. The lectures are illustrated by schemes, diagrams and graphics using PC presentations. Laboratory practices are designed to provide students with practical skills in metallography and materials testing of some engineering materials, introduced in lectures. The course finishes with a final exam. During training there are two tests of a students knowledge on the lecture material which successful work out gives students the possibility to have a final mark without taking the final exam. Otherwise the final assessment is set up accounting the final exam results and the two tests results.

Informatics

ECTS credits: 4 **Weekly workload:** 1lec+0sem+ 0labs+2ps+0cw

Assessment: continuous assessment **Type of exam:** test

Department involved:

Department of Informatics and Information Technologies, Faculty of Natural Sciences and Education **Lecturers:**

Prof. Margarita Stefanova Teodosieva, PhD, Dept, of Informatics and Information Technologies tel. 888 645, Email: mteodosieva@ami.uni-ruse.bg

Assoc, prof. Svetlozar Stefanov Tsankov, PhD, Dept, of Informatics and Information Technologies

tel. 888 645, E-mail: stsankov@uni-ruse.bg

Abstract:

The course objective is to familiarize students with computers and their components as technical aids, as well as with local and global networks and the most widely spread software products - operating systems, word processing systems, presentations, spreadsheet data processing systems, data bases and computer graphics. The workshops aim at providing students with knowledge on the use of Windows, Word, Excel and PowerPoint. **Course content:**

Classification of computers. Hardware. Operating systems. Application software - word processing systems, spreadsheets, presentations and databases.

Teaching and assessment:

Lectures are taught in 2 academic hours every other week. Workshops are carried out in computer laboratories under the guidance of the teacher. Student's progress on the application of relevant software product is assessed continuously. Students get semester validation after attendance not less than 70% of the semester classes.

In the end of the semester students' theoretical knowledge is assessed with a test involving the whole course material.

The final mark is formed on the basis of the results from the test (30%) and the course assignment mark (70%).

Practical Skills

ECTS credits: 4 **Weekly classes:** 0lec + 0sem + 0labs+ 3ps

Assessment: continuous assessment **Type of exam:** written and oral

Departments involved:

Department of Electrical Power Endineering

Faculty of Electrical and Electronic Engineering and Automation

Lecturers:

1. Assoc. Prof. Dimo Neikov Dimov, MEng, PhD, Department of Electrical Power Endineering
tel.: +359 82 888 659, E-mail dnd@uni-ruse.bg

2. Principal Assistant Mariqna Todorova Dacheva, MEng, Department of Technical and Natural Sciens Silistra Branch, tel.: 086 821521: E-mail: mtd@fs.uni-ruse.bg

Abstract:

The course objective is for the students to receive knowledge and skills, needed to work as an electrical engineer. Course pre-requisites includes knowledge, obtained from high school and the course outcome leads to other electrical courses, studied in the Bachelor degree program.

Course content:

Electricity – main concepts and quantities. Transfer and transformation of electrical energy. Electrical equipment and installation. Electric machines. Electrical machines. Electrical Drive and Supply of Aggregates. Electrical Safety. Introductory theoretical knowledge and practical skills in the areas of electronics and automation.

Teaching and assessment:

The laboratory equipment allows every student to get acquainted with the electrical equipment independently.

Oral examining is done during the lectures and workshops. The preliminary exam is written and oral.

Electrical Safety

ECTS credits: 2 **Weekly classes:** 1lec + 1sem + 0labs + 1ps + 0cw
Assessment: colloquium **Type of exam:** written
Departments involved:
Department of: Electrical Engineering
Faculty of: Electrical Engineering, Electronics and Automation
Lecturers:
1.Prof. Dr. Nikola Petrov Mihajlov; Dept. of Electrical Engineering, Phone: 082 888 843,E-mail: mihailov@uni-ruse.bg;
2.Assoc. Prof. PhD. Ivaylo Stefanov Stoyanov, Dept. of Electrical Engineering, Phone: 082 888 843,E-mail: stoyanov@uni-ruse.bg;
3.Assoc. Prof. PhD. Valentin Jordanov Dimov, Dept. of Electronics; Phone: 082 888 772 E-mail: vdimov@ecsuni-ruse.bg
Abstract:
The course Electrical Safety is designed for the students studying in the Bachelor of Science courses in Electrical engineering. It gives the students with knowledge and skills regarding the basic principles, methods and technical means of providing of electrical safety when working with electrical devices, appliances and installations. The taught material is being supplemented with examples and cases from the industry which helps the students gain the ability to make decisions.
The course is connected with other disciplines - Theoretical Electrical Engineering, Electrical Measurements and Electrical materials science as well with the Industrial practice and the future professional perspectives of the students.
Course content:
Basic terms and definitions of the protection of safety. Influences alternative and direct current of people. Parameters and limits value. Electric insulation. Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts - IK code and IP code. Safety of electric appliances for measurement, control, management, and laboratorial application. Safety of manual electric instruments. Electrostatics and methods for safety. Electrostatic sources. Electromagnetic compatibility of the devices
Technology of teaching:
The teaching is based on the usage of classical pedagogic forms. On some topics projecting materials and videos are shown. The practical exercises follow the lecture topics Early passing of exam is not allowed. At the exam the students work one question to estimate the degree of knowledge**eaching and assessment:**

English, Russian - 1

ECTS credits: 3 **Weekly classes:** 0lec + 0sem + 0labs+ 3ps
Assessment: **Type of exam:**
Departments involved:
Department of: Department of Foreign Languages, Faculty of: Law
Lecturers:

Senior Lecturer Tsvetanka Pavlova Bucvarova, MA, Department of Foreign Languages, tel.: 08682821521
E-mail: tcbychvarova@uni-ruse.bg

Abstract:
The foreign language module 1 is aimed at achieving communicative competence in the area of the subject specialism and the future job. The teaching objectives comprise the development of reading comprehension skills to handle specialist texts and the acquisition of communication skills to interact successfully in professional settings and everyday situations

Course content:
Meeting people. Talking about the present and the past. Plans. Describing objects and places. Comparing things. Searching for information in catalogues. Linking facts and ideas. Applying for a job. The grammar material is connected with the lexical topics and situations

Teaching and assessment:
To acquire the necessary language knowledge and to develop skills in using the language as a means of communication a wide range of authentic and specially constructed texts (i. e. articles, diagrams and tables, brochures, catalogues, manuals etc.) as well as audio , video, and multimedia materials are used. Students are set an assignment to prepare a presentation on one of the studied topics.

Technical Documentation

ECTS credits: 6 **Weekly classes:** 2lec + 0sem + 0labs+ 2ps+1cw
Assessment: continuous assessment **Type of exam:** written
Departments involved:
Department of: Machine Science, Machine Elements and Engineering Graphics
Faculty of: Transport
Lecturers:

1. Assoc. Prof. Phd Eng. Daniela Aleksandrova Belkinova, Dept. of MSMEEG; Phone: 082 888 491
E-mail: dbelkinova@ uni-ruse.bg
2. Assoc. Prof. Phd Eng. Peter Dimitrov Pantileev , Dept. of MSMEEG; Phone: 082 888 491
E-mail: ppantileev@ uni-ruse.bg

Abstract: The course "Technical documentation" teaches the methods for design, standard documents and rules for elaboration of design documents (drawings, schemes, textdocuments), notations when drawing specific parts of the electric industry, common assemblies in engineering, as well as the opportunities and tools for computer documentation. At the workshops and while doing the course work the students acquire the skills of independent elaboration and comprehension of design documents per hand and with application of computer.

Course content: Main characteristics and importance of the documentation of technical solutions. General requirements for the preparation of technical documents. Complexity of technical documentation. Part drawing. Assembly drawing. Text documents. Making drafts of items with electrical mounting, electrical schemes etc., rules for working out and reading. Symbols for expressing specific details from the electrical industry, Use of programming products for electrical drawings with application of computer.

Teaching and assessment: The lectures present the theoretical material, that give main knowledge how to prepare technical documents. At the workshops students solve problems and prepare to work on their course work. Three of the workshops are done in labs equipped with personal computers and the practical work done under the leadership of a teacher on the above mentioned topics. The course work is elaborated out of classes and is checked, corrected and marked by the lecturer. The final mark is formed from the results of the course work and two control works.

Computer application for Technical Documentation

ECTS credits: 6 **Weekly classes:** 1lec + 0sem + 0labs+ 2ps+1cw
Assessment: continuous assessment mark **Type of exam:** written
Departments involved:
Department of: Machine Science, Machine Elements and Engineering Graphics
Faculty of: Transport
Lecturers:

1. Assoc. Prof. Phd Eng. Daniela Aleksandrova Belkinova, Dept. of MSMEEG; Phone: 082 - 888 491, E-mail: dbelkinova@ uni-ruse.bg
2. Assoc. Prof. Phd Eng. Peter Dimitrov Pantileev, Dept. of MSMEEG; Phone: 082 - 888 491, E-mail: ppantileev@ uni-ruse.bg

Abstract: The course "Computer application for Technical documentation" has the objective to acquaint the students with the application of computer as a technical device and with the different kinds of application of programming products for special electrical drawing and schemes Microsoft Visio. At the workshops and while doing the course work the students acquire the skills of independent elaboration and comprehension of design documents with application of special programming products and computer.
Course content: 2-CAD Systems specifical programming products for electrical drawings. General requirements for the preparation of technical documents. Text documents,. electrical schemes etc., rules for working out and reading. Complexity of the technical documentation. Symbols for expressing specific details from the electrical industry, Making draftsymbols of electrical elements. Use of programming products for electrical drawings with application of computer.

Higher Mathematics II

ECTS credits: 6 **Workload per week**: 2l+2s+0lab+0p
Assessment: exam **Type of exam**: written
Department involved: Demartment 27 Mathematics, Faculty of Natural Sciences and Education, tel. 082 888 226
Lecturers:
1. prof. DrSc. Stepan Terzian, Demartment of Mathematics, tel. 082 888 226
2. assist, prof. PhD Anna Lecheva, Demartment of Mathematics, tel. 082 888 420
Annotation:
The subject Higher Mathematics II is a basic for mathematical education in engineering sciences. It gets the students acquainted with the basic notions of the mathematical analysis such as definite integrals, partial derivatives, and gives them computational abilities to solve ordinary differential equations, to

find extrema of functions of two variables, to integrate functions of complex variable, to apply Laplace transformation. This knowledge is necessary for further study of physics, computing sciences and other technical subjects.
Course syllabus:
Basic themes:
definite integrals and applications, functions of two variables, ordinary differential equations, functions of complex variable, Laplace transformation, series.
Teaching and learning methods:
The educational process is realized by lectures and seminar exercises. The educational material is theoretically presented and demonstrated by proper example problems in the lectures. The basic themes understanding are controlled and skills for solving practical problems are developed in the seminar exercises. The exam test includes 6-8 practical problems for solving.

Physics

ECTS credits: 5 **Weekly classes**:2lec+0sem+2labs+0ps
Assessment: exam **Type of exam**:written
Departments Involved: Department of Physics,
Faculty of: Electrical Engineering, Electronics and Automation
Lecturers:
Assoc. prof. Temenuzhka Bogdanova Buhcheva, PhD.; Dept. of Technical and Natural Sciences, Silistra Branch, tel. 086/821521, E-mail betina93@abv.bg
Assist. Prof. Alefter Myumyun Idriz, Dept. of Teihnical and Natural Sciences, Silistra Branch, Tel:086/821521, e_mail: alefter@mail.bg
The course in physics is a theoretical background for all engineering subjects. The course aims at familiarizing . the students with the physical character of processes and phenomena in nature and the methods of their investigation, with the most general properties of the matter and the structure of the material objects. The offered course is a general one and it comprises the main parts of the classical and modem physics. The laboratory exercisesLaim at creating skills for experimental investigation of physical phenomena.
Course content:
Measuring physical quantities. Mechanics of a material point and rigid body. Gravitation. Work and energy. Laps of conservation in mechanics. Thermodynamics. Electric field and electric current. Magnetic field and electromagnetic induction. Mechanical oscillations and waves. Optical phenomena and laps. Elements of quantum mechanics, solid state physics and laser physics.
Technology of teaching:
Lectures give the main theoretical material, supported by some demonstrations of physical phenomena and processes. At the laboratory exercises the students work independently and investigate particular physical phenomena.
The knowledge of the laboratory exercises is tested regularly and the students receive a mark on the laboratory exercises.
At the exam the students answer two theoretical questions and do one laboratory exercise

Theoretic Electrical Engineering 1

ECTS credits: 5 **Weekly classes:2lec+2sem+0labs+0ps**
Assessment: exam **Type of exam**:written and oral
Methodology management:
Department of Theoretic and Measuring Electrical Engineering Faculty of Electrical Engineering, Electronics and Automation **Lecturers:**
Assoc. Prof. PhD Tanya Metodieva Stoyanova; Dept, of Theoretic and Measuring Engineering; tel.: 888 502 Head assistant PhD Dimcho Vasilev Kiriakov; Dept, of Theoretic and Measuring Engineering; tel.: 888 371
Abstract
The course Theoretic Electrical Engineering 1 familiarizes the students with the bases of the electromagnetism and with the main methods for analysis of settled modes in linear electric chains. The acquired knowledge is a basis for Electrical Engineering 2 and all electrical courses.
Syllabus contents:
Bases of the electromagnetism - main concepts; electro-magnetic field; electric current; electric voltage, electric potential, electricmoving voltage; magnetic field; law of electro-magnetic induction; electric and magnetic energy; Maxwell's equations, scalar and vector potential;; transforming the energy of electro-magnetic field,.Pointing theorem,.transmitting energy over a two-wire line and transformer connection. Settled modes in linear electric chains - main concepts and laws; constant modes in electric and magnetic chains; conversion, methods of analysis, principle and theorems for electric chains; sine modes and quantities, sine modes in serial and parallel RLC bi-pole, laws of Ohm and Kirhof in complex fashion, resonance phenomena; periodic non-sine modes; three-phase chains; quadripoles.
Technology of teaching:
Lectures present the teaching material according to the syllabus. At the seminar students solve problems covering the topics of the syllabus.
The final assessment is accomplished via examination, conducted in a written and oral form

Machine Science

ECTS credits:4 **Weekly classes:** 1l+0s+0le+2p
Assessment: continuous assessment **Type of exam:** written
Methodology management: Department of Machine Science and Machine Elements, Transport Faculty
Lecturers:

English,Russian 2

ECTS credits: 5 **Weekly classes:**0lec+0sem+0labs+4ps
Assessment: continuous assessment **Type of exam**: oral
Department involved:
Department of Foreign Languages, Faculty of Law
Lecturers:
Senior Lecturer Tsvetanka Pavlova Bucvarova, MA, Department of Foreign Languages, tel.: 08682821521
E-mail: tcbychvarova@uni-ruse.bg

Abstract:
The foreign language module 2 like module 1 is aimed at achieving communicative competence in the area of
the subject specialism and the future job. The teaching objectives comprise the development of reading
comprehension skills to handle specialist texts and the acquisition of communication skills to interact
successfully in professional settings and everyday situations.
Course content:
Making a request. Offering advice. Conditionals. Describing a process. Components and specifications.
Describing graphs. Higher education. Writing a CV. Likes and dislikes. Announcements and messages (formal
and informal). Making suggestions and plans. The grammar material is connected with the lexical topics and
situations.
Teaching and assessment:
As in module 1 a wide range of authentic and specially constructed texts (i. e. articles, diagrams and tables,
brochures ,catalogues , manuals, etc.) as well as audio , video, and multimedia materials are used to acquire

Higher Mathematics - 3

ECTS credits: 4 **Weekly classes**: 2lec+0sem+0labs+1ps
Assesment: exam **Type of exam:** written and oral
Methodology management: Department of Numerical Methods and Statistics, Faculty of Social Health
Lecturers:
Prof. Dr. Luben Georgiev Vulkov , Department of Numerical Methods and Statistics; tel. 888 466, 888 725; E-mail: lvalkov@uni-ruse.bg
Principal Assistant Nikolinka Stoianova Strateva, Department of Numerical Methods and Statistics; tel. 888 466, 888 725; E-mail: nstrateva@uni-ruse.bg
Anotation:
The objective of the Cource on 3035 Mathematic III is to students knowledge and skills to solve engeneering problems requiring: Fourier serie; The most common numerical methods of linear algebra and mathematical analysis; Mathematikal apparatus of probability theory; The methods of mathematical statistics for processing experimental data.
Syllabus contents: Power serie, Fourier serie, Numerical methods for solving systems of linear equations, nonlinear equations, systems of non-linear equations, least squares method for approximation of tabulated data. Elements of theory of probability, elements of mathematical statistics, element of regression and correlation analysis, main concepts of experiment planning.
Technology of teaching:

The lecturers present the material theoretically and illustrate it with appropriate example problems. The half of each lecture consists of solving problems on material of the previous lecture. At the workshops application examples are solved with the aid of the programming environment MATLAB and namely: numerical method of algebra nad analysis, mathematical statistics. Two control works, 2 hours each, are conducted during the semester. The final mark is formed from written and oral exams, bearing in mind the results from the control works.

