

**MINISTRY OF HIGHER AND SECONDARY SPECIALIZED
EDUCATION OF THE REPUBLIC OF UZBEKISTAN**

ANDIJAN MACHINE-BUILDING INSTITUTE

Registered:
No. 235
24 08 2022 year



**ORGANIZATION OF TRAFFIC
SCIENCE
WORKER STUDY PROGRAM**

Field of study: 620,000 – Transport

Field of study: 5620400 – Organization of traffic (vehicle transport)

General education hour	320 hours	5th semester	6th semester
That's it including:		160	160
Lecture	64	32	32
Practical exercises	96	48	48
Laboratory exercises	-	-	-
Independent education hours	160	80	80

Andijan - 2022

The working curriculum of the subject was approved by the order of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan No. It was developed on the basis of the “Organization of traffic” science program .

The working curriculum of the Andijan Machine-Building Institute is educational and methodological “___” in _____ of 2022 year confirmed by statement no.

Developer:

1. Erkinjanov A.B - Trainee teacher of AndMBI “Ground transport systems” department

Reviewers:

1. Almatayev T.O - AndMBI Professor Department of Automotive Engineering

2. Askarov I.B - Jizzakh Polytechnic Institute, head of the Vehicle engineering department , PhD, Assoc .

Chief of the educational - methodical department:

2022 year “___” _____ **A.B.Akhmedov**
(signature)

AndMBI Dean of Transport and logistics faculty:

2022 year “___” _____ **D.Kh.Sarimsakov**
(signature)

Head of the Department of On land Transport Systems :

2022 year “___” _____ **L.Y.Bakirov**
(signature)

I. The content of science

The purpose of teaching science - is to teach students the methods of studying traffic, collecting the characteristics of traffic and pedestrian flows and organizing traffic based on them.

The task of the subject is to provide students with theoretical knowledge, practical skills, a methodical approach to the processes of organization and management of traffic and the formation of a scientific worldview, to know the content and essence of the laws and principles of traffic flows, and the role of a specialist in his work by forming a personal attitude towards them. and reveal the importance .

II . The main theoretical part (lecture exercises

The subject includes the following topics:

Table 1

No	Topics of lectures	Size of lesson hours
5th semester		
Module 1. Enter. Ways to study traffic		
1.	Topic 1. Goals and tasks of the science of traffic organization. Automotiveization and traffic in Uzbekistan on a global scale. 1.2 Systematic character of traffic operation . 1.3 OT constituent factors: development of regulatory documents in the field of OT, development of vehicles, practical application of legal requirements in the processes of design, construction and operation of street-road networks. 1.4 Organization of control of reliability of activity of all components of street road networks .	6
2.	Topic 2. The main directions of engineering activity on the organization of traffic. 2.1 Gathering information about the current state of traffic management. 2.2 Organization of work to determine the occurrence of many road traffic accidents. 2.3 Traffic organization projects. 2.4 Direct participation in the implementation of measures	6

	<p>designed to improve traffic management.</p> <p>2.5 International organizations, services, organizations and international conventions operating in the field of traffic management</p>	
3.	<p>Topic 3. Traffic characteristics.</p> <p>3.1 Traffic characteristics, traffic flow.</p> <p>3.2 Movement speed.</p> <p>3.3 Movement composition.</p> <p>3.4 Unevenness of traffic flow in time and space.</p> <p>3.5 Intervals of vehicles by time.</p> <p>3.6 Dimensions of vehicles.</p> <p>3.7 Dynamic car movement corridor and safety distance.</p> <p>3.8 Transport flow composition factor</p>	6
4.	<p>Topic 4. Pedestrian flow .</p> <p>4.1 The role of pedestrians in the organization of traffic.</p> <p>4.2 Pedestrian flow characteristics.</p> <p>4.3 Methods of studying the flow of pedestrians.</p> <p>4.4 Movement speed and speed of pedestrians.</p> <p>4.5 Pedestrian accidents and their study and analysis.</p> <p>4.6 Interaction of traffic flows with pedestrian flows.</p>	8
5.	<p>Topic 5. Mathematical description of transport flows .</p> <p>5. 1 Movement speed.</p> <p>5.2 Spatial-spatial characteristics of vehicle speeds in traffic flows.</p> <p>5.3 Macroscopic and microscopic models of transport flows.</p> <p>5.4 Load coefficient of the road.</p>	6
6th semester		
Module 2. “Methods of traffic organization”		
6.	<p>Topic 6. Road capacity.</p> <p>6.1 Factors affecting the capacity of highways.</p> <p>6.2 Traffic operational indicators of highways.</p> <p>6.3 Causes of road congestion.</p> <p>6.4 Mathematical modeling of the capacity of different parts of the highway.</p> <p>6.5 Models representing traffic and pedestrian flows.</p> <p>6.6 Transport links and road networks.</p>	4
7.	<p>Topic 7. Methods of traffic research .</p> <p>7.1 Collection of traffic data.</p> <p>7.2 Classifications and characteristics of obtaining information on traffic parameters.</p>	6

