

**Don State Technical University  
HIGHER EDUCATION SYLLUBUS IN**

1.1. Field of study	Land transport-technological facilities
1.2 Name of the study programme in English	Technical facilities of Agriculture
1.3 Qualification (degree)	Machine engineer
1.4 Mode of education	Full-time
1.5 Educational department	Faculty of Machines and Equipment of Agro-industrial Complex Department of Agricultural Machines and Equipment
1.6 Workload (ECTS)	300
1.7 Duration of education (the course)	5 years
1.8 Teaching languages	Russian, English

**2. Aim of the programme**

Training of specialists able to develop and improve modern technological processes and means of their realization, to create competitive engineering products, to improve national technological environment.

**2.1 Distinctive features of the programme:** Four types of practice (academic introductory, technological, engineering and pre-graduation practice) at the leading enterprises of agricultural machine engineering.

**3. Characteristics of the programme**

<b>3.1 Main disciplines/modules</b>	Professional cycle:
<b>3.2 Elective courses</b>	Descriptive geometry and engineering graphics; The theory of mechanisms and machines; Resistance of materials; Parts of machines and principles of design; Hydraulics and hydraulic gear; thermodynamics and heat-process engineering; Material studies; technology of construction materials; Electrical engineering, electronics and hydraulic gear; Metrology, standardization and certification; Principles of scientific research; Reliability and operation of mechanic systems; CAD system of agro-industrial complex; Constructions of technical facilities of agro-industrial complex; electronic equipment of technical facilities of agro-industrial complex; technologies of production of agricultural machines; design of technical facilities of agro-industrial complex; testing of technical facilities of agro-industrial complex. 3.1. Theory and assessment of machines for cattle farms; tractors, engines and aggregation of agricultural machines; automated systems of agricultural machines and equipment; design of cattle farms; theory and assessment of strapping and seeding machines. 3.2. User-defined programming of graphic systems; machines for vegetable production and gardening; machines and equipment for forage production.

**4. Employability and further education**

<b>4.1. Job opportunities</b>	Graduates from the department “Agricultural machines and equipment” work at agricultural machine enterprises and
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	other enterprises.
<b>4.2. Further studies</b>	Master's program, postgraduate training program, doctoral program
<b>5. Programme learning outcomes</b>	
A graduate is ready to solve the following professional tasks:	
<ol style="list-style-type: none"> <li>1. To perform state analysis and perspectives of development of land agricultural machines, aggregates, equipment.</li> <li>2. To perform research for the search and inspection of new ideas for the development of agricultural machines and equipment.</li> <li>3. To search the ways for revelation of the aims of the project, development of new ones, and modernization of agricultural machines and equipment, to forecast consequences of implementation of these ideas.</li> <li>4. To work out design and technical documents for the production of new or modernized agricultural machines and equipment.</li> <li>5. To perform tests of agricultural machines and equipment.</li> </ol>	
<b>6. Teaching, training, assessment</b>	
<b>6.1 Learning and teaching approaches</b>	
Lectures, seminars, laboratory works, internship at agricultural enterprises and enterprises of agricultural machine engineering.	
Term papers, projects and graduation engineering project are to be fulfilled for the subjects of specialization.	
Modern technologies of brainstorming, multidimensional analysis and structural parametric synthesis of a designed technical object.	
<b>6.2 Assessment methods</b>	
Presentations, tests, individual teacher's assessment.	
<b>7. Contact information (chair on duty, head of the programme)</b>	
Head of the department of Agricultural machines and equipment Prof., Doctor of Engineering Ermolyev Y.I.	