Theoretic Electrical Engineering 2

ECTS credits: 5 **Weekly classes**: 2lec+0sem+1labs+0ps+1ca
Assessment: exam **Type of exam**: written and oral
Departments involved:
Department of Theoretic and Measuring Electrical Engineering
Faculty of Electrical Engineering, Electronics and Automation
Lecturers:
Assoc. Prof. Nikola Kolev Armianov, MEng, PhD, Dept. of Theoretic and Measuring Engineering,
tel.: 888 502, E-mail: armianov@ru.acad.bg
Assoc. Prof. Tania Metodieva Stoianova; MEng, PhD, Dept. of Theoretic and Measuring Engineering,
tel.: 888 502, E-mail: tstoynova@ru.acad.bg
Abstract:
The Theoretic Electrical Engineering 2 course familiarizes the students with the main methods for the analysis of transient modes in linear electric chains and with the main methods for analysing settled and transient processes in a chain with distributed parameters and in non-linear electric chains.
Course content:
Transient processes in linear electric chains - introduction; classical method; operator method; frequency method; transient quantities, Duamelle integral; method with state variables.
Chains with distributed parameters - main concepts; differential equations of a homogeneous line; settled sine process in a homogeneous line, input impedance; line with no losses, standing waves.
Non-linear electric chains - constant modes, main laps and methods for analysis; periodic modes, electric chains inertia and non-inertia non-linear elements, analysis methods; resonance phenomena; transient processes, methods.
Teaching and assessment:
At the beginning of the semester each student is given an individual problem as course work. It is to be presented at the end of the semester in written form and is defended orally. Final assessment is done at the exam (written and oral), which consists of solving problems and answering questions.

Electrical Measurements

ECTS credits: 5 **Weekly classes**: 2l+2lab+0ws +0cw

Assessment: continuous assessment **Type of exam:** written and oral

Methodology management

Department of Theoretic and Measuring Electrical Engineering Faculty of Electrical Engineering, Electronics and Automation **Lecturers:**

Assoc. Prof PhD Georgi Rashkov Georgiev; Dept of Theoretic and Measuring Engineering; tel 082 888 412;

Head assistant PhD Tosho Jordanov Stanchev; Dept, of Theoretic and Measuring Engineering; tel.: 082 888 505

Abstract

"Electrical Measurements" course has the aim to make the students familiar with the basic methods and devices for electrical and non-electrical quantities evaluating as well as the metrical appraisals and results calculating. Another aim is students to acquire skills and habits which might be needed in measurement schemes realizing and to solve particular problems as well as in students' activities as forth coming experts - electrical engineers.

The module is based on the knowledge acquired in Physics, Mathematics, and Mechanics lessons and especially in Theoretical Electrical Engineering.

The knowledge and skills acquired on this module are needed for the students to perceive the particular modules during the tutorials for metrical design ensuring of the technologic and production processes. Syllabus contents: Quantitative analysis and quantitative methods, Identification of a measuring method,Identification of a calculating method; A quality of the quantitative appraisals; Electrical and magnetic quantities; Assigning values to the electrical and magnetic quantities; Electrical quantities measuring by immediate comparison; Electrical quantities by mediate comparison; Digital electro-measuring appliances, Appliances for registration and observation; Electrical quantities calculating; Quantitative analysis of non electrical quantities by electrical methods and devices; System for ensuring the unity of the measurements

Technology of teaching:

The process of the education on "Electrical Measurements" module consists of lectures and tutorials. Lantern- slides and experimental models might be used as guides.

Normally the tutorials are carried out into cycles. There are four places of work at the hall where on the average three students work together on each of it The duration of each tutorial is three hours and at the end the students have to prepare a report The all semester long marking is realized by testing at the time when the tutors are in progress and by periodical test control. The education completes with an exam at the end of fourth semester. Individual tutorials are carried out regularly at previously announced time for this purpose.

Semiconductor Devices

ECTS credits: 5 **Weekly classes:** 2lec + 0sem +2labs+ 0ps+0ca

Assessment: exam **Type of exam:** written

Departments involved:

Department of Electronics

Faculty of Electrical Engineering Electronics and Automation

Lecturers: Assoc. Prof. Krasimira Stefanova Shtereva

, MEng, PhD, Department of Electronics tel:+35982888366, E-mail: KShtereva@ecs.uni-ruse.bg

Abstract:

The aim of the Semiconductor Devices course is to provide the students with the necessary knowledge of the structure, principle of operation, characteristics and the application areas of the most popular semiconductor devices (semiconductor diodes, bipolar and field-effect transistors, optical device), as well as with skills for their practical use for the development of electronics products. A prerequisite is Physics.

Course content:

Fundamentals of the Physics of Semiconductors -Conductivity, Carrier Generation and Recombination, p-n Junction and Metal - Semiconductor Contact. Semiconductor Diodes. The Bipolar Transistors. The Thyristors. The Junction Field-Effect Transistor (JFET). The Schottky Field-Effect Transistor (MESFET). Metal-Oxide-Semiconductor Field-Effect Transistor (MOS FET). Optical Devices. Photovoltaic Devices. Active Matrix Flat-Panel Display (AMLCD). Fundamentals of the Integrated Circuits.

Teaching and assessment:

The lectures are two hours each week. They are interactive with the use of multimedia. The laboratory exercises are four hours every second week and the whole group works on the same topic. A test is carried out in the beginning of each laboratory exercise. The test is graded on a scale from 0+5 points. The students submit a report for each laboratory exercise to the course instructor. Computer programs are used for the analysis of the results and the report preparation. The additional requirements are according the Internal Academic Regulations. Finishing course procedure is a written exam in the form of a test with 120 minutes duration. The test is graded on a scale from 0+100 points. Final assessment is based: 20% on laboratory assignments and 80% on the final test.

Engineering Mechanics

ECTS credits: 6 **Weekly classes:** 2lec + 2sem + Olabs+ Ops+Oca

Assessment: continuous assessment **Type of exam:** tests

Departments involved:

Department of Engineering Mechanics
Faculty of Mech. and Manufacturing Engineering

Lecturers:

1. Assoc, prof. Stoyan Stoyanov, PhD,
Dep. of Engineering Mechanics, tel. 888 572, e-mail sqstovanov@uni-ruse.bg
2. Principal Assistant Jordan Dimov, subsidiary of the University of Ruse in Silistra, tel. 086/821 521, e-mail idimov@abv.bq

Abstract:

The course has four parts: Static, Strength of Materials, Kinematics, Dynamics. The aim of the course is the students to get acquainted with the basic laws and methods of Engineering Mechanics in order to apply them when they solve mechanical problems. Preliminary knowledge in Mathematics and Physics are necessary for this course. The subject is a fundamental for the engineering courses Control Theory, Electromechanical Devices, Control of Electromechanical Systems, Dynamics of Mechanical systems, Machine Elements and Mechanisms, Hydraulic Machines and Pneumatics, Mechatronic Elements and Mechanisms, Robotics.

Course content:
Equilibrium of a rigid body. Equilibrium in presence of friction. Basic definitions and principles in Strength of Materials. Tension and compression. Particle kinematics. Translational, rotational and plane rigid body motion. Particle dynamics. Dynamics of mechanical systems. Lagrange's equations.
Teaching and assessment:
The lectures elucidate the theoretical basis of studied topics, while their application is illustrated by examples. Numerical examples are solved in seminar exercises. The final grade of student's knowledge is obtained by averaging the results of carried out tests.

Technical documentation using CAD systems

ECTS credits: 6 **Work load per week:** 1l+0s+0lab+3p
Assessment: exam **Type of exam:** written
Department involved: Department "Machine Science, Machine elements and Engineering Graphics"
Lecturers: Assoc. Prof. Vyarka Ronkova PhD. Msc. (Eng), "Machine Science, Machine elements and Engineering Graphics (MSMEEG)", TF, E-mail: vronkova@uni-ruse.bq
Assoc. Prof. Tsvetelina D. Georgieva PhD. Msc. (Eng), Department "Automatics and Mechatronics", FEEA, E-mail: cqeorqieva@uni-ruse.bq
Krasimir St. Kamenov PhD, Department "Machine Science, Machine elements and Engineering Graphics (MSMEEG)", TF, E-mail: kkamenov@uni-ruse.bq
Annotation: The course is compulsory for students in Electrical Engineering. The course objective is to teach students the principles of systems design in the field of electrical engineering, study technology for automated design of small buildings to large industrial projects and use computers and software in the design, planning and management of these projects.
Course syllabus: The window of AutoCAD. Toolbars and menus. Coordinate data entry. Selecting objects. Editing objects. Work with blocks and layers. Structure, basic features and general functions of EPLAN Electric P8 software. Icons, Popup Menus, Dialogs and Toolboxes in EPLAN Electric P8 software. Schematic documents and macros. Graphical and External Reports. Management Tasks in EPLAN.
Teaching and learning methods: Training of students in this course is carried out by lectures, workshops and class work. Students acquire basic knowledge of creating and managing industrial projects. For illustration the course lecturers, appropriate materials presented through multimedia are used. The workshops are conducted in a computer rooms equipped with a sufficient number of computers. The course work is given at the beginning of the semester.

Electrical Machines

ECTS credits: 7 **Weekly workload:** 3L+0S+2Lab+0P
Assessment: exam **Type of exam:** written
Departments involved: Department „Electrical supply and electrical equipment", Faculty "Electrical engineering, Electronics and Automation"

Lecturers: Assoc. Prof. Dimo Nejkov Dimov, MSc (Eng), PhD, Department "Electrical supply and electrical equipment",
tel: 888 659; E-mail: dnd@ru.acad.bg

Abstract:

The subject has the objective to acquaint the students with the transformers, direct current machines, induction and synchronous machines arrangement, principle action, theory, characteristics and research methods.

Input links are subjects: "Higher Mathematics", "Physics" and "Theory of Electrical Engineering" , "Electrical Material Science" and "Electrical measurments".

Output links: „Mehatronics Systems", "Control Systems Components", "Control of Mehatronics Systems" etc.

Course content:

General issues of the electrical machines. Construction and principle action of direct current machines. Direct current generators and motors. Types. Characteristics. Special types of direct-current motors. Transformers arrangement and principle action. Modes of operation. Working in parallel. Special transformer types. Induction machines arrangement and principle action. Modes of operation. Special types induction machines. Synchronous machine arrangement and principle action. Types. Modes of operation. Synchronous generators. Parallel operation of synchronous generators. Synchronous motors. Special types synchronous machines. Collector alternating current motors.

Teaching and assessment:

The theoretical basic issues on all topics from the syllabus, presented at the lectures, are further practiced during the laboratory exercise through investigation of the examined electrical machines and formulation of individual reports. Learning practice consists also of working out a course work. The students must prepare for the laboratory exercise in advance. The exam is conducted in written form and consists of two subject questions. The final examination mark depends on the mark received on the laboratory exercise and course work that is submitted before beginning of the examination session.

Analog Devices

ECTS credits: 5 **Workload per week:** 21 + Os + Olab + 2 p
Assessment: continuous assessment **Type of exam:** written
Departments involved: Department of Electronics, Faculty of Electrical Engineering, Electronics and Automation **Lecturers:**

1. Assoc. Prof. Avram Sabetay Levi, PhD, Dept, of Electronics, tel.:++359 82 888375, E-mail: alevi@ecs.ru.acad.bg
2. Principal Assistant Penyo Georgiev Penev, MSc, Faculty of Electrical Engineering-Silistra tel.+359 86 821521 , E-mail: pp0726@abv.bg

Annotation:

The compulsory subject gives the students the necessary minimum of knowledges in analog devices. It discusses the factors and methods for the realization of the most often used low-level and power amplifiers and generator stages in a discrete and integral input, methods for dc and ac analysis of the discussed circuits, as well as instructions for their design are used.

Course syllabus:

General information about the amplifying engineering; main characteristics and operation

modes. Back-coupling in the amplifiers; influence of the negative back-coupling on the main values of the amplifiers. Resistance of the amplifiers. Aperiodic amplifiers of small signals with a common emitter, common base and common collector by middle, low and high frequencies. Cascade circuits. Aperiodic amplifiers of power. Main elements from the analog devices of the analog integrated circuits. Differential amplifiers. Direct current amplifiers. Operational amplifiers - general characteristics and main circuits. The subject contains a course assignment.

Teaching and learning methods:

2 hours lecture by scheme.

2 hours exercises carried out in two stages: analysis, design and measurement of the discussed device and/or computer analysis.

Electrical Apparatuses

ECST credits: 6 **Weekly classes:** 2l + 0s + 2lab + 0p

Assessment: exam **Exam type:** in writing

Methodology management: Department of Electric Power Engineering (EPE), faculty *Electrical Engineering, Electronics and Automation.*

Lecturers: Assoc. Prof. PhD Krasimir Velikov Martev, Department EPE, tel.:082 888280, e-mail: kmartev@uni-ruse.bq Assoc. Prof. PhD Konstantin Koev, Department EPE, tel.: 082 888 201, e-mail: kkoev@uni-ruse.bq

Annotation:

The subject-matters of the theory, the functions, type, structure, selection and setting of the high- and low- voltage electrical equipment produced by Bulgarian and foreign leading companies are considered in the suggested course.

Incoming connections: Physics, Higher Mathematics 1, 2, 3; Theoretical Electrical Engineering,Engineering Mechanics

Outgoing connections: Electric Power Networks and Substations, Electromechanical Systems, Automation of Technological Processes, Electric Power Supply, Electrical Equipment, Graduation Design.

Course syllabus:

Classification of the electrical apparatuses (EA). Electrodynamic forces. Heating of EA. Electrical insulation. Electric arc. Electromagnets. Low-voltage switchgear apparatuses. EA for distribution and protection. Electromagnetic actuators. High-voltage switchgear apparatuses.

Teaching and learning methods:

The teaching is carried out as the lectures are provided to students in advance. On all topics, multimedia projector allowing the demonstration of the schemes of the structure and the control of EA, as well as product catalogs, are used. Computers are used in many lab exercises. Methodical instructions are provided for each exercise as appropriate laboratory models are developed.

The requirements for obtaining attestations on the discipline are in accordance with the internal rules on the teaching activities in the University of Ruse. The exam consists of a written answer to two questions from the lectures and a subsequent oral discussion.

Signals and data processing

ECTS credits: 5 **Weekly workload:** 2l + Os + Olab + 2p
Assessment: examination **Type of exam:** written and oral
Departments involved:
Department of Electronics Faculty of Electrical and Electronic Engineering and Automation
Lecturers: Prof. Ivan Borisov Evstatiev, PhD, Department of Electronics, tel. 888772, E-mail:ievstatiev@ecs.uni-ruse.bg
Abstract:
The course introduces the students with the basic principles of signals and data processing for the needs of the electrotechnics, electronics and communications.
In the course are being examined the spectral analysis of periodic and aperiodic signals, discretion of the analogue signals, discrete and fast Fouriet transforms, correlational analysis, analogue and digital signal filters, modulation of signals, analogue-digital and digital-analogue converters, signal processors and digital data processing.
Course content:
Basic principles of the signals and data processing. Basic information about the signals. Spectral analysis of aperiodic signals. Spectral analysis of the signals. Discretion of analogue signals. Discrete Fourier transform. Fast Fourier transform. Corelational analysis. General information about the signal filters. Modulation and manipulations. General information about the signal coding. Analogue-digital and digital-analogue converters. Signal processors. Statistical data processing.
Teaching and assessment:
The students get introduced with the course by listening to the lectures. For better learning the information is presented with a multimedia projector. The practical exercises are being carried out frontal by 4 hours a week. Software products for synthesis and analysis of electronic schemes and simulation are being used - MicroCap and Protel. During the exercises are being done manual calculations, investigations with computer analysis and investigations with laboratory measurements. The course thesis is being done independently by each student. It completes the students knowledge about the signals and data processing and their practical usage. The non-auditory work of the students includes learning of the lectures materials, preparation for the practical exercises and finalizing their reports. The students receive consultations every week about the information that interests them. The final mark is given after an examination.