	<p>7.3 Document Research.</p> <p>7.4 Direct Research.</p> <p>7.5 Study of road conditions.</p> <p>7.6 Study of stationary posts.</p> <p>7.7 Study of traffic flow using moving vehicles.</p> <p>7.8 Study of conflict situations.</p> <p>7.9 Topographical analysis of road transport in street-road networks.</p>	
8.	<p>8 - topic . The main directions and methods of traffic organization</p> <p>8.1 Main directions and methods of traffic organization.</p> <p>8.2 The role of traffic management in comprehensive measures to ensure the efficiency and safety of motor transport.</p> <p>8.3 Improvement of the "Driver-Car-Road-Environment" complex, as well as the organization of car transportation as an important basis for the organization of traffic.</p> <p>8.4 Forecasting the development of motorization and traffic in the regions.</p> <p>8.5 Designing the organization of traffic in the process of city and road construction.</p> <p>8.6 Normative and methodological requirements for traffic design.</p>	6
9.	<p>Topic 9. Improvement of traffic organization</p> <p>9.1 The main directions of improvement of traffic organization.</p> <p>9.2 Segregation of traffic.</p> <p>9.3 Severability by Time.</p> <p>9.4 Formation of one type of traffic flow.</p> <p>9.5 Optimization of traffic speed on streets and roads.</p> <p>9.6 Solving passenger traffic organization problems.</p> <p>9.7 Solving the problem of temporary parking places.</p> <p>9.8 Implementation of automated traffic control systems.</p> <p>9.9 Assessment of the impact of traffic on the ecological characteristics of the environment.</p>	6
10.	<p>Topic 10. Practical activities on the organization of traffic</p> <p>General and specific tasks of organizing traffic in cities and highways .</p> <p>10.2 Organization of movement at uncontrolled intersections.</p> <p>10.3 Provision of visibility and privilege.</p> <p>10.4 Reducing the Level and Number of Points of Conflict.</p> <p>10.5 Controlled and uncontrolled intersections and their separation</p>	6

	criteria. 10.6 Circular movement at intersections. Pros and cons. 10.7 Organization of unilateral and reversive movement, pros and cons.	
11.	Topic 11. Organization of pedestrian traffic 11.1 Creation of pedestrian walkways. 11.2 Organization of pedestrian crossings. Location and dimensions. Equipment. 11.3 Level of Visibility. 11.4 Provision of Information. 11.5 Residential Areas. 11.6 Measures to increase the carrying capacity of sidewalks. 11.7 Requirements for organization of surface transport movement. 11.8 Capacity of traffic lanes and stops.	4
	Total	64

Lectures are held in an auditorium equipped with multimedia facilities for the flow of academic groups .

III. Practical training instructions and recommendations

From the science of traffic organization practical training is multimodal an auditorium equipped with devices and on Boburshah street of Andijan city will be transferred to each academic group separately .

Practical training instructions and recommendations

Table 2

No	Topics of practical training	Size of lesson hours
5th semester		
Module 1. Organization of traffic .		
1.	Basic detail of traffic rules.	8
2.	Convention on Road Traffic and Road Signs and Signals .	10
3.	describing road traffic and methods of their study.	10
4.	Organization of movement at intersections.	10
5.	Organization of pedestrian traffic.	10
	Total	48
6th semester		

Module 2. Organization of traffic		
1.	Ways of lighting roads and streets .	8
2.	Methods of calculating conflicting points.	10
3.	Transport flow modeling.	10
4.	Determining the capacity of roads.	10
5.	Direct study of transport flows.	10
Total		48

From the science of traffic organization practical training is multimodal an auditorium equipped with devices and on Boburshah street of Andijan city will be transferred to each academic group separately .

IV. Instructions and recommendations for laboratory exercises

“Organization of traffic” science training on laboratory training is not planned in the plan .

