**Справка за дисциплините в летен семестър на учебната 2018/2019 г. - катедра „Растениевъдство“, специалност „Семепроизводство и растителна защита“ (Seed Production and Plant Protection),**

**ОКС „Магистър“, задочно обучение**

**(за специалисти от други професионални направления)**

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| Discipline „*LEGISLATION ON SEED PRODUCTION AND PLANT PROTECTION*”, code: 7 |
| Annotation: The discipline "Legislation on seed production and plant protection" is compulsory in the curriculum of the specialty "Seed production and plant protection", Master's degree. The aim of the subject is to introducing students with the current legal regulations in the field of seed production and plant protection, in which full harmonization of national and European legislation is achieved. The aim of the course is to prepare the students for master's thesis, which will inevitably help them in future realization as producers and traders of seed and planting material, consultants and specialists in state and private structures with the subject of seed production and plant protection. The lecture course provides studying of the state control bodies, field inspection, variety testing, variety maintenance, production, trade, preparation, import and export of seed material; control of economically important pests and phytosanitary control, plant protection products, specialized plant protection services, control over the use of plant protection products and general principles of integrated pest management. Seminar exercises include introduction and discussion on methods, methods and schemes for the production and certification of seed; safe transport, storage and use of plant protection products (PPPs); protection of environmental and human health components when using PPPs; plant protection logs. The subject is introductory to the specialized courses on seed production and plant protection. |
| Main issues of the syllabus content:* State control bodies in the field of seed production and plant protection;
* Variety testing and entry of the varieties in the official variety list;
* Production and marketing of seed material;
* Import and export of seed material;
* Control of economically important pests and phytosanitary control;
* Plant protection products. Specialized plant protection services;
* Control over the use of plant protection products;
* General principles of integrated pest management.
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| Discipline „*PRODUCTION OF CEREAL AND FODDER CROPS SEEDS*”, code: 8 |
| Annotation: The course "Production of cereal and fodder crops seeds" is compulsory in the curriculum of the specialty "Seed production and plant protection ", Master's degree. The aim of the subject is to introducing students with the peculiarities of seed production of grain and fodder crops grown in Bulgaria. The aim of the course is to prepare master students for work with the methods and seed production schemes, which will inevitably help them in future realization as producers and traders of seed and planting material, consultants and specialists in state and private structures. The lecture course provides an introduction to the specifics of the variety maintenance, seed production, field inspection, laboratory and follow-up control, methods and schemes of seed production of grain and fodder crops grown in Bulgaria. Seminar exercises include introduction and discussion of methodologies for competitive variety trials, field inspection, laboratory requirements for certification of seed categories, harvesting, cleaning, forming a seed lots, labeling, solving planning tasks for areas for variety maintenance and seed production in an institute or breeding company. |
| Main issues of the syllabus content:* Variety maintenance and seed production in crop plants;
* Field inspection of seed crops, laboratory control of seeding qualities of the seed, follow-up control;
* Seed production of winter cereal-grains;
* Seed production of spring cereal-grains;
* Seed production of grain-legumes;
* Seed production of fodder grain-legumes;
* Seed production of perennial meadow crops.
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| Discipline „Seed Production of Technical Crops”, code: 9 |
| Annotation: The curriculum is intended for students of a Master's degree degree program in “Production of Seeds and Planting Material”. The course "Seed Production of Technical Crops" provides students with the opportunity to acquire modern, real and specific knowledge about the nature, the necessary conditions and the principles of seed production. The students are acquainted with the genetic basics of seed maintenance and seed production, with the organization, requirements and control of seed production. The course examines patterns of seed production in various industrial crops and measures to implement successful seed production practices with norms of sowing, care during vegetation (weed control, diseases and pests control, regulating growth and development of crops, irrigation mode) approbation, harvesting and storing seeds of traditional and important to our world industrial crops (sunflower, canola, peanut, sesame, potatoes, beets, cotton, flax, hemp, tobacco, rose, lavender, anise). After mastering those skills, students will be able to manage science-based, environmentally friendly and efficiently seed production of these crops under specific soil and climatic conditions. In carrying out the purposes of the program, students will expand their knowledge on genetics and breeding, agro-meteorological, soil science, agricultural chemistry, general agriculture, herbology, entomology, plant pathology, machinery and others. The knowledge on "Production of seeds of technical crops" is a good basis for future realization of the students in seed production, as well as in the structure of the services, controlling the quality of seed production. |
| Main issues of the syllabus content:* Content and tasks of seed production. Basic terms and concepts in seed production. Maintenance of varieties and production of seeds.