Introduction to Automatic Control Theory

ECTS credits: 7 **Weekly classes:** 3lec + Osem + 2labs+ Ops + 1ca
Assessment: exam **Type of exam:** written
Departments involved:
Department of Automatics and Mechatronics
Faculty of Electrical Engineering, Electronics and Automation
Lecturer:

1. Assoc. Prof. Georgi Lyubomirov Lehov, PhD, Department of Automatics and Mechatronics, phone 082 888 745, E-mail: qlehov@uni-ruse.bq

Abstract:

The course aims are to give knowledge and practical skills for modelling, analysis and synthesis of linear continuous-time control systems. Prerequisites to this course are the Mathematics and Signal Processing courses. The acquired knowledge has application in various fields of engineering. It is a basis for the courses where control systems and their elements are studied.

Course content:

Control systems: basic concept and definitions, classifications. Control systems design process. Mathematical models of linear continuous-time control systems: differential equations, transfer functions, block diagrams. Time-domain and frequency-domain characteristics. Stability analysis. Steady-state errors. Dynamic performance analysis. P, PI, PD and PID controllers. Digital controllers. Control systems design methods.

Teaching and assessment:

The lectures present the theoretic aspects of the addressed problems and illustrate them with appropriate examples. The aim of the practical exercises and the course work is to teach the students to apply the acquired knowledge creatively. They are conducted with the aid of MATLAB software system. The students' progress is checked in each exercise throughout the semester. A different topic for the course work is assigned to each student. The course ends with a written exam which consists of problem solving and question answering. In order to be allowed to take the exam the students have to attend all the exercises as well as to write a course work. The practical work mark and the course work mark are both taken into consideration when forming the final course mark.

Computer Architectures

ECTS credits: 5 **Weekly workload**: 1lec + Osem + 2labs + Ops + 1ca
Assessment: exam **Type of exam:** written and oral

Departments involved: Department of Computing
Faculty of Electrical Engineering, Electronics and Automation

Lecturers:

Asoc Prof Georgi Nikolov Krastev, MEng, DSc, Dept of Computing, tel: +359 82 888 672,
E-mail: gkrastev@ecs.uni-ruse.bg
Principal Assistant Lachezar Lazarov Yordanov, MEng, Dept of Computing, tel: +359 82 888 859,
E-mail: liordanov@ecs.uni-ruse.bg **Abstract:**

The course "Computer Architecture" aims to introduce students to computer architectures to provide basic knowledge for the presentation of information in the computer, basic logic circuits and types of computer architectures. Discussed are the three main architectures: rechargeable, registers and stack. Architecture x86, IA-32 and RISC Hierarchical model of memory and input-output system

Course content:

Introduction to Computer Architecture. Presentation of information in the Computer Basic

components. Milestones in the development of Computer Architectures. Classification of Computer Architectures. Accumulator, Stack and Register Architecture. Global structure of the Computer System Architecture x86. System instructions. Addressing modes. IA-32 Architecture. RISC Architecture. Computer Memory hierarchy. Input-output System

Teaching and assessment:

Lectures are conducted in one hour a week. Laboratory are held every other week for two hours. Students are assessed on the results of the exam paper developed and participation in lectures and exercises.

Electromechanical Systems

ECTS credits: 4 **Weekly classes:** 21 + Os + 1lab + Op

Assessment: continuous assessment **Type of exam:** written

Methodology management:

Department "Electrical Power Supply and Electrical Equipment"

Faculty of Electrical Engineering, Electronics and Automation

Lecturers:

Assoc. Prof. Dimo Neykov Dimov, PhD, Engineering, phone 888 659, E-mail: dnd@uni-ruse.Bq

Annotation:

The aim of the course is to introduce the students from the department of ESEO to the mechanics of electro-motion, the electromechanical properties of induction motors, the power engineering of electromotion and the bases of dynamics of electro-motion. The discipline is based on the knowledge, acquired during the following courses: "Physics", "Theory of Electrical Engineering", „Electrical machines".

Output links: "Control of Mehatronics Systems" and Diploma Project.

Syllabus contents:

Basic equation of the electro-motion. Mechanical characteristics of the manufacturing mechanisms. Mechanical and electromechanical characteristics of the current electricity motors. Mechanical and electromechanical characteristics of the induction motors. Stopping of the electric motors. Speed control of electro-motion. Transitional processes in electro-motion. Thermal processes in the electro-motion. Choice of power capacity of the electric motors.

Teaching and assessment:

The theoretical basic issues on all topics from the syllabus, presented at the lectures, are further practiced during the laboratory exercise through investigation of the examined electrical drives and formulation of individual reports. The students must prepare for the laboratory exercise in advance. The exam is conducted in written form and consists of two subject questions. The final examination mark depends on the mark received on the laboratory exercise.

Electrical Networks

ECTS credits: 6 **Weekly workload:** 2L+1S+0Lab+0P+CW

Assessment: exam **Type of exam:** written
Departments involved: Department of Electrical Power Systems and Equipment Faculty of Electrical Engineering, Electronics and Automation
Lecturer: Assoc. Prof. Ivaylo Stefanov Stoyanov MSc, PhD, Department of Electrical Power Engineering,
Tel: 888 843, E-mail: stovanov@uni-ruse.bq
Abstract:
The subject has the objective to provide knowledge and skills in the area of electrical networks. The issues about the stationary operation modes of both the opened and closed networks and the different methods for determining the cut of the air and cable electrical ducts are discussed. The study material is directly connected with all main subjects of the specialty. The input links are with the subjects: "Theory of Electrical Engineering", "Mechanics" and others. The output is with: "Electrical part of electrical power plants and electrical power stations", "Power supply" and "Final year project".
Course content:
Constructive elements of electrical networks. Stationary operation modes of the opened electrical networks. Voltage regimes, power and energy losses. Methods for determining the cut of the conductors. Closed electrical networks. Methods for determining the power distribution. Voltage, power and energy losses. Regulating of the voltage and frequency in the electrical systems. Mechanical design of electric power lines. United energetic systems.
Teaching and assessment:
Along the classical lecture forms, visual aids are used during some parts. The laboratory practice follows the lecture material in a synchronized way. The students are supposed to be acquainted with the main issues of the previous lecture in advance. The lecturer provides continuous assessment of the learning process of the taught material via the learners' participation in the laboratory practice.
The requirements for successfully finishing the subject are in compliance with the Inner regulations of the study activity of the University of Ruse. Possibilities for not sitting for an exam are not envisaged.
The final control is achieved by sitting for a written and oral exam on the subject

Electrical substations

ECSTcredits:4 **Workload per week:** 2l+0s+1lab.+0p
Assessment: exam **Tupe of exam:** written
Deprtments: Department of Electric Power Engineering, Faculty of Electrical and Electronic engineering.
Lecturer:
Assoc. Prof. Liudmil Dosev Mihaylov, Department of Electric Power Engineering, тел.:+359 82 888 302
E-mail: lmihaylov@uni-ruse.bg
Annotation:
The course "Electrical Substations" provides students with theoretical and engineering expertise needed to the design and operation of the electrical equipment and systems in the electrical substations.

Listening to a course of lectures, laboratory classes and introduction with acting electric power sites are provided.
The input connections of the corse: Higher Mathematics, Electrical materials, Electric Power Safety, Theoretical Electrical Engineering, Electrical Measurements, Electrical Machines and Electrical Apparatus.
The output connections are: Electric Power Networks, Electric Sypply, Technical Operation of Electrical Systems in Industry, Renewable Energy Sources and Energy Technologies.
Course syllabus: Operating modes of operation of electrical systems. Selection of bars (rigid and flexible), cables, insulators and fuses for MV and HV circuits. Electric apparatuses in MV and HV distribution systems. Main electrical circuits of electric substations.
Teaching methodology: The teaching is mainly conducted through lectures and laboratory exercises. Multimedia presentation, advertising materials and lab stands are used to illustrate the delivered material.
The main part of the laboratory exercises last 2 academic hours, complete with protocols and are lead by cycles. The processing of experimental results and the preparation of reports take place at the end of the exercises and, if necessary, it is accomplished in the extracurricular time. The course ends with an ongoing assessment. It is formed according to the results of two tests and of the laboratory work.

Digital Electronics

ECTS credits: 6 **Weekly workload:** 2l+0s+2lab+0p+1,0cw
Assessment: exam **Type of exam:** written test
Departments involved: Department of Telecommunications Faculty of Electrical Engineering, Electronics and Automation
Lecturers:
Assoc. Prof. Yoana Emilova Ruseva, PhD, Dept, of Telecommunications,tel.: 888 823,
E-mail: ioana@uni-ruse.bg
Principal Lecturer Volodia Hristov Tsonev, MEng, Dept, of Telecommunications, tel.: 888 839,
E-mail: vol@uni-ruse.bq
Assoc. Prof. Nina Vasileva Bencheva, PhD, Dept, of Telecommunications,tel.: 888 823,
E-mail: nina@uni-ruse.bq **Abstract:**
The subject has the objective to familiarize students with the main problems of digital electronics. It links the functions of the digital elements with their microelectronic basis on one hand, and on the other hand - with their application when building pulse and digital devices. Deep knowledge in electrical engineering and semiconductors is necessary. The subject helps to give knowledge in the field of hardware.
Course content:
Boolean algebra. Synthesis and analysis of combinational circuits. Digital circuits with memory. Forming circuits. TTL integrated circuits. CMOS logic integrated circuits. Triggers. Schmidt triggers. Multi-vibrators. Generators of linear voltage. Impulse circuits with operating amplifiers. Particularities of integrated circuits with middle scale of integration. Interface circuits.
Teaching and assessment:

The lectures give the students the opportunity to get acquainted theoretically with the main questions of digital electronics before the laboratory exercises. The students must be prepared for each workshop and at the end prepare a report for each of them. The exam is held as a written test.

Process Control

ECTS credits: 8 **Weekly classes: 3I + Os + 2lab + Op + ca**
Assessment: exam **Type of exam: written**
Methodology management: Department of Automatics, Information and Control Engineering Faculty of Electrical Engineering, Electronics and Automation
Lecturers:
1. Assoc. Prof. Mirolyub Ivanov Mladenov, PhD, Department of Automatics, Information and Control Engineering, phone: 082/888 747, E-mail: mladenov@uni-ruse.bq
2. Martin Plamenov Deyanov, PhD, Department of Automatics, Information and Control Engineering, phone: 082/888 678, E-mail: mdeianov@uni-ruse.bq
Annotation:
The lectures in the course introduce the main aspects of process control to the students including control of processes like objects for automation with their specific features as well as the dynamic of the main structures of automation systems using standard industrial controlers. The course foundation is the knowledge received in other courses: Basics of Control Theory and Control Instrumentation and is connected with courses in student's education.
Syllabus contents:
Main function and structure in the process control systems. Processes like objects for automation. Control systems with standard control lows and relay control. Control of integrating processes. Introduction of classical control architectures like cascade, feed forward with feedback and ratio control. Control of objects with a significant dead time. Fuzzy Logic for process control.
Teaching and learning methods:
The lectures are visualized with presentation. Laboratory classes are in a cyclic manner. The course assignment is for studying the dynamic of a control system. The final written exam mark is based on'a number of problems with a different degree of difficulty.

Elements of Automation Systems

ECTS credits: 6 **Weekly classes**: 3I + Os + 1 lab + Op
Assessment: examination **Type of exam:** written
Methodology management: Department of Automatics and mechatronics
Faculty of Electrical Engineering, Electronics and Automation
Lecturers:
1. Assoc. Prof. Valentin Bogdanov Stoyanov, PhD, Department of Automatics, Information and Control Engineering, phone: 82/888 372; E-mail: vstoianov@uni-ruse.bq
2. Principal Assistant Nikolaj Petkov Valov, Department of Automatics, Information and Control Engineering, phone: 82/888 372; E-mail: nvalov@uni-ruse.bq

Annotation:
Through this discipline the students are introduced to the principles of design and formation of the control laws, some particular constructions of electronic, pneumatic and hydraulic regulators, executive mechanisms and regulating devices. The achieved knowledge will be the base of some disciplines, which will be studied later: "Special Controllers", "Automatic Control Systems Design", Project "Automatic Control Systems Design".
Syllabus contents:
Properties of the real regulators. Elements and assemblies of industrial electronic regulators. Industrial digital regulators. Operation of digital regulators in noisy environment. Pneumatic and hydraulic regulators. Executive mechanisms. Regulating devices. Transformers of the type of energy of signals.
Teaching and learning methods:
The students are acquainted with the curriculum subjects by lections. Practically the themes are carried out and developed through exercises and the course study. An individual report is prepared for each exercise, which is assessed by the lecturer after defence. The final mark for the semester is formed by an exam, as the marks from the exercises are taken into account.

Hydraulics And Thermotechnics

ECTS credits: 5 **Week education:** 2lec+1sem+1labs+0ps
Form of knowledge control: running valuation
Methodic guidance: Department of Thermotechnics, hydraulics and ecology, Agrarian-industrial faculty
Lecturers: Assoc. Prof. Gencho Stoykov Popov, PhD; Phone: 082/888-580; E-mail: qspopov@uni-ruse.bq
Assist. Zhivko Dimitrov Kolev, PhD; Phone: 082/888-304, E-mail: zkolev@uni-ruse.bq
Department of Thermotechnics, hydraulics and ecology
Annotation: The discipline proposes basic knowledge from the fields of hydraulics, hydraulic machines, thermodynamics, heating transfer and the applied thermotechnics.
The aim of education by the discipline is giving of knowledge to the students for the methods and ways of means of analyzing and effective working of the real hydraulic and thermotechnics systems and installations.
In the applied part questions from the fields of water steam and heating transfer apparatuses are included.
Contents of the education discipline:
Part 1: Basic properties of the fluids. Basic equation of the hydrostatics. Equation for continuity of the fluid streams. Equations of Bernoulli. Hydraulic resistances in pipes. Pipe systems. Common information and classification of the hydraulic machines. Basic indices of turbo pumps. Centrifugal pumps and ventilators - principle of working and characteristics. Working in pipe system and regulation. Economy of the methods of flow regulation of the pump and ventilator installations.
Part 2: Basic laws of the ideal gases. Thermodynamics processes - kinds. First and second principles of the thermodynamics. Concepts for thermal engine and refrigeratory machine. Water and water steam. Processes of changing of the fluids physical conditions. Heating

transfer - heat conductivity, convection and thermal radiation. Heating installations. Ventilation and air-conditioning of public and industrial objects. Compressor and absorption refrigeratory machines and installations.

Technology of education: The students receive theoretical knowledge from the lection material. The seminar and laboratory exercises create computing and practical habits of the students. At every laboratory exercise the students calculating, presetting by graphics and analyzing the received data. The evaluation of the students depends from their activity during the lectures and exercises and the results from the two knowledge controls.

Economics

ECTS credits: 4 **Weekly classes:** 2lec+1sem+0labs+0ps
Assessment: continuous assessment **Type of exam**: written
Departments involved:
Department of Economics
Faculty of Business and Management
Lecturers:
Assoc. Prof. Emil Georgiev Trifonov, MEcon, PhD, Department of Economics, tel.: 888 557, E-mail:e_trifonov@abv.bg
Assoc. Prof. Dyanko Hristov Minchev, MEcon, PhD, Department of Economics, tel.: 888 557, E-mail: dminchev@ru.acad.bg
Abstract:
Economics is a fundamental economic discipline that examines the general principles and problems of contemporary market economy at micro- and macro level. It gives knowledge of the economic system functioning, and it is fundamental for the formation of economic expertise.
Course content:
Essence of Economics. Measuring Economic Activity: Incomes and Products Circulation. Goods and Services Production. Market and Market Mechanism. Demand and Supply Elasticity. Costs and Revenues of the Company. Competition and Market Behavior. Pricing and Income of Production Factors. Government
Intervention in the Economy. Market Economy, Money Supply and Bank system. Macroeconomic and Policy Economic Theory. Economy Management (Fiscal and Monetary Policy). Government Policy and International
Exchange. Rates of Exchange and Their Mechanism.
Teaching and assessment:
The teaching process in Economics is accomplished by lectures, seminars and controlled extracurricular work.
The lectures present the logic of the discipline principles and illustrate it by appropriate examples. The seminars are based on the lectures and synchronized with their consistency. There are two tests as part of the continuous assessment on microeconomics and macroeconomics carried out during the seminars. The active form of the tuition in Economics is an essay whose topic is submitted in the first week of the course during the seminars. Countersign in the discipline is given to students that have been present at the two tests and have

delivered self-elaborated essay. The final assessment of the student is formed by the results of the two tests and the essay.