V. Instructions and recommendations for course work, course project and accounting graphic work

Course work, course project and calculation graphic work scheduled for the 7th semester.

is carried out according to a separate assignment given to each student .

the course project , the student in the given street network :

determines the characteristics of the traffic flow;

develops the laws of traffic flow characteristics;

constructs graphs based on the laws of traffic flows;

studies and analyzes the existing traffic organization scheme in the transport network ;

of the completed calculations and analysis , he develops a scheme that includes proposals for improving traffic .

VI. Independent education

Table 3

No	Independent study topics	Size of lesson hours
5th semester		
1.	Impact of automobileization on the organization of traffic on a global scale and in Uzbekistan.	4

2.	Systemic nature of traffic operation.	4
3.	Factors affecting the organization of traffic.	4
4.	Normative documents in the field of OT.	4
5.	Organization of control of operational reliability of all components of street road networks.	4
6.	Gathering information about the current state of traffic management.	4
7.	Traffic organization projects.	4
8.	conventions operating in the field of traffic organization.	4
9.	Traffic characteristics.	4
10.	Dynamic corridor and safety distance of the car.	4
11.	The role of pedestrians in the organization of traffic.	4
12.	Pedestrian flow characteristics.	4
13.	Methods of studying the flow of pedestrians .	4
14.	Movement speed and speed of pedestrians.	4
15.	Pedestrian accidents and their study and analysis.	4
16.	Interaction of traffic flows with pedestrian flows .	4
17.	Movement speed.	4
18.	Spatial-spatial characteristics of vehicle speeds in transport flows.	2
19.	Macroscopic and microscopic models of transport flows.	2
20.	Load coefficient of the road.	2
21.	Factors affecting the carrying capacity of highways .	2
22.	Transport and operation indicators of highways .	2
23.	Reasons for traffic jams on the roads. Mathematical modeling of the capacity of different parts of the highway.	2
Total		80
6th semester		
1.	Models representing traffic and pedestrian flows.	4
2.	Transport connections and road networks.	4
3.	Collect traffic data. Classifications and characteristics of obtaining information on traffic parameters.	4
4.	Ways to identify accident hotspots in street-road networks.	4
5.	Conflicting points and situations.	4
6.	Typographical analysis of RTA.	4
7.	methods of traffic organization.	4
8.	role of traffic organization in comprehensive measures to ensure the efficiency and safety of motor transport .	4
9.	“Driver-Vehicle-Road-Environment” complex, as well as the organization of car transportation as an important basis for the	4

	organization of traffic.	
10.	Directions of motorization and traffic development in the regions .	4
11.	Designing the organization of traffic in the process of urban and rural construction.	4
12.	Normative -methodical requirements for traffic planning.	4
13.	improvement of traffic organization.	4
14.	Separation of traffic.	4
15.	Forming a type of traffic flow.	4
16.	Optimizing traffic speed on streets and roads.	4
17.	Solving the problems of organizing passenger traffic.	4
18.	Solving the problem of temporary parking spaces.	2
19.	Implementation of automated traffic management systems.	2
20.	Assessment of the impact of road traffic on the ecological characteristics of the environment.	2
21.	General and specific tasks of organizing traffic in cities and highways .	2
22.	Organization of traffic at uncontrolled intersections. Provide visibility and privilege.	2
23.	Controlled and uncontrolled intersections and their separation criteria.	2
Total		80

It is recommended to prepare abstracts and present them by students on subjects to be mastered independently.

VII . Criteria for monitoring and evaluating student knowledge in science

knowledge of subjects at the Andijan Institute of Mechanical Engineering in accordance with the Decree of the President of the Republic of Uzbekistan dated June 5, 2018 No. According to the decision of the Minister of Higher and Secondary Special Education of the Republic of Uzbekistan dated August 9 , 2018 No. 19-2018 It is carried out on the basis of the “Regulation on the control and evaluation system of students’ knowledge in higher education institutions”, approved and registered by the Ministry of Justice of the Republic of Uzbekistan on September 26, 2018 with No. 3069 .

Table 4

Evaluation methods	Oral survey, test, interview, supervision, homework check, written work, presentations and other such forms
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<p>B population criteria</p>	<p>5 – “A” grade</p> <ul style="list-style-type: none"> - The student makes independent conclusions and decisions ; - I can think about something ; - m conducts independent observation ; - can apply the acquired knowledge in practice ; - understands, knows, can express, tell the essence of the science (topic) and when it is considered that he has an idea about the science (topic) - he is evaluated with 5 (excellent) grade. <p>4 – “Good” grade</p> <ul style="list-style-type: none"> - The student observes independently; - can apply the acquired knowledge in practice; - understands, knows