* Seed production of oil crops.
* Production of seeds and planting material of root and tuber crops.
* Seed production of fiber cro
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* Seed production of medical plants.
* Seed production of essential oil crops.
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| Discipline „Organization and Management of Mechanized Agro-Technological Practices in Plant Growing”: 10a |
| Annotation: The curriculum is intended for students of a Master's degree program in “Production of Seeds and Planting Material”. The course "Organization and Management of Mechanized Agro-Technological Practices in Plant Growing" clarify the essence, the necessary conditions and the principles of the crop production. The applied mechanized technologies (soil cultivation, sowing and transplanting, fertilizing with organic and mineral fertilizers, plant protection operations and harvesting of crops) in the cultivation of the main agricultural crops are studied. During the course students have the opportunity to apply their knowledge of general agriculture, plant growing, agrochemistry, economics, mechanization, etcAfter finishing the course, the students will be able to develop efficient technologies for the different crops and to assemble and organize the operation of machine-tractors aggregates according to specific soil and climatic conditions. |
| Main issues of the syllabus content:* Fundamentals of industrial technologies for growing crops.
* Organization and management of soil treatment.
* Organization and management of fertilization with organic and mineral fertilizers.
* Organization and management of sowing and planting operations.
* Organization and management of plant protection operations.
* Organization and management of harvesting of the main grain, oil, technical, vegetable and fodder crops.
* Organization and management of harvesting of perennial crops.
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| Discipline „GOOD AGRICULTURAL PRACTICES”: 10b |
| Annotation: The curriculum of the course “Good Agricultural Practices” is intended for students of a Master's degree program in “Seed Production and Plant Protection”. The course "Good Agricultural Practices" clarify the nature and principles of plant production. The course examines the good agricultural practices in mechanized technologies as soil treatment, sowing and planting, fertilizing with organic and mineral fertilizers, plant protection operations and harvesting, applied to the cultivation of the main agricultural crops.During the course students will apply their knowledge of general agriculture, herbology, plant growing, agrochemistry, economics, mechanization, etc.After finishing the course students will be able to apply good agricultural practices in cultivation of the main crops of the country according to the specific soil and climatic conditions, as well as to observe the basic rules for the implementation of the plant protection practices. |
| Main issues of the syllabus content:* Good agricultural practices in soil tillage.
* Good agricultural practices in fertilization with organic and mineral fertilizers.
* Good agricultural practices in sowing and planting operations.
* Good agricultural practices in plant protection operations.
* Good agricultural practices in harvesting of the main grain, oil, technical, vegetable and fodder crops.
* Good agricultural practices in harvesting of perennial crops.
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| Discipline „plant quarantine”, code: 11 |
| Annotation: Conservation of the territory of a country of the penetration of dangerous quarantine pests, as well as the limitation of their distribution in the case of possible penetration through the application of a system of state measures, is the main goal of the Plant Quarantine. The geographical situation, as well as the membership in the European Union, makes Bulgaria an external border of the Union. This, in turn, defines plant quarantine as a strategic direction in plant protection to protect the territory of the EU from the penetration and distribution of quarantine sites. In this connection, the study of the "Plant Quarantine" discipline aims to give basic knowledge of the legal basis of the system of state measures to limit the penetration and spreading of quarantine sites and of the most important quarantine pests . |
| Main issues of the syllabus content:* Plant quarantine as a strategic direction in plant protection.
* System of state measures for limiting the penetration and spreading of quarantine sites.
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| Discipline „ENVIRONMENTAL SAFETY OF PLANT PRODUCTION”, code: 12 |
| Annotation: The course "Environmental Safety of Plant Production" is designed for studying in the Master course in "Production of Seed and Planting Material".Heavy metals, nitrates and other toxic substances, including mineral fertilizers, lead to their increase in plant production.The aim is to respond to these problems with the unnecessary accumulation in plant products of toxic substances and the impact on human health. These issues have been exacerbated by an increase in the content and cumulative effect of carcinogens in the environment (soil, drinking water, plants, foodstuffs), leading to a general increase in exposure to the population. The issues related to "organic farming" and "healthy food" have not yet been studied, which summarizes our view of the quality of plant food safety obtained from plants grown on clean soil without or with minimal use of chemical preparations. |
| Main issues of the syllabus content:* Nitrates, nitrite in the soil. Exogenous and endogenous synthesis of nitrites.
* Heavy metals in plant and food products
* Pesticides. Pesticide content in the eco-system.
* Insecticides.Fungicides.Herbicides.
* Dioxins and dibenzofurans. Toxicity, mutagenicity, carcinogenicity, mechanism of action.
* Monitoring. Recommendations of the World Health Organization.
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