Automated control of tools and systems

ECTS credits: 5 **Weekly classes:** 2I + Os + 2lab + Op
Assessment: exam **Type of exam**: writing
Methodology management:
Department of Automatics, Information and Control Engineering Faculty of Electrical Engineering, Electronics and Automation
Lecturers:
1. Assoc. Prof .Venelin lliew Yakov, PhD, Eng, Department of Automatics, Information and Control Engineering, phone 082 888 269, E-mail:! acov@uni-ruse.bq Annotation:
The discipline "Automated control of tools and systems" is a continuation of the discipline "Control of Electromechanical Systems". The aim of the course is to introduce the students from the department of AICT to the influence of different types of feed-back on the static and dynamic characteristics of closed electro-motion systems. It reviews the combined work of electric motors, converters and the following particularities in the work of the electromechanical systems. There are certain incoming relations with other discipline "Computer Control of Electromechanical Systems" (a discipline from the MSC DEGREE COURSE).
Syllabus contents:
The Static characteristics of the production mechanisms. The Right stop and Productivity of machines and equipment. Speed control of machines and equipment. Positional control of machines and equipment. Protection and interlocks of machines and equipment. Automated control of pumps, ventilations and transport equipments.
Teaching and learning methods:
The practice classes are carried every week in a cycle (3 lessons form a cycle). Flowing assessment takes place during the practice classes. A student must be present at all the practice classes and write a report for every one of them and the colloquium. The final exam is a written one, bus also has a discussion part.

Electrical Power Supply

ECTS credits: 7 **Weekly workload:** 3L+0S+2Lab+0P
Assessment: exam **Type of exam:** written
Departments involved: Department "Electrical supply and electrical equipment",
Faculty "Electrical engineering, Electronics and Automation" (EEA)
Lecturers:
Assoc. Prof. Stefan Petrov Stefanov, PhD, EEA department, tel.: 082 888 616;
E-mail: stefanov@uni-ruse.bq
Assoc. Prof. Viara Subova Ruseva, PhD, EEA department, tel.: 082 888 616,
E-mail: vruseva@uni-ruse.bq **Abstract:**
Electrical supply is one of the main disciplines of the subject. The aim of the course is studying

of basic questions from the theory and practice of designing, exploitation and management of the Electrical Power Supply Systems.The subject is based on knowledge received in the courses of "Theoretical Bases of the Electro Engineering", "Electric Measurements", "Electrical Machines", "Electrical apparatus", "Electrical Networks", "Electrical Part of Electrical Power Stations", "Lightening and Installation Equipment". The subject Electrical Power Supply is a prerequisite for the specializing subjects and the Final Year project.

Course content:

Basic elements and working regime of the Electrical Supply Systems. Classification and characteristics of the recipients of electrical power. Electrical load. Reliability of the electrical power supply. Quality of the electrical power. Schemes of electrical supply systems. Compensating of the reactive loads. Starting and self-starting of electrical machines. Protection of the electrical networks for low voltage. Rational use of electricity.

Teaching and assessment:

Suitable technical devices and prospective materials of foreign and Bulgarian companies are used for visualizing the lecture material. The laboratory exercises are held as cycles. Every exercise begins with oral exam and finishes with submitting a protocol. The examination is conducted by solving test.

Electrical Power Supply - Course Project

ECTS credits: 4 **Weekly workload:** OL+OS+OLab+2P

Assessment: Control of project documents **Type of exam:** Course Project Presentation

Departments involved: Department "Electrical supply and electrical equipment",
Faculty "Electrical engineering, Electronics and Automation"

Lecturers:

Assoc. Prof. Stefan Petrov Stefanov, PhD, EEA department, tel.: 082 888 616;E-mail: stefanov@uni-ruse.bq

Assoc. Prof. Viara Subova Ruseva, PhD, EEA department, tel.: 082 888 616,E-mail: vruseva@uni-ruse.bq

Abstract:

The Course Project on the subject Electrical Power Supply is elaborated with the purpose of assimilating of the application of the basic methods, approaches, solutions, structures and elementary base during the designing of the electrical supply complex of the users of electrical power.

The initial connections are based on knowledge received during the courses on "Technical Documentation", "Electrical apparatus", "Electrical Networks and Systems", "Electrical Part of Electrical Plants", "Lightening and Installation Equipment", "Relay Protection". The exit connections are with the following subjects: "Technical Exploitation of Electrical Arrangements in the Industrial and agriculture enterprises", "Automatic systems in the Electrical Power Supply" as well as Final Year project.

Course content:

There are two detached parts in connection with the Course Project: Part one - designing of the electrical supply system on low voltage in differentiated user (manufacture department, agricultural object) Part two - designing the electrical supply system of a business establishment. The specified in the designing practice textual and graphical documents should

be worked out for both parts.

Teaching and assessment:

The development of the course project is done as individual assignment and on week schedule. The transitional results and the next problems are checked and specified during the period for individual week consultations. The Course Project should be submitted and defended in front of the manager of the project

Lightening and Installation Equipment

ECTS credits: 7 **Weekly workload:** 2L+0S+2Lab+0P+CW

Assessment: exam **Type of exam:** written

Departments involved: Department of Electrical Power Engineering,
Faculty of Electrical engineering, Electronics and Automation **Lecturers:**

Assoc. Prof. Orlin Lyubomirov Petrov, MEng, PhD, Department of Electrical Power Engineering,
tel: 082 888 301; E-mail: opetrov@uni-ruse.bq

Abstract:

Discipline Lightening and Installation Equipment aims to provide knowledge and skills to students on key issues of lighting and installation equipment: terminology, variables, indicators, classifications, methods, element base, electrical circuit solutions safeguards, content projects, measurements and other.

Coursework in order to reinforce the knowledge and skills to create a practical implementation of the basic methods, approaches, solutions and structures in the design of the lighting system and the electrical system of a small residential, industrial, public or other building.

The course utilizes the students' knowledge of the subjects: Physics, Technical documentation, Electrical safety, Theoretical Electrical Engineering, Electrical materials, Electrical Measurements, Electrical machinery and electrical equipment.

Knowledge gained in this course are link courses: Electricity, Lighting and design, diploma and master programs.

Course content:

Basic concepts, light quantities and units. Optical radiation. Basic energy quantities and units. Heat and fluorescent radiation. Light properties of the bodies. Light measurements. Types of light sources. Fixtures. Types of lighting systems. Photometric design of lighting systems.

Introduction to Electrical Installation. Electrical components and systems. Electrical circuits. Technology to design of electrical installations.

Teaching and assessment:

Presented lectures on theoretical foundations are taught laboratory classes by examining the light source and installation devices. Individual reports must be created. The exam is written by two questions. The final assessment takes into account the assessment of coursework.

Process Control System Design

ECTS credits: 7 **Weekly classes:** 3l + Os + 2lab + Op

Assessment: exam **Type of exam:** written

Methodology management: Department of Automatics and Mechatronics
Faculty of Electrical Engineering, Electronics and Automation
Lecturers:
Prof. Mirolyub Ivanov Mladenov, PhD, Department of Automatics, Information and Control Engineering, phone: 082/888 747, E-mail: mladenov@uni-ruse.bq
Annotation:
The course objective is to give the students working knowledge in the main stages and activities, concerning the process control systems design. Different problem connected with the choice of the system structure, the control algorithm and adjustment of the automatic control sistems are taken under concideration, as well as the choice of components for system implementation. The students study the standards, concerning process control system design.
Syllabus contents:
Main stages in the process control system design. Selection of the system structure and control algorithm. Adjustment of automatic control systems. Selection of the components for system implementation. Basic standarts, concerning the process control system design.
Teaching and learning methods:
The lectures present the material the main theoretic aspects of the automatic control systems design. At the seminars students acquire skills to solve problems, concerning the systems design. The final mark is formed on the basis of the continuous assesment and examination.

Process Control System Design-Project

ECTS credits: 4 **Weekly classes:** Ol + Os + Olab + 2p + cp
Assessment: continuous assessment **Type of exam:** course project
Methodology management: Department of Automatics and Mechatronics
Faculty of Electrical Engineering, Electronics and Automation
Lecturers:
1. Prof. Mirolyub Ivanov Mladenov, PhD, Department of Automatics and Mechatronics Engineering, phone: 082/888 747, e-mail: mladenov@uni-ruse.bg
2. Martin Plamenov Deyanov, PhD, Department of Automatics and Mechatronics Engineering, phone: 082/888 678, e-mail: mdejanov@uni-ruse.bg
Annotation:
The course's objective is to systemise, strengthen and deepen theoretical and practical knowledge about a wide range of problems, related to control systems design, like the choice of the system structure, the control algorithm, the control system adjustment, as well as the choice of the components for system implementation, schemes development.
Syllabus contents:
Smoothing and approximation of the experimental step response characteristics of a control object. Choice of the system structure. Choice and adjustment of the controller. Dynamic analysis and simulation. Control system engineering. Schemes development. Graphical performance. User manual development. **Teaching and learning methods:**
Each student independently develops one task. The workshops are two hours a week. Consulting is provided in the computer labs. At the end of the semester the students prepare a written report for the work done. The project is defended in the last week of the semester. The final mark is formed on the basis of project implementation, it's defence and the student's

work during the workshops

Special Microprocessor Devices

ECTS credits: 7 **Weekly workload:** 3l + 0s + 2lab + 0p
Assessment: exam **Type of exam:** written and oral
Departments involved:
Department of Telecommunications
Faculty of Electrical Engineering, Electronics and Automation **Lecturers:**
Assoc. Prof. Nina Vasileva Bencheva, PhD; Dept, of Telecommunications; tel.: 888 841; 888 823;
E-mail: nina@uni-ruse.bq
Assoc. Prof. Yoana Emilova Ruseva, PhD; Dept, of Telecommunications; tel.. 888 823;
E-mail: ioana@uni-ruse.bq **Abstract:**
The subject Special Microprocessor Devices has the objective to acquaint the students with the characteristics, organization, functioning and usage of the microprocessors and microcomputers systems. The subject is based on the PIC18FXX2 single chip microcontroller and the MPLAB development environment. Methods and circuits of digital-analog and analog-digital conversion are discussed.
Course content:
Microprocessor's architecture. Microprocessor system's architecture. Memory organization. Fundamentals and organization of the parallel interface, series interface and timers modules. ADC and DAC convertors.
Teaching and assessment:
The topics of the lectures give the possibility to the students to get acquainted theoretically with the main issues of the microprocessor devices before doing the practical exercises. Students develop and debug programs for exploring the components of the microprocessor system or the modules of the microcontroller using the available development environment.

Course Project Special Microprocessor Devices

ECTS credits: 4 **Weekly workload:** 0l + 0s + 0lab + 2p + 3cp
Assessment: defence **Type of exam:** oral
Departments involved:
Department of Telecommunications
Faculty of Electrical Engineering, Electronics and Automation **Lecturers:**
Assoc. Prof. Nina Vasileva Bencheva, PhD; Dept, of Telecommunications; tel.: 888 841; 888 823;
E-mail: nina@uni-ruse.bq
Assoc. Prof. Yoana Emilova Ruseva, PhD; Dept, of Telecommunications; tel.: 888 823;
E-mail: ioana@uni-ruse.bq **Abstract:**
The course project on the subjects Specialized Microprocessor Devices consolidates the acquired knowledge and gives skills to the students for independent solving of engineering problems, connected with the design of different microprocessor systems, their repair and exploitation.

Course content:
Example topics, connected with the design of microprocessor devices based on single-chip microcomputers, are discussed. The project assignment includes hardware design (synthesis of the structure circuit and choice of the control processor; analysis of the work regimes) and software design (tasks division of the processor in the time as main routine and subroutines, interrupt service routines).
Teaching and assessment:
At the beginning of the term the students receive individual assignments, containing particular data for the required indicators. Weekly individual tutorials are envisaged. The explanatory notes of the project contain 10-15 pages with the following compulsory parts: hardware design, software design and arguments about the chosen structure, graphical part. The explanatory notes contain an assembler listing of the particular subroutine or interrupt service routine. The project is defended during the last week of the semester in front of the lecturer, who evaluates it with a complex mark, which is formed on the basis of the project's development and presentation.

Heavy-Current Power Suplies

ECTS credits: 5 **Weekly classes:** 3l+3p+0ws +0cw
Assessment: continuous assessment **Type of exam:** written and oral
Methodology management:
Department of Theoretic and Measuring Electrical Engineering Faculty of Electrical Engineering, Electronics and Automation **Lecturers:**
Head assistant PhD lliyan Stefanov Tsvetkov; Dept, of Theoretic and Measuring Engineering; tel.: 082 888 415.
Abstract:
The course Heavy-Current Power Supplies Devices is designed to acquaint students with the basic principles and procedures applicable to the provision of electricity, the different technical tools in the industry. It is designed for students in electrical engineering specialty in Silistra department of Ruse University.
The course builds on the knowledge acquired in the courses in physics, mathematics and electrical engineering and electronics.
Knowledge gained in this course are necessary when working in the fields of industry, energy, renewable energy, etc..
Syllabus contents:
Power sources for electric current. Electrical machinery operating in generator mode - DC, synchronous and asynchronous. Chemical sources of electricity. Galvanic elements. Photovoltaic's. Generators used in renewable energy sources. Power and welding transformers. Powerful Semiconductor components. Methods and devices for protection in the power supply. Single-phase and Poly-phase rectifiers - types, modes of action and essential characteristics. Rectifiers operation with active and reactive loads. Controlled rectifiers. Filters - General information, types and parameters. Voltage and current stabilizers. Voltage and current regulators. Converters of voltage and frequency. Inverters. Chargers. General information on uninterruptible power sources. UPS.
Technology of teaching:

Training in the discipline of heavy-current power supplies shall be carried out through lectures and laboratory exercises. Lection material shall be demonstrated by means of presentation equipment.
Laboratory exercises are conducted in a laboratory with an installation. Laboratory exercises follow a lection material. Classes are held in the Lecture-Hall four hours per week. During each exercise a protocol is filled, while at the end of the session, a check is being carried out and the results obtained. Last week, when all the exercises and protocols are given the endorsements of the semester are provided.

The Industrial Electrical Power Equipment Maintenance

ECTS credits: 4 **Weekly workload**: 3L+0S+0Lab+2P
Assessment: exam **Type of exam:** written and oral

Departments involved Faculty of Electrical Engineering, Electronics and Automation
Lecturers:
Assoc. Prof. Konstantin Georgiev Koev, MSc (Eng), PhD, Department of Electrical Power Supply and Electrical Equipment, tel: 888 201; 888 661; e-mail: kkoev@uni-ruse.bq.
Abstract:
The subject has the objective the students to learn how to organize and carry out the activities of the industry electric power equipment maintenance and the students be able to decide practical issues. The subject has input links to the following courses: "Electrical networks and substations", "Electrical machines", "Electrical apparatus", "Electric equipment" and others. The subject is a prerequisite for the Diploma theses and the students' practical realization.
Course content:
The organization of the industrial electrical power equipment maintenance. The industrial heat and furnace electrical power equipment maintenance. The maintenance of the electric apparatus for the start, stop, control processes of the electric power equipment. The electric power equipment maintenance. The electric power machines and transformers maintenance.
Teaching and assessment:
Teaching of the students is done via lectures and practical exercises. The lection's material is presented by classical pedagogic forms and present multimedia presentation techniques. The laboratory exercises follow the lectures and practical problems are decided during the exercises. The exam includes a written part on topics from the study material, which is followed by oral discussion and forming of the final mark.

Electrical Power Equipment

ECTS credits: 4 **Weekly workload:** 3L+0S+0Lab+2P
Assessment: exam **Type of exam:** written, oral
Departments involved: Department "Electrical Power Supply and Equipment" (EPSE), Faculty of Electrical Engineering, Electronics and Automation (EEEA)
Lecturers:
Prof. Ivan Jordanov Palov, M.Sc.Eng. PhD, Department EPSE, tel: 082 888 364;

E-mail: ipalov@uni-ruse.bq
Assoc. Prof. Kiril Aleksandrov Sirakov, M.Sc.Eng. PhD, Department EPSE, tel: 082 888 364;
E-mail: csirakov@uni-ruse.bq
Abstract:
The objective of the subject is knowledge acquirement about electric equipment of specific common production aggregates and about their management schemes understanding.
Course content:
Management schemes compilation principles. Heating devices, cranes, ventilators, pump aggregates electric equipment.
Teaching and assessment:
Visual aids are used during the lectures. Operative models are used during the laboratory exercises. Oral discussions and short tests (up to 5 minutes) are done during the lectures and laboratory exercises. Protocols submission is required for the acceptance of the laboratory exercises. The semester can be validated if all exercises are done, submitted and defended and if the student attended more than 50% of the lectures. The exam is written on two topics from the questionnaire and is followed by oral discussion on parts of other topics.

