

COURSE DESCRIPTION

1. Name of the discipline ELECTRIC EQUIPMENT OF CARS AND TRACTORS
2. Symbol (code) in the curriculum B3.B.1.5
3. Direction of the basic educational program 35.03.06 Agroengineering
4. Profile of preparation Technical service in agrarian and industrial complex
5. Qualifications (degree) applied Bachelor
6. The providing division Department TMS YUTI TPU
7. Teacher Retyunskiy O.Y., call 8(38451) 7-77-61, E-mail retol@tpu.ru
8. The results of the development of the discipline

Know:

- Structural elements, principles of operation and application of electrical machinery and equipment;
- Characteristics of electromechanical energy converters;
- Methods for performing engineering calculations associated with the design elements of mechanization of production processes in crop and livestock production, maintenance and repair of machinery and equipment.

Know how:

Use this knowledge in a production environment; to solve problems related to the operation of electrical machines and tractors; to use the necessary literature.

9. Contents (a list of the main topics (sections))

Section 1. Basic theory of electric

Section 2 Electromechanical properties of induction motors

Section 3. Electromechanical properties of DC motors

Section 4. Determination of electric power

Section 5. The equipment and the electric motor control circuit

Section 6. The equipment and motor protection circuit

Section 7. Electrical and mobile electric transport.

Section 8. Batteries. Requirements thereto. Factors influencing capacity.

Section 9. The parallel operation of the generator and the battery charge balance.

Section 10. Car alternators.

Section 11. Contactless generators.

Section 12. Voltage regulation in the vehicle electrical system.

Section 13. The ignition system. General information. Classical ignition.

Section 14. The ignition system. Electronic ignition systems.

Section 15. System start-up engine. General information. Design and function of a starter.

Section 16. Electrical starter control circuit. Analysis of the electric starter.

10. COURSE 3,4; SEMESTER 6,7; CREDITS 6 (3/3)

11. PREREQUISITES: "Physics", "Chemistry", "Theoretical Mechanics", "Metrology, Standardization and Certification", "Materials Science and Technology of construction materials", "Electrical Equipment"

12. KOREKVIZITY : "Diagnostics and maintenance of machines", "Technology of repair of machinery", "Exploitation of machines and tractors"

13. TYPE CERTIFICATION (Exam, offset): offset 6 semester, exam in semester 7

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