Renewable energy resources and energy technologies

ECTS credits: 3 **Weekly workload:** 2L+OS+2Lab+OP
Assessment: exam **Type of exam:** written
Departments involved: Department of Electrical Power Supply and Equipment,
Faculty of Electrical Engineering, Electronics and Automation **Lecturers:**
Assoc. Prof. Dr. Krasimir Velikov Martev; Department of Electrical Power Supply and Equipment;
tel: 888 281. 888 749. E-mail: kmartev@uni-ruse.bq
Abstract:
The course aims at acquainting the students with the main issues connected with the different types of energy and energy resources, their rational usage, electrical power supply and protection of the environment in the enterprises, farms and companies.
The course is based on knowledge acquired on the courses in “Physics, “Heat Engineering”, and “Theoretical Electrical Engineering”. Output links - Final Year project.
Course content:
Types of energy resources. Energy balance of the enterprise and the company. Power supply of the enterprises and the farms (heat energy, compressed air, water, oxygen, fuel oil, gas etc). Rational use of energy. Secondary energy resources. Model and balance of the systems ’’Energy - environment”. Optimum technologies and systems of power supply.
Teaching and assessment:
The teaching is based on the usage of classical pedagogic forms. On every topic audio-visual materials are used and videos are shown. Two planned tests are done during the semester. At the exam the students work on two questions in a written form, which help to estimate their degree of knowledge, after that there is an oral exam.

Automatic Control Theory

ECTS credits: 4 **Weekly classes:** 3lec + Osem + Olabs+ 2ps
Assessment: exam **Type of exam:** written exam
Methodology management:
Department of Automatics and Mechatronics
Faculty of Electrical Engineering, Electronics and Automation
Lecturers:
1. Assoc. Prof. Georgi Lyubomirov Lehov, PhD, tel. 082 / 888 745, E-mail: qlehov@uni-ruse.bq
Department of Automatics and Mechatronics
2. Assoc. Prof. Donka llieva Ivanova, PhD, tel. 082 / 888 266, E-mail: divanova @uni-ruse.bq
Department of Automatics and Mechatronics
Abstract:
The aim of the course is to give knowledge and practical skills for modelling, analysis and synthesis of linear continuous control systems in state space, linear digital systems and nonlinear automatic control systems. Prerequisites to this course are the Introduction to Automatic Control Theory and Signal Processing courses. The acquired knowledge has application in various fields of engineering.
Syllabus contents:
State space description of linear continuous-time control systems. Analysis and design of control systems in state space. Mathematical models of digital control systems. Stability analysis, dynamic performance analysis and design of digital control systems. Nonlinear control systems.
Teaching and learning methods:
The lectures present the theoretic aspects of the addressed problems and illustrate them with appropriate examples. The aim of the practical exercises is to teach the students to apply the acquired knowledge creatively. The students' progress is checked in each exercise throughout the semester. The course ends with a written exam which consists of problem solving and question answering. In order to be allowed to take the exam the students have to attend all the exercises. The practical work mark is taken into consideration when forming the final course mark.

Intelligent Systems and Sensors

ECTS credits: 4 **Weekly classes:** 3I + Os + Olab + 2p
Assessment: exam **Type of exam:** written
Methodology management: Department of Automatics and mechatronics
Faculty of Electrical Engineering, Electronics and Automation
Lecturers:
Prof. Mirolyub Ivanov Mladenov, PhD, Department of Automatics and mechatronics Engineering, phone 888 747, E-mail: mladenov@uni-ruse.bq
Annotation:
The course aims to give the students working knowledge in modern sensor technics and its application in the artificial intelligence systems. Focused on the following sensor groups:

tactile sensors, F/T sensors, location sensors and visual sensors. It treats the following topics: the structure, the technical characteristics, the basic principles and methods for processing sensor information and different aspects of sensor application, as well as modern principles and instruments for "sensor fusion".

Syllabus contents:

Basic characteristics of the artificial intelligence systems. Tactile sensors, tactile matrices. Tactile information processing. F/T sensors - basic characteristics, analytical transformations, applications. Ultrasonic and optical sensors. Speech sensors and speech recognition. Computer vision systems. Visual sensors. Image processing. Multifunctional sensor systems. Application of the Kalman filter and Bayes networks for "multisensor fusion".

Teaching and learning methods:

The lectures present the main theory material by multimedia system and illustrate it with appropriate example problems. Lecture materials will be given out in advance to the students on CD. The workshops are held in a laboratory where the students use specialized equipment and software. They are provided with appropriate workshop materials. The final mark is formed on the basis of two written exams during the semester and on the basis of the results from workshops.

Electromagnetic Waves Propagation, Antennas and Microwave Technique

ECTS credits: 4 **Weekly workload:** 3 I + 0 s + 0 lab +2 p

Assessment: exam **Type of exam:** written and oral

Departments involved: Department of Electronics, Faculty of Electrical Engineering, Electronics and Automation

Lecturers:

Assoc. Prof. Valentin Angelov Mutkov, PhD, Department of Electronics, tel.:++359 82 888 246, E-mail: vmutkov@uni-ruse.bg

Annotation:

The optional subject "Electromagnetic Waves Propagation,Antennas and Microwave Technics" has the objective to acquaint the students from the degree course in Electro-engineering with the peculiarities of the electromagnetic waves propagation and microwave technics in different media and with the parameters of some types of antennae, antenna grades and transmitter lines. The subject requires knowledge in Physics and Theory of Electrical Engineering.

Course syllabus:

Main notions and equations of the electromagnetic field. Flat electromagnetic wave in unlimited medium. Polarization of electromagnetic waves. Reflection and penetration of an electromagnetic wave into the border between two media. Influence of the earth surface over the propagation of the electromagnetic waves. The ionosphere and its influence over the propagation of the electromagnetic waves. Microwave Technics. Peculiarities of the propagation of the electromagnetic waves with frequencies under 30MFIz. Peculiarities of the propagation of the electromagnetic waves with frequencies over 30MFIz. Transmitter lines: wave guides, lines with surface waves. Compatibility and symmetry of the lines with the load. Emission from linear conductor. Symmetrical vibrator. Vibrator system - reflectors and

directors. Antenna characteristics and parameters. Antennas for long and medium waves, transmitter antennas. Antennas for short waves, symmetrical vibrator. Television antennas. Scanning antenna systems.

Teaching and learning methods:

The lectures and the exercises have 3 hours duration and are held every weeks.

The method of assessment is written exam. The exam has 2 hours duration

Broadcasting Technique

ECTS credits: 4 **Weekly workload:** 3I + 0 s + 0 lab + 2 p

Assessment: exam **Type of exam:** written and oral

Departments involved: Department of Electronics, Faculty of Electrical Engineering, Electronics and Automation

Lecturers:

1. Assoc. Prof. Valentin Angelov Mutkov, PhD, Dept, of Electronics, tel.:++359 82 888246, E-mail: vmutkov@uni-ruse.bg **Annotation:**

The optional subject has the objective to acquaint the students with the theory and structure of the receiving and broadcasting equipment. The devices, the analysis and synthesis methods, the principles and operation regimes of the different receiving and broadcasting equipment are studied. The peculiarities of the active elements and of the units, determining the frequency, are discussed

Course syllabus:

General information, main functions and structure circuits of the radio broadcasting devices High frequency power amplifiers. Frequency multipliers. Electronic generators. Frequency synthesizers. Modulations in the radio broadcasting devices. Amplitude modulation. Frequency modulation devices. Phase modulation devices. Stereophonic frequency radio broadcasting. Radio receiving devices. Block circuits. Input devices of the radio receivers. High frequency amplifiers in the radio receiving devices. Medium frequency amplifiers in the radio receiving devices. Frequency converters in the radio receiving devices. Detection in the radio receiving devices. Amplitude detectors. Frequency demodulators. Regulations in the radio receiving devices. Stereophonic radio receivers. The subject contains a course work.

Teaching and learning methods:

Lectures are delivered with duration of three hours every weeks. The laboratory exercises are held every week and have two hours duration. The measurements are made on specially developed models - radio receivers and radio transmitters.

The method of assessment is written exam. The exam has 2 hours duration.

Television and Video Technique

ECTS credits: 3 **Weekly workload:** 2 l+ 0 s + 0 lab + 2 p

Assessment: continuous assessment **Type of exam:** written control work

Departments involved: Department of Electronics, Faculty of Electrical Engineering, Electronics and Automation

Lecturers:

1. Assoc. Prof. Valentin Angelov Mutkov, PhD, Dept, of Electronics, tel.:++359 82 888246,
E-mail: vmutkov@uni-ruse.bg **Annotation:**

The optional subject has the objective to give the students knowledge about the technical devices, organizing the television systems and their subsystems: forming, keeping, transferring, reproducing and controlling the television signals. The lecture material includes the operation principles and design peculiarities of the devices, forming the transmitting, the preserving, the transferring and the receiving television subsystems. The exercises consolidate the studied lecture material via measurements and investigations on models, processing the television signals in different ways.

Course syllabus:

Television signals and systems. Analog-digital and digital-analog conversion. Source and channel coding for connection. Error protection by transferring the digital television signal. Characteristics of Digital Video Broadcasting signals. Transfer via air, cable and satellite distributing networks (DVB-T, DVB-S, DVB-C). General information about the digital modulations. Phase manipulation. Square amplitude modulation. OFDM. Modulation of type 8VSB. Television program transfer via MMDS. Video signal coding by standard MPEG-2. Profiles and levels. Digital video recording. Video taperecorders.

Teaching and learning methods:

Lectures are delivered every week and have three hours duration in the period of the 8th semester with continuation of ten weeks. The laboratory exercises are held with duration of two hours every weeks. The measurements are made on specially developed laboratory models and television apparatus. The subject finishes with the continuous assessment at the workshops and the mark of the control work.

SPECIALTY

AUTOMOTIVE ENGINEERING

educational qualification degree
BACHELOR

PROFESIONAL STANDARTS

OF A BACHELOR IN

AUTOMOTIVE ENGINEERING

SPECIALTY: "Automotive Engineering"
Educational qualification degree: bachelor
Term of study: 4 years
Form of education: regular

The main goal of the Bachelor's degree in AUTOMOBILE ENGINEERING is to prepare executive and managerial staff with high professional qualification in the field of service for motor vehicles.
The professional purpose of the engineers professional bachelors in "AUTOMOBILE ENGINEERING" is to perform service activities in the diagnosis, maintenance and repair of internal combustion engines and tractor equipment, to actively participate in the organization of service activities, to perform teaching and other activities in the field of tractor machinery and other industries, organizations and companies.
Requirements for the training of the specialist: Bachelor's degree engineers in "AUTOMOBILE ENGINEERING" must have a good fundamental general engineering and special professional training, high language and general culture.
General engineering training should include: higher mathematics, physics, mechanics, resistance of materials, computer science, applied geometry and engineering graphics, machine elements, thermodynamics, hydraulic and pneumatic drives, consumables, technical measurements, electrical engineering, materials science and technology of metals documentation with CAD systems.
Special training includes: theory and design of internal combustion engines, theory and design of cars, tractors, trucks and road construction machines, electrical equipment of cars and tractors, maintenance and repair of transport equipment, air conditioning in the car, electronic control systems Internal combustion engines, technical diagnostics and car maintenance, organization of service activities, service equipment, service technology, OBD diagnostics, hybrid and electric vehicles.
Requirements for the skills of the specialist: Bachelor's degree engineers in "AUTOMOTIVE ENGINEERING" must have the following general skills: to know the characteristics of tractor equipment, to organize and perform diagnostics, maintenance and repair of tractor equipment in service conditions; to detect and eliminate faults in various systems, to develop technological maps for various service activities, to know the service equipment and to be able to use it effectively.
Graduates of bachelors must have the skills to communicate with both specialists in the field of automotive technology and non-specialists, and have developed the necessary skills to continue their education in higher education.
Job opportunities: Graduates of the Bachelor's degree in Automotive Engineering can work as specialists in companies, services and institutions working in the field of diagnostics, maintenance, repair of tractor equipment, such as head of service, diagnostician, receiver, etc. , as well as in GTP points, driver training companies, organizations for authorized inspections,

sale of spare parts, etc.

CURRICULUM

Of The Degree Course In

AUTOMOTIVE ENGINEERING

First year

Code	First term	ECTS	Code	Second term	ECTS
	Higher mathematics 1 part	6		Higher Mathematics II	6
	Material science	5		Physics	6
	Informatics	6		**Chemistry and exploitation materials**	5
	Technical documentation	7		Economics	3
	Practice in materials technology and machine building	2		Laboratory of Internal Combustion Engines and Automtive technology	2
	Physical education and sport	1		Physical education and sport	1
	Foreign Language:			***Foreign Language:***	
	English I	4		English I	5
	Russian I	4		Russian I	5
Total for the term:		35	Total for the term:		33

Second year

Code	First term	ECTS	Code	Second term	ECTS
	Manufacturing Technologies	4		Internal Combustion engines I	6
	Technical documentation using CAD	5		Automotive Engineering I	6
	Engineering Mechanics	6		Resistance of the materials	4
	Machine elements I	8		Electrical and Electronic Engineering	5
	Road Traffic Safety	4		Machine elements II	4
	Technical Measurements	2		Machine elements - course project	2
	Physical education and sport	1		**Thermodynamics**	3
				Physical education and sport	1
				Practice in machine-building enterprise (3 weeks)	3
Total for the term:		30	Total for the term:		34

Third year

Code	First term	ECTS	Code	Second term	ECTS
	Internal Combustion Engines-2	6		Electronic systems for engine management	6
	Automotive Engineering II	6		Electronic Control Systems in Automotive Engineering	6
	Testing of Internal Combustion Engines (ICEs)	6		Hydraulics and Pneumatics Drive Systems	6
	Environmental problems of transport	6		Electric and Engine Forklift Trucks	6
		1			7
					1

	Tractors Physical education and sport			Technical diagnostics and servicing of automotive engineering Physical education and sport Practice in transport-building enterprise (3 weeks) ***Elective courses (students choose one course from each group):*** Internal Combustion Engines - Course project Course project on Automotive engineering	3 2 2
Total for the term:		31	Total for the term:		39

Fourth year

Code	First term	ECTS	Code	Second term	ECTS
	Fundamentals of testing and diagnostics OBD	6		Service equipment	4
	Hibrid and Electric Vehicles	5		Organization and technology service activities	6
	Air conditioning equipment in vehicles	5		Safety technique	2
	Practice in diagnostic 1	3		Corporate culture and ethics in engineering profession	1
	Technology and Organization of Transport	5		Practice in diagnostic 2	3
	Physical education and sport	1		Physical education and sport	1
	Elective courses (students choose one course from each group):	6		Self graduation	4
		6		State Examination	10
	Road building machines			Graduation	10
	Railway equipment				
Total for the term:		37	Total for the term:		41

Total for the course of study: 240 ECTS credits

Higher mathematics 1 part

ECTS credits: 6 **Weekly workload:** 2 l + 2 s + 0 l + 0 p
Assessment: exam **Type of exam:** written
Department involved: Dept. *Mathematics*, Faculty of Natural Sciences and Education
Lecturers:
1. Assoc. Prof. Veselina Stoyanova Evtimova, PhD, Dept. Mathematics, phone 082/ 888 453, E-mail: vevtimova@uni-ruse.bg
2. Pr. Ass. Anna Simeonova Lecheva-Nedelcheva, PhD, Dept. Mathematics, phone 082/ 888 420,
E-mail: alecheva@uni-ruse.bg
Abstract: The subject is fundamental for the engineers' education and is based on the topics in Mathematics studied at secondary schools. It is very important in students' education in other mathematical subjects, as well as in Physics, Mechanics and other basic courses of engineers' education.
Course content: Revision of secondary school Mathematics. Linear algebra - determinants, matrices, systems of linear equations. Analytical geometry in plane and space - vector calculus, lines and planes in space. Differential calculus - basic theorems, applications (monotony, extremums, convexity, asymptotes, graphics). Integral calculus - definition and basic properties of the primitive function, basic methods for integration.
Teaching and assessment: The students get acquainted via lectures with basic mathematical notations. By rule, the theorems do not include proofs but there are many examples and applications. The seminars create the students' technical ability for practical problem solving. There are two two-hour tests. The student is exempt from exam only if she/he has received at least 4.00 on the corresponding test. The exam is considered passed only if the student has solved at least two problems.

Material science

ECTS credits: 4 **Weekly workload:** 2 l + 0 s + 1 l + 0 p
Assessment: final exam **Type of exam:** written
Department involved: Department of Materials & Manufacturing Engineering (M&ME) Faculty of Mechanical and Manufacturing Engineering (FMME)
Lecturers:
1. Assoc. Prof. Diana Vassileva Tzaneva, MSc (Chemistry), PhD, Dept, of Materials & Manufacturing Engineering (M&ME), tel. 082 888 307, E-mail: dvc@uni-ruse.bg
2. Prof, assistant Mariana Dimitrova llieva, PhD (Materials science and Technology) Dept, of Materials & Manufacturing Engineering (M&ME)), tel. 082 888 307, E-mail: mdilieva@uni-ruse.bg
Abstract: The discipline is devoted to the metal and non-metal engineering materials used in automobile industry. The discipline is based on Physics and Chemistry knowledge and it is a base for "Engineering Chemistry", "Manufacturing technology", "Engineering Design I", "Materials strength", "Engineering Design II", „Workshop - Industrial Placement".
Course content: Classification of the engineering materials. Structure and methods for its

investigation. Phase diagrams and phase transformations. Metallic materials - irons; steels; Cu-, Zn-, AI-, Mg-, Ti-based alloys. Modifying materials properties to achieve maximum efficiency and performance - process alloying, heat and thermo-chemical treatments and coatings deposition. Materials destruction caused by fatigue, wear, deformation and corrosion. Nonmetallic inorganic materials - technical ceramics and glasses. Nonmetallic organic materials - technical polymers and elastomers. Composites.

Teaching and assessment: The subject of the study program is presented to students as lectures and laboratory practices. The lectures are illustrated by schemes, diagrams and graphics using PC presentations. Laboratory practices are designed to provide students with practical skills in metallography and materials testing of some engineering materials, introduced in lectures. The course finishes with a final exam. During training there are two tests of a students knowledge on the lecture material which successful work out gives students the possibility to have a final mark without taking the final exam. Otherwise the final assessment is set up accounting the final exam results and the two tests results.

Informatics

ECTS credits: 4 **Weekly workload:** 1 l + 0 s + 0 l + 2 p + cs

Assessment: continuous assessment **Type of exam:** test

Department involved: Department of Informatics and Information Technologies; Faculty of Natural Sciences and Education

Lecturers:

Prof. Margarita Stefanova Teodosieva, PhD, Dept, of Informatics and Information Technologies

tel. 888 490, Email: mteodosieva@ami.uni-ruse.bg

Abstract: The course objective is to familiarize students with computers and their components as technical aids, as well as with local and global networks and the most widely spread software products - operating systems, word processing systems, presentations, spreadsheet data processing systems, data bases and computer graphics. The workshops aim at providing students with knowledge on the use of Windows, Word, Excel and PowerPoint.

Course content: Classification of computers. Hardware. Operating systems. Application software - word processing systems, spreadsheets, presentations and databases.

Teaching and assessment: Lectures are taught in 2 academic hours every other week. Workshops are carried out in computer laboratories under the guidance of the teacher. Student's progress on the application of relevant software product is assessed continuously. Students get semester validation after attendance not less than 70% of the semester classes. In the end of the semester students' theoretical knowledge is assessed with a test involving the whole course material.

The final mark is formed on the basis of the results from the test (30%) and the continuous assessment mark (70%).

Technical documentation

ECTS credits: 7 **Weekly workload:**

2 l+0 s+0 l +2 p + ca

Assessment: **continuous assessment** **Type of exam:** Written

Department involved: department (MSMEEG), Faculty of Transport.

Lecturer:

Assoc. Prof. Vyarka Toncheva Ronkova PhD MSc. (Eng.), dep. "MSMEEG", tel. 888461, e-mail vronkova@um-ruse.bg

Principal Assistant Krasimir Stankov Kamenov PhD, dep. "MSMEEG", tel. 888461, e-mail: kkamenov@uni-ruse.bg

Abstract: The subject presents the students the methods for constructing of plane images of machine building products and the design documentation types. The main part explores the rectangular projection of the images as view, section, vertical section, axonometric projection. The subject creates practical skills for detail drawing and reading drawing, dimensional drawing, general arrangement drawing, specifications. The acquired acknowledges develop the students' spatial imagination, skills needed for projects implementation and help them for learning easily of new acknowledges during the next design subjects.

Course content: Introduction. Methods of projection. Rectangular projection of point, line and surfaces. Axonometric projection. Types of images. System of laying. Design documents. Threads display and denotation. Denotation of qualitative and quantitative parameters. Design activity automation. Display and denotation of detachable and permanent joints, shape tolerance and surfaces laying, dimensional tolerance, surface roughness, coatings and heat treatments. Engineering requirements. Real detail drawings. Dimensional drawing. Specification. Reading of general arrangement drawing. Denotation of components.

Teaching and assessment: The acquired theoretical acknowledges are improved by problem solving during the practical training. Under the guidance of the lecturer each student prepares work design documentation of the real product and reads a general arrangement drawing. The students individually implement a course assignment which is prepared by stages and is controlled weekly. The student receives the semester attestation if the course assignment is implemented successfully and the trainings are attended regularly. The subject concludes with continuous assessment.

SB10340 Practice in materials technology and machine building

ECTS credits: 5 **Weekly workload:** 0 l + 0 s + 0 l + 4 p

Assessment: colloquium **Type of exam:** written

Department involved: Department of Machine Tools and Manufacturing, Faculty of Mechanical and Manufacturing Engineering

Lecturer:

Assoc.Prof. Tihomir Milenov Todorov, PhD, Department of Machine Tools and Manufacturing, E-mail: titan_tmt@abv.bg

Abstract: The discipline "Practice in materials technology and machine building" aims to give the students the necessary initial knowledge and practical skills on the main stages of the technological processes in the metal casting, welding, plastic deformation and practical skills in the main machining processes - turning, milling, drilling and fitting. Yet another aim is to put graduates from different high schools on equal basis. Input links - In parallel studied Materials Science and Engineering Drawing. Output links - The knowledge are needed for the next general engineering and special disciplines as "Strength of Materials", "Machine Parts", "Technology of mechanical engineering" and others., as well as for production practice of

students.
Course content: Intended for viewing material is divided into 16 topics. Eight of them are devoted to methods and means for obtaining billets by hot mechanical process - casting, forging, welding. In the remaining eight are taught the basic processes and related machines and equipment for processing workpieces by cutting - turning, milling, drilling and others.
Teaching and assessment: The planned practical exercises are carried out into three sub-groups in the casting, forging, welding sections of the students practice workshop. And two sub-groups in the lathe and fitting sections of the students practice workshop in the section Manufacturing Technologies. In the beginning of each exercise the professor introduces the students to the topic by explaining the nature of the operations, the tools used, the sequence of implementation of the operation, and also gives brief information about their application. Then a skilled worker (master) who is responsible for the given section, performs the operation. Each student individually or in a team of students performs the assignment at the specified workplace. The professor monitors and leads the sequence of activities in all sections.

Foreign Language for the Al Parti: English I, Russian I

ECTS credits: 3 **Weekly workload:** 0 l + 0 s + 0 l + 3 pc
Assessment: continuous assessment **Type of exam:** oral
Department involved: Department of Foreign Languages, Faculty of Law
Lecturers:
1. Sr Lecturer Sevda Tsvetanova.Dept of Foreign Languages,tel.:888 816, E-mail: mpopova@uni-ruse.bg
2. Senior Lecturer lliana Benina, Dept of Foreign Languages,tel: 888815; E-mail: ibenina@uni-ruse.bg
Abstract: Foreign Language module 1 is aimed at systematizing the basic linguistic skills of the students and their upgrading for the purpose of increasing the quality and their language level in view of the key importance it has for the professional career of the *Exploitation of Fleets and Ports* degree course, as well as gradual preparation for handling scientific tests and technical documentation as the next stage of foreign language teaching for the respective degree course.
Course content: Making introductions. Giving personal information. Providing information abour one's workplace. Describing routines. Informal letter-writing.. Description of premises. Places of residence. Everyday English for telephone communication. Formal letter-writing, applying for a job. Biographies. Describing activities.
Teaching and assessment: Foreign language training is carried out through a variety of exercises and linguistic activities: through individual, pair and group work, which demand the active participation of the students during the classes. In line with the most recent trends in foreign language teaching, students are introduced to various learning strategies and are offered activities which develop their linguistic intuition and independent thinking. Module 1 uses a wide range of authentic texts and recordings.
Continuous assessment is based on a minimum of two tests and the evaluation of the student's work during the semester.

Higher Mathematics II

ECTS credits: 6 **Weekly workload:** 2 l + 2 s + 0 l + 0 p

Assessment: exam **Type of exam:** written

Department involved: Demartment 27 Mathematics, Faculty of Natural Sciences and Education, tel. 082 888 226

Lecturers:

1. prof. DrSc. Stepan Terzian, Demartment of Mathematics, tel. 082 888 226
2. assist, prof. PhD Anna Lecheva, Demartment of Mathematics, tel. 082 888 420

Abstract: The subject Higher Mathematics II is a basic for mathematical education in engineering sciences. It gets the students acquainted with the basic notions of the mathematical analysis such as definite integrals, partial derivatives, and gives them computational abilities to solve ordinary differential equations, to find extrema of functions of two variables, to integrate functions of complex variable, to apply Laplace transformation. This knowledge is necessary for further study of physics, computing sciences and other technical subjects.

Course content: Definite integrals and applications, functions of two variables, ordinary differential equations, functions of complex variable, Laplace transformation, series.

Teaching and assessment: The educational process is realized by lectures and seminar exercises. The educational material is theoretically presented and demonstrated by proper example problems in the lectures. The basic themes understanding are controlled and skills for solving practical problems are developed in the seminar exercises. The exam test includes 6-8 practical problems for solving.

Chemistry and exploitation materials

ECTS credits: 4 **Weekly workload:** 2 l + 0 s + 1 l + 2 p

Assessment: exam **Type of exam:** written

Department involved: Department of Repairing, Reliability, Mechanisms, Machines, Logistic and Chemical Technologies, at Agrarian and Industrial Faculty

Lecturer:

1. Assoc. Prof. Nina Nikolaeva Gospodinova, PhD, Department of Repairing, Reliability, Mechanisms, Machines, Logistic and Chemical Technologies, tel, 888 733, ninag@uni-ruse.bg

Abstract: The course helps student form basic notions about the structure of materials and substances, the properties of metals and alloys, corrosion, electrochemical phenomena and processes and their application in technology; properties and application of fuels, lubricants, motor and hydraulic oils, cooling and breaking fluids.

Course content: Structure of substances; Metals and alloys; Corrosion and corrosion prevention; Electrochemistry; Fuels. Lubricants and Oils - motor, hydraulic oils etc. Greases. Cooling fluids. Antifreezing agents.

Teaching and assessment: The material presented at lectures is exemplified and clarified during laboratory classes; the aim is to provide students with a hand-on laboratory experience on the covered topics. The laboratory classes are divided into two modules. At the beginning of the laboratory class the students, divided into groups of four, are acquainted with the objectives of the exercise and the methodology of teaching and practicing. The lecturer assists students with their work and helps them summarize the achieved results. Students have to keep a diary about the tasks performed during laboratories; they are expected to enter the achieved and summarized results regularly and in accordance with the requirements.

Assessment: students should sit a written exam; they have to answer two questions from the material covered at lectures.

Economics

ECTS credits: 4 **Weekly workload:** 2 l + 1 s + 0 l + 0 p
Assessment: continuous assessment **Type of exam:** written
Department involved: Department of Economics, Faculty of business and management
Lecturers:
Assoc.Prof. Djanko Hristov Minchev, PhD, Dept, of Economics, tel. 888 557, e-mail: Dminchev@uni-ruse.bg
Assoc.Prof. Emil Georgiev Trifonov, Dept, of Economics, tel. 888 557
Abstract: The subject is concerned with the general problems, laws and categories of the contemporary market economy. Thus it creates a certain basis for the remaining economic objects. It also gives general knowledge, which is expressed in alternative ways of economic viewing and which forms and creates abilities for independent and expert choice in economic surroundings. Course prerequisite is knowledge of mathematics and it is related to concrete branch and functional economic subjects.
Course content: Introduction - the economic system and the fundamentals of economic theory. Market mechanism. Public sector. Consumer demand and behavior. Manufacture, company assets and expenses. Imperfect competition and supplying. Price formation and incomes depending on production factors: Gross domestic product and economic growth. Economic cycles, unemployment and inflation. Taxation, budget and monetary policy.
Teaching and assessment: Material is taught in two ways - lectures and practical classes, which elucidate and develop further some of the issues discussed at lectures. Continuous assessment is carried out. It includes two test assignments and student performance during the semester. Final assessment is the average of the above-mentioned components of evaluation.

Laboratory of Internal Combustion Engines and Automtive technology

ECTS credits: 4 Weekly workload: 0 I + 0 s + 0 l + 4 p
Assessment: continuous assessment **Type of exam:** written
Department involved: Department of Engines and Transport Engineering, Faculty of Transport
Lecturers: Assist. Prof. Valentin Manev, MEng, PhD, Dept. Silistra;
Abstract: The course provides knowledge of the structure and the working principles of Internal Combustion Engines and Vehicles as well as their mechanisms and systems. The knowledge of maintenance, safety work conditions and management are included. This course is a prerequisite for other courses such as Fundamentals of Internal Combustion Engines, Automotive Engineering etc.
Course content: Overall structure design and working of internal combustion engines. Crank-Slider Mechanism. Gas exchange mechanism. Cooling system. Oil system. Fuel supplying system for gasoline engines. Fuel supplying system for compression ignition engines. Fuel

supplying system for LPG and CNG engines. Ignition systems. Starting systems. Electrical systems and equipment. Introduction to automobile and tractor construction. Transmissions. Automotive clutch. Gear box. Continuous transmissions. Cardan couplings. Drive axles. Frame, wheels and suspension of wheeled vehicles. Frame, suspension and steering of chain vehicles. Work equipment of automobiles and farming machinery.

Teaching and assessment: Rich illustrative material and working models of different mechanisms and systems of automobiles and farming machinery support the teaching. Practical classes provide time for individual work. The continuous assessment grade is based on two written tests and a final discussion.

Foreign Language for the Al, Part 2: English II; Russian II

ECTS credits: 5 **Weekly workload:** 0 l + 0 s + 0 l + 4 p
Assessment: continuous **Type of exam:** written
Department involved: Department of Foreign Languages, Faculty of Law
Lecturers:
1. Sr Lecturer Sevda Tsvetanova.Dept of Foreign Languages,tel.:888 816,E-mail: mpopova@uni-ruse.ba
2. Senior Lecturer Benina, Dept of Foreign Languages,tel: 888815; E-mail: ibenina@uni-ruse.bg
Abstract: Foreign Language module 1 is aimed at systematizing the basic linguistic skills of the students and their upgrading for the purpose of increasing the quality and their language level in view of the key importance it has for the professional career of the ***Exploitation of Fleets and Ports*** degree course, as well as gradual preparation for handling scientific tests and technical documentation as the next stage of foreign language teaching for the respective degree course.
Course content: Describing relationships. Getting information about inventions. Ways of expressing preferences, offers and requests. Comparing cities, towns and villages. Absolute Possessive Pronouns. Structures for expressing intentions and plans. Adjective order. Describing feelings. Describing episodes from one's life. Describing travel. Expressing opinions. Writing e-mails.
Teaching and assessment: Foreign language training is carried out through a variety of exercises and linguistic activities: through individual, pair and group work, which demand the active participation of the students during the classes. In line with the most recent trends in foreign language teaching, students are introduced to various learning strategies and are offered activities which develop their linguistic intuition and independent thinking. Module 2 uses a wide range of authentic texts and recordings.
Continuous assessment is based on a minimum of two tests and the evaluation of student's participation in class, and final assessment is based on an oral exam on topics studied during this module.

Manufacturing Technologies

ECTS credits: 4 Weekly workload: 2 I + 0 s + O l + 4 p
Assessment: continuous assessment **Type of exam:** written

Department involved: Department of Machine Tools and Manufacturing, Faculty of Mechanical and Manufacturing Engineering
Lecturers: Prof. Veselin Ivanov Grigorov, MSc (Eng), PhD, DSc Department of Machine Tools and Manufacturing, Tel: 888 308, E-mail: vgrigorov@uni-ruse.bg
Abstract: The aim of the course "Manufacturing Technologies" is to form the competencies of students stage of production activities related to the development of elements of automotive engineering as objects of machine production. Knowledge of the possible technical solutions for the production of these elements allows respective technological features to be considered in the design stage and to ensure the achievement of quality requirements, functional and operational suitability.
Course content: Through knowledge acquired in the discipline are prerequisites for effective communication between professionals involved in the production and exploitation phase of automotive engineering and other areas of mechanical engineering in the exercise of functions under development, operational management and management of company activities.
Teaching and assessment: Discussed are 13 lectures and practical exercises conducted 6. It covers issues relating to manufacturing activity and related processes, industrial equipment and types of technological effects in mechanical engineering, and also the basic principles of design processes.

Technical documentation using CAD

ECTS credits: 6 **Weekly workload:** 1 l + 0 s + 3 l + 0 p
Assessment: exam **Type of exam:** written
Department involved: Department "Machine Science, Machine elements and Engineering Graphics''
Lecturers:
Assoc. Prof. Nikola St. Nikolov PhD. Msc. (Eng), Department "Machine Science, Machine elements and Engineering Graphics (MSMEEG)'', TF, E-mail: nnikolov@uni-ruse.bq
Krasimir St. Kamenov PhD, Department "Machine Science, Machine elements and Engineering Graphics (MSMEEG)", TF, E-mail: kkamenov@uni-ruse.bq
Abstract: The subject examines the rules for making out drawings and other technical documents using the software AutoCAD. It improves the qualification of the students, gives them knowledge and abilities for making technical documentation using computer. The knowledge accumulated during the course can be used in other technical subjects and in the engineering practice.
Course content: The window of AutoCAD. Toolbars and menus. Coordinate data entry. Selecting objects. Editing objects. Work with blocks and layers. Hatching. External reference. Creating dimensions. Adding text. Paper space layout. SolidWorks modeling and creating images.
Teaching and learning methods: The teaching and learning process is conducted through practical classes. During the training the students learn the rules of the work with the software. The course ends with colloquium. An attestation is given, when the practical classes have been attended.

Engineering Mechanics

ECTS credits: 5 **Weekly workload:** 2 l + 2 s + 0 l + 0 p
Assessment: exam **Type of exam:** tests
Department involved: Department of Engineering Mechanics, Faculty of Mech. and Manufacturing Engineering
Lecturers:
Assoc, prof. Stoyan Stoyanov, PhD, Dep. of Engineering Mechanics, tel. 888 572, e-mail sqstovanov@uni-ruse.ba
Assoc, prof. Velina Stoyanova Bozduganova, PhD, Dep. of Engineering Mechanics, tel. 888 572, e-mail velina@uni-ruse.ha
Abstract: The course has four parts. Static, Strength of Materials, Kinematics, Dynamics. The aim of the course is the students to get acquainted with the basic laws and methods of Engineering Mechanics in order to apply them when they solve mechanical problems. Preliminary knowledge in Mathematics and Physics are necessary for this course. The subject is a fundamental for the engineering courses Control Theory, Electromechanical Devices, Control of Electromechanical Systems, Dynamics of Mechanical systems, Machine Elements and Mechanisms, Hydraulic Machines and Pneumatics, Mechatronic Elements and Mechanisms, Robotics.
Course content: Equilibrium of a rigid body. Equilibrium in presence of friction. Basic definitions and principles in Strength of Materials. Tension and compression. Particle kinematics. Translational, rotational and plane rigid body motion. Particle dynamics. Dynamics of mechanical systems. Lagrange's equations.
Teaching and assessment: The lectures elucidate the theoretical basis of studied topics, while their application is illustrated by examples. Numerical examples are solved in seminar exercises. The final grade of student's knowledge is obtained by averaging the results of carried out tests.

Machine elements I

ECTS credits: 8 **Weekly workload:** 2 l + 0 se + 1 l + 2 p + cp + CM
Assessment: current control **Type of exam:** written
Departments involved: department "Machine science, machine elements and engineering graphics (MSMEEG)", Transport Faculty
Lecturers:
1. Prof.PhD Antoaneta Ivanova Dobreva, dep."MSMEEG".Phone:0887746311 ,E-mail:adobreva@uni-ruse.bg
2. Assoc.Prof.PhD Vasko Iliev Dobrev, dep. "MSMEEG", Phone:082888492; E-mail: vdobrev@uni-ruse.bg
Abstract: The subject implements the interconnection between general theoretic subjects (Materials science, Informatics, Engineering drawing, Drawing with CAD systems, Manufacturing Technologies, Mechanics, Resistance of Materials, Technical Measurements, etc.) and some technical subjects, included in the general module of the curricula. The aim of the course is to provide knowledge in the area of the fundamentals of the theory of machine elements with general application and to develop skills of the students concerning methods

for calculation and design of machine components.
Course content: Static body stresses and surface strength of machine elements. Fatigue strength. Springs. Joints: threaded fasteners and power screws, rivets, welding, bonding, keys, splines, etc. Elements of rotary motion: axis and shafts, bearings, couplings, clutches and universal joints.
Technology of education: Lectures are delivered in front of students from several specialties. Current students' training is evaluated through two control assignments upon the study material. Practical exercises are carried out in computer halls with modern computers. There are tables, standards and prospects, models and multimedia available for the students. Laboratory exercises support the explanation of theoretic fundamentals from the lectures. For those exercises, there are also current control tests. The exercises' results are processes with computer software and they are summarized in specific forms. The course assignment is individual and concerns designing of a power screw. Weekly consultations and control of calculations' and graphical parts are envisaged. These two assignments are to be defended by the students. General current mark for the subject "Machine elements I" is based upon the results of the current control assignments and the defending of the course individual assignments.

Road Traffic Safety

ECTS credits: 4 **Weekly workload:** 2 l + 0 s + 0 l + 1 p
Assessment: continuous assessment **Type of exam:** written
Department involved: Department of Transport, Faculty of Automotive and Transport Engineering
Lecturers:
Assist. Prof. Daniel Atanasov Lyubenov, PhD, Tel.: (+359) 082 888-605, E-mail: diiubenov@uni-ruse.bg
Assist. Prof. Svilen Atanasov Kostadinov, Tel:. (+359) 082 888-515, E-mail: skostadinov@uni-ruse.bg
Abstract: The aim of the subject is to give the students knowledge on traffic safety problems, to study the estimation methods and traffic safety methods and measurements. The methods for traffic accidents reconstructions are presented in detail. Previous knowledge of mechanics, transportation infrastructure, vehicles and vehicle diagnostics is necessary. The subject is an essential contribution to the professional training of engineers.
Course contents: Traffic safety problems. Structure and functions of the "Driver - Vehicle - Transport infrastructure - Environment" system. Psychophysical characteristics of the drivers. Vehicle safety - Active safety systems and Passive safety systems. Measures to improve traffic safety. Transport accidents. Methods for estimating traffic safety and transport risk. Traffic accidents expertise. Vehicle accident analysis and reconstruction methods.

Teaching and assessment: Lectures are conducted in a traditional form using appropriate technical aids. The laboratory exercises are practice-oriented. Assessment is based on tests. The final grade is calculated as an arithmetic evaluation of the current written tests.

Technical Measurements

ECTS credits: 3 Weekly workload: 1 l + 0 s + 0 l + 1 p

Assessment: examination **Type of exam:** written

Department involved: Department 'Machine Tools and Manufacturing', Faculty of Mechanical and Manufacturing Engineering

Lecturers:

Assoc. Prof. Danko Tonev, PhD, Department 'Machine Tools and Manufacturing', Tel: 888 493, E-mail: dtonev@uni-ruse.bg

Abstract: The discipline Technical Measurements' is an important part of the general technical disciplines in the higher education in engineering. Through the various forms of the teaching process it gives targeted knowledge and practical skills in the domain of metrology. Based on this, the main goals of the discipline are: teaching the theoretical bases of metrology, the main theoretical and practical aspects of the SI system, basic principles for accuracy prescribing, tolerance design and prescribing the necessary accuracy of parts and units depending on their exploitation requirements, developing real practical skills for working with basic devices for measuring lengths, angles and threads.

Course content: Introduction to metrology. Measurement of length. Principles used in technical measurements. Measurement methods. Devices for measuring linear dimensions. Single and multi-coordinate measuring devices and machines. Precision of the geometrical quality indexes. Basic terms and indexes. ISO system of tolerances and fits for cylindrical units. Method for selecting interference fits. Accuracy prescribing and measurement of shape and.

Teaching and assessment: Lectures are conducted in a traditional form using appropriate technical aids. The laboratory exercises are practice-oriented. Assessment is based on tests. The final grade is calculated as an arithmetic evaluation of the current written tests.

Internal Combustion engines I

ECTS: 6 **Weekly workload:** 3 l + 0 s + 1 l + 1 p

TEST: Examination **Type of exam:** written

Departments involved: Department of Engines and Vehicles (E and V), Transport engineering faculty.

Lecturers:

1. Prof. Hristo Stanchev, PhD, Depart. E and V, Phone:+359 82 888 275, E-mail: hstanchev@uni-ruse.bg

Abstract:

In subject "Internal combustion engines" the students will be acquainted with basic theory of IC Engines, engine characteristics, fuel systems, emission and emission reduction.

Course content: Fuels and chemical reaction of combustion. Real cycles in IC Engines. Indicative and effective parameters. Emission reduction. Fuel systems of gasoline and diesel engines. Engine characteristics.

Teaching and assessment: Lectures, practical exercises, prospectus and publications in leading magazines, E-leaming shell at the University of Ruse.

Automotive Engineering I

ECTS credits: 8 **Weekly workload:** 3 l + 0 s + 1 l + 1 p
Assessment: exam **Type of exam:** written
Department involved: Department of Engines and Transport Engineering, Faculty of Transport
Lecturers:
Assoc. Prof. Ivan lliev Evtimov, MSc (Eng), PhD, Department of Engines and Transport Engineering, tel. 888 527, e-mail: ievtimov@uni-ruse.bg
Prof. Borislav Georgiev Angelov, MEng, PhD, Department of Engines and Transport Engineering, tel. 888 457, E-mail: banaelov@uni-ruse.bg
Abstract: The course acquaints the students with the theory of movement of automobiles in various working conditions as well as with their operational characteristics. What is needed also is knowledge about the internal combustion engines, theoretical mechanics and mathematics. The discipline is a prerequisite for studing design and creating new machines as well as for their exploitation and maintenance.
Course content: Basic exploitational characteristics and working conditions, transmission of the energy from the motor towards the track system, dynamics of the wheeled and chained machines, dragging and dynamic characteristics and energy economy, braking characteristics, stability of movement, management and roadability of the machines.
Teaching and assessment: Lectures clarify the theoretical basis of the topics taught. The laboratory and **practical** exercises are conducted on special devices which enable the students to study the basic characteristics of automobiles. Student performance is monitored by preparing and defending reports on the laboratory and practical exercises. Term validation is given after fulfilling all the requirements of the laboratory and **practical** exercises. The exam consists of two questions to be answered in written form which are later assessed.

Electrical and Electronic Engineering

ECTS credits: 5 **Weekly workload:** 2 l + 0 s +2 l + 0 p
Assessment: exam **Type of exam:** Oral
Departments involved: dep. of Theoretic Electrical Engineering and Electrical Measuring, faculty Electrical Engineering, Electronics and Automatics
Lecturer:
head assistant lliyan Stefanov Tsvetkov, PhD, tel 888 415
Abstract: The subject "Electrical and Electronic Engineering" is a part of the curriculum for the bachelor degree of non-electrical specialties. The aim of the course is the students, aspirated for, to get knowledge in the fields of Main Laws of the Theoretical Electrical Engineering, Electrical Measurement, of Electrical and Non-electrical Quantities, DC and AC Electrical Machines, Electronic semiconductors and schemes. It is necessary the students to have

preliminarily knowledge from the courses of "Physics", "Mathematics". The knowledge on the "Electrical and Electronic Engineering" is used in the next courses and when preparing the graduation work.

Course content: Basic elements and magnitudes of the electrical circuits - DC and AC, Three-phase and magnetic circuits, Electrical measurements of electrical and non-electrical quantities, DC machines, Transformers, Synchronous and Induction AC Machines, Electronic Devices, the most used diagrams, Operational Amplifiers, Digital networks. Microprocessor Devices. Diagnostic Interfaces. GPS Navigation.

Teaching and assessment: The teaching process is divided into lectures and laboratory classes. In the laboratory classes the students can receive practical knowledge. There is a test control on basic topics in the beginning of the exercises, which could be either written or oral, having 15 minutes duration.

Machine elements II

ECTS credits: 4 **Weekly workload:** 1 l + 0 s + 1 l + 1 p

Assessment: examination **Type of the exam:** written

Departments involved: Department "Machine Science, Machine Elements and Engineering Graphics (MSMEEG)"; Transport faculty

Lecturers:

1. Prof. PhD Antoaneta Ivanova Dobreva,Dep."MSMEEG",Phone:888437;E-mail: adobreva@uni-ruse.bg
2. Assoc. Prof. PhD Vasko lliev Dobrev, Dep. "MSMEEG", Phone: 888492; E-mail: vdobrev@uni-ruse.bg

Abstract: The subject aims to ensure the interconnection between general theoretic subjects (Machine elements - part I, Technical Documentation, Technical Mechanics, Strength of Materials, Computer Science, Materials Science, Technical measurements, etc) and some technical subjects, included in the main study module. The objective of the course is to teach the basics of the theory of machine elements with general applications and the methods for their calculation and design.

Course content: Mechanical transmissions. Cylindrical involute gears - geometry, kinematics, calculations of strength and bending stresses. Planetary, conical, helical and worm gear trains. Reducers. Chain and belt transmissions. Frictional drives and variable speed drives.

Teaching and assessment: The theory is given in lectures. Practical classes are held in a computer room equipped with modern computers. Available to students are information boards, standards and catalogues, technical samples, multimedia. Laboratory classes demonstrate visually a number of theoretical issues, presented in lectures. There are also tests for incoming and ongoing control. The practical results of the exercises are processed by a computer and presented in report templates. Assessment under "Machine Elements - II" is based on a written exam.

Machine elements - course project

ECTS credits: 2 **Weekly workload:** cp

Assessment: defending a project **Type of the exam:** oral

Departments involved: Department "Machine Science, Machine elements and Engineering Graphics (MSMEEG)", TF

Lecturers:
The course project is taught by all lecturers responsible for the subject area "Machine Science and Machine elements" from the Department "MSMEEG".
Abstract: The course project aims is to continue the development of the students' skills to read and create engineering drawings, to teach the layout of design constructions and strengthen the knowledge of students to calculate machine elements and to upgrade the acquired knowledge from the subject "Machine elements I". The subject is a connection unit between both parts of the subject Machine elements - part I and II, Technical Documentation, Technical Mechanics, Strength of Materials, Computer Science, Materials Science, Technical measurements and the design case studies in specialized subjects.
Course content: During the development of the course project basic practical skills of the students to read and create engineering drawings are developed further. Main problems concerning design, scheme of construction and the defining of loadings are clarified. The knowledge of the students to determine strength calculation of complex elements (shafts, bearings; spur, helical, bevel and worm gear trains) are elaborated and upgraded.
Teaching and assessment: The course project is implemented through weekly consultations, including the application of firm and authors' software. The training in this subject is carried out in halls, equipped with computers. The assignments of the students are individual. They differ from each other concerning layout and initial parameters. These are assigned in specific forms, involving also recommendations for the sequence and range of their fulfillment. The project consists of 2 parts - calculations and graphical drawings. The graphical part includes: assembly drawing, list of components and part drawings of non-standard details. The calculation part includes explanations and calculations. The project goes through several stages. Each stage is controlled by the lecturer after a consultation. When the project is done, the student defends it in front of an audience. The defense is evaluated and the result, considering also the written elaboration is formed as final mark for the subject "Machine elements - Course project".

Thermodynamics

ECTS credits: 3 **Weekly workload:** 2 l + 0 s + 1 l + 0p
Assessment: running valuation
Methodic guidance: Department of Thermotechnics, hydraulics and ecology, Agrarian-industrial faculty
Lecturers:
1. Assoc. Prof. Valentin Vasilev Bobilov, PhD; Phone: 082/888-844; E-mail: bobilov@uni-ruse.bg
2. Assist. Zhivko Dimitrov Kolev, PhD; Phone: 082/888-304, E-mail: zkolev@uni-ruse.bg
Department of Thermotechnics, hydraulics and ecology
Abstract: The discipline has been designed to give some basic knowledge related to the properties of gases and process with gases, the theoretical foundations of thermal machines, etc. The theoretical foundations of thermodynamics, built on the first and second laws of thermodynamics, the thermodynamic properties of bodies, basic thermodynamic processes, leakage and throttling of gases, Carnot cycle with ideal gas, Carnot cycle with real gas, cycles of internal combustion engines, etc, have been presented.
Course content: Basic concepts of thermodynamics. Thermodynamic condition.

Termodynamic system. Termodynamic process. Heat and work. Thermal state parameters. Circular processes. Reversible and irreversible processes. Deformation and technical work. Complete and incomplete differentials functions of the process and functions of the state. Ideal gas. Laws of the ideal gases. Equations of state of the ideal gases. Gas constant.
Teaching and assessment: Lectures are conducted in a traditional form using appropriate technical aids. The laboratory exercises are practice-oriented. Assessment is based on tests. The final grade is calculated as an arithmetic evaluation of the current written tests.

Internal Combustion Engines-2.

ECTS credits: 6 **Weekly workload:** 2 l +0 s + 1 l +1 p
Assessment: exam **Type of exam:** written and oral
Department involved: Department of "Engines and Transport Engineerig", Faculty of Transport.
Lecturers:
Assoc. Prof. Emiliyan Petrov Stankov, PhD, Department of "Engines and Transport Engineerig", Tel.: +359 82 888332, e-mail: estankov@uni-mse.bg
Abstract: The course covers in depth issues of internal combustion engines' dynamics and design. The main aim of the course is to enhance the students' design skills and to acquaint them with the methods and sequence of calculation and design of the main parts and systems for internal combustion engines. The teaching material aims to familiarize students with the classical and modern methods of strength- strain research and to give them practical skills in order to choose or replace materials for the parts and their assembly. The course presents also the modern technological and structural solutions of mechanisms and systems for internal combustion engines and their trends.
Course content: Kinematics and dynamics of internal combustion engine's crank- piston rod mechanism. Balancing. Torsional vibrations in the crankshaft. Noise and vibration. Methods and tools for engine design. Design and calculation of the internal combustion engines' crank-piston rod and camshaft mechanisms, body parts and systems.
Teaching and assessment: Mainly multimedia presentations and posters with specialized content are used to illustrate lectures. Some important theoretical issues and design techniques for strength calculations are displayed on the blackboard in the conventional method.
Laboratory classes are conducted in a specialized laboratory, where there are special rigs and equipment. Students use a manual of laboratory exercises, where the technology and methodology of exercise is described. Each laboratory exercise ends with the student's report verification by the teacher.
The practical exercises familiarize students with the methodology for the development of the course project's individual stages.
The exam is written. The final mark is given after an interview with every students

Testing of Internal Combustion Engines (ICEs)

ECTS Credits: 6 **Weekly workload:** 2 l + 0 s + 2 l + 0 p
Assessment: continuous assessment **Type of exam:** written

Department involved: Deprtment of Engines and Transport Engineering, Faculty of Transport
Lecturers:
Assoc.Prof. Simeon Penchev lliev, Eng, PhD, Dept, of Engines and Transport Engineering, tel: 082 888-331, e-mail: spi@uni-ruse.bg
Abstract: The course deals with the principles of operation, theory, construction, characteristics and partly maintenance features of the machines, devices and apparatuses of the electric and electronic equipment in automobiles and tractors. This knowledge is necessary for designing and maintaining automobiles and tractors and it is a prerequisite for the successful study of related course. It is based on profound knowledge of Electrical Engineering and Electronics.
Course content: General information about the electric equipment of automobiles and tractors. Starting accumulator batteries. Generators. Starters. Requirements to the ignition system. Battery and electronic - ignition systems. Magnetos. Electric control systems of ignition timing. Audible and lighting signaling devices. Lighting system. Additional electric apparatuses. Electric equipment of electrical cars - a traction accumulator battery, electric motors and commutation equipment.
Teaching and assessment: Slides are employed as visual aids for the material taught. Problematic questions are put forward for discussion. There is a test on each topic. Laboratory classes are on basic themes and duration 4 h. The experimental data are worked up and the reports are formed during the practical classes. The students get a grade at the entrance test and for the fulfillment of each exercise. Final assessment is based on all the grades received and should these be positive, the student can be exempt from examination.

Environmental problems of transport

ECTS credits: 6 **Weekly workload:** 3 l + 0 s + 3 l + 0 p
Assessment: exam . **Type of exam:** Written and oral
Department involved: Department of Engines and Transport Engineering, Faculty of Transport
Lecturer:
Prof. Kiril Barzev, MEng, PhD, Dept, of Engines, tel. +359 82 888432, e-mail: barzev@uni-ruse.bg
Abstract: The subject gives knowledge about the basic interaction between internal combustion engines, energy sources, environment and the harmful consequences for both тап and nature. It requires profound knowledge of ongoing processes in internal combustion engines as well as basic knowledge of chemistry and thermodynamics.
Course content: Engine emissions and their contribution to the global environmental pollution. Physical and chemical processes in the formation of basic toxic engine exhaust emissions and influencing factors. Measurement and legislation of internal combustion engines toxic exhaust emissions. Ways of toxic components reduction in spark-ignition and compression-ignition engines.
Teaching and assessment: During the laboratory classes the students assimilate the concepts about formation and measurement discussed at the lectures. Final assessment is exam, but it is possible if the average mark based on the two grades obtained from the minimum two tests during the semester is positive, the student to get rid of exam.

Tractors

ECTS credits: 8 **Weekly workload:** 2 l + 0 s + 1 l + 1 p**ssessment:** exam **Type of exam:** written

Department involved: Department of Engines and Transport Engineering, Faculty of Transport

Lecturers:

Assoc. Prof. Ivan Kiev Evtimov, MSc (Eng), PhD, Department of Engines and Transport Engineering, tel. 888 527, e-mail: ievtimov@uni-ruse.bg.

Prof. Borislav Georgiev Angelov, MEng, PhD, Department of Engines and Transport Engineering, tel. 888 457, E-mail: banqelov@uni-ruse.bg.

Abstract: The course acquaints the students with the theory of movement of tractors in various working conditions as well as with their operational characteristics. What is needed also is knowledge about the internal combustion engines, theoretical mechanics and mathematics. The discipline is a prerequisite for studing design and creating new machines as well as for their exploitation and maintenance.

Course content: Basic exploitational characteristics and working conditions, dynamics of the wheeled and chained machines, dragging and dynamic characteristics and energy economy, braking characteristics, stability of movement, management and roadability of the machines, aggregation of tractors.

Teaching and assessment: Lectures clarify the theoretical basis of the topics taught. The laboratory and **practical** exercises are conducted on special devices which enable the students to study the basic characteristics of tractors. Student performance is monitored by preparing and defending reports on the laboratory and practical exercises. Term validation is given after fulfilling all the requirements of the laboratory and **practical** exercises. The exam consists of two questions to be answered in written form which are later assessed.

Electronic systems for engine management

ECTS credits: 5 **Weekly workload:** 2 l + 0 s + 0 l + 2 p

Assessment: examination **Type of exam:** written

Department involved: Department of Engines and Transport Engineering, Faculty of Transport

Lecturers:

Assist. Prof. Kiril lliev Hadjiev, MEng, PhD, Dept, of Engines and Transport Engineering tel.: 888 433

Abstract: The course "Electronic systems for engine management" aims to acquaint the students with the functions, principles of operation and structure of electronic systems used in internal combustion engines. The course studies management of electronic fuel injection, systems for reducing of harmful emissions and electronic management of ignition systems.

Course content: Mixture formation. Optimal composition of the fuel mixture to reduce toxicity. Specifics of different ways of mixture formation and combustion process. Classification. Gasoline fuel injection. Management of ignition. Management of gasoline engine.

Teaching and assessment: The training includes lectures and practical sessions. To illustrate the lectures using multimedia projector. In practical exercises using drawings and models. Practical exercises begin with incoming written control within 15 minutes.
Course exam is written. Each students gets 10 questions covering the lectures and practical exercises.

Electronic Control Systems in Automotive Engineering

ECTS credits: 5 **Weekly workload:** 2 l + 0 s + 0 l + 2 p
Assessment: exam **Type of exam:** written
Department involved: Department of Engines and Vehicles, Faculty of Transport Engineering
Lecturers:
Prof. Rosen Ivanov, PhD, Department of Engines and Transport Vehicles, tel. +359 82 888 528, e-mail: rossen@uni-ruse.bg
Pr. Assistant Georgi Penchev Kadikyanov, PhD, Department of Engines and Transport Vehicles, tel. +359 82 888 526, e-mail: gkadikvanov@uni-ruse.bg
Abstract: The course provides students with knowledge of the structure and mode of operation of the various control systems used in automotive engineering, as well as carrying them technical equipment. Discussed are some methods used in the study of control systems of automotive engineering.
Course content: Basic knowledge Automatic Control Systems, Control of continuous and automatic transmission, Systems to improve braking performance and stability, Automation of steering, Control suspension, Control of work equipment of automotive engineering.
Teaching and assessment: During the lectures using multimedia projector. In practical exercises - laboratory equipment, instrumentation, illustrative material (posters and multimedia), models, assemblies and components of automotive engineering. There are two assessments in semester on the lectures. The final assessment includes written test based on the lectures.

Hydraulics and Pneumatics Drive Systems

ECTS credits: 5 **Weekly workload:** 2 l + 0 s + 2 l + 0 p
Assessment: exam **Type of exam:** written
Department involved: *Department* of Thermotechnics, Hydraulics and Ecology , Agrarian and Industrial Faculty
Lecturers:
Prof. Gencho Stoykov Popov, PhD, Department of Thermotechnics, Hydraulics and Ecology tel.: 888 580, E-mail: gspopov@uni-ruse.bg;
Abstract: The course provides fundamental instruction in the basic laws of fluid movement, canal and pipe flows, and calculation of pipeline parameters. It includes some principal issues concerning the construction and utilization of different types of hydraulic and pneumatic machines in electrical power engineering, in industry and agriculture. The course also examines some hydro-systems and some fluid-power drive machines.
Course content: Fluid properties. Pressure, Basic equation of hydrostatics. Bernoulli's equation. Modes of movement and hydraulic resistance. Computing of hydro- and air-pipes. Structure and working principles of turbo-machines, displacement machine-pumps, fans,

compressors and fluid-powered engines. Basic of theory of turbomachinery. Structure, adjustment and performance of machine systems. Hydraulic elements. Some hydraulic systems used as machine driving force.
Teaching and assessment: Teaching is by lecture; lectures precede laboratory sessions, which take place when students already have some theoretical knowledge of the subject matter. At laboratory sessions students have access to experiment stands and are able to find out for themselves how the basic hydraulic machines and systems function. The final mark will be formed on the basis of a number of test given to the students during the semester.

Electric and Engine Forklift Trucks

ECTS credits: 5 **Weekly workload:** 2 l + 0 s + 1 l + 1 p
Assessment: exam **Type of exam:** written
Department involved: Department of Engines and Transport Engineering, Faculty of Transport
Lecturers:
Assoc. Prof. Ivan Iliev Evtimov, MSc (Eng), PhD, Department of Engines and Transport Engineering, tel. 888 527, e-mail: ievtimov@uni-ruse.bg.
Abstract: The purpose of the course is to give the students knowledge of the principles and methods of vehicle engineering and its operational systems. The student will also acquire the expertise to analyze the established constructions and prototypes, to calculate the geometrical and material durability of components positioning.
Course content: Classification and implementation of electric and engine trucks. Technical parameters. Construction of electrical and engine trucks. Transmission. Control. Control system. Braking system. Lifting systems. Horizontal load movement system. Interchangeable operating adapters/instruments. Hydraulic system. Electric system of electrical trucks.
Teaching and assessment: The fundamentals of the course are taught during classes. Student attendance and participation during laboratory classes facilitate the comprehension of the theoretical studies.
The final grade is based on the results from the written final exam and on the student's participation during laboratory classes and his/her preparation of a term paper.
Lecture material is taught by means of modern methodology, while the samples are based on up-to-date technologies of development of vehicles. The laboratory classes take place in the specially designed laboratories of the Department of Engines and Transport Engineering the University. During the development of the term paper, the student is given the opportunity to imply the acquired theoretical knowledge throughout the course.

Technical diagnostics and servicing of automotive engineering

ECTS credits: 7 **Weekly workload:** 3 l + 0 s + 2 l + 0 p
Assessment: exam **Type of exam:** written
Department involved: Department of Transport, Faculty of Transport
Lecturers:
Assoc. Prof. Asen Tsvetanov Asenov, MEng, PhD, Department of Transport, tel: 888 605, e-

mail: asasenov@uni-ruse.bg
Assist. Mihail Parashkevov Milchev, MEng, PhD, Department of Transport, tel: 888 515, e-mail: mmilchev@uni-ruse.bg
Abstract: The discipline gives basic knowledge about the methods and means for diagnostics and managing of the processes of technical maintenance and repair of vehicles. The laboratory exercises aim to teach the students to analyse and evaluate the different diagnostical methods and to make them acquainted with the processes of optimization.
Course content: Methods for diagnostics, technical maintenance and repair of the transport vehicles systems and aggregates. Methods for determining the maintaining intervals. Methods and devices for diagnosis and maintenance of systems and aggregates of vehicles. Alteration of the technical condition. Eligible parameters.
Teaching and assessment: Lectures are based on the classical approach. Presentations, video and multimedia materials are provided. Laboratory exercises cover the material previously studied in class and involve all students, who, separated into subgroups, work individually over technical models, real samples, and stands that are used for practice. The final grade is a sum of the final exam performance and participation during the exercises.

Internal Combustion Engines - Course project.

ECTS credits: 2 **Weekly workload:** CP
Assessment: defending a project **Type of exam:** oral
Department involved: Department of "Engines and Transport Engineering", Faculty of Transport
Lecturers:
Assoc. Prof. Emiliyan Petrov Stankov, PhD; Department of "Engines and Transport Engineerig", тел: (+359) 82 888332 E-mail: estankov@uni-ruse.bg
Abstract: Through the course project a conceptual design of reciprocating internal combustion engine is developed and its aim is to introduce students to the basic methods of design and calculation of internal combustion engines. The choice of the prototype stimulates students to be familiarized with modern engine designs.
Course content: The students prepare an explanatory note with the following content: thermal calculations of ICE; kinematics and dynamics calculations; strength calculations of parts; comparative structural analysis of the prototype engine and the designed engine, which includes all mechanisms and systems.
In order to visualize the concept and the computational results obtained, a drawing with the following elements is prepared: an indicator diagram; the necessary graphics for kinematics and dynamics analysis of ICE; longitudinal section of the engine; drawings of units and parts, schematic drawing of the cooling or lubrication system of the designed engine.
Teaching and assessment: The teaching methodology of the course project is with self-controlled nature and an individual assignment. The project is being developed by students in methodical sequence indicated in the individual assignments. The required information regarding the methodology for the development of the individual steps of the course project is provided during the lectures and practical exercises of the course. Continuous assessment is carried out during the practical exercises and during the hours for consultation, where students submit weekly to the teacher everything done so far and if necessary consult on unclear raised matters. At the end of the semester, the course project concludes with oral defense and mark.

Course project on Automotive engineering

ECTS credits: 3 **Weekly workload:** ср
Assessment: defense of project **Type of exam:** oral presentation
Departments involved: Department of Engines and Automotive Engineering, Faculty of Transport
Lecturers:
Prof. Ivan lliev Evtimov, PhD, dep. EAE, тел. 888 528, e-mail: ievtimov@uni-ruse.bg
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Abstract: Course project on Automotive engineering aims to develop in students skills for independent creative analysis, optimal design of structures and developing of motor cars and tractors. Perform in-depth analysis of the principles and concrete constructions of units, units and clarify key points in their calculation, their regulation and the need and the way to their maintenance in operational conditions, prerequisites: Mathematics, Mechanics of Materials, Applied Geometry and Engineering Graphics, Machine Parts, Automotive Engineering 1, etc.. Learning outcomes in this discipline are the basis upon which is based the specific and specialized courses and diploma projects.
Course content: To work on the course project is designed on paper and on the internet necessary methodological tools. The project contains an explanatory memorandum of 30 pages and drawing of two pieces of A1 involving the construction of an automobile or tractor kinematic scheme and construction design.
Teaching and assessment: At the beginning of the semester, each student gets job working on the course project where certain topic, tasks and deadlines for work weeks. Students can work during the hours stated in the project lab. The main part of the project, however, is running alone in the library, computer labs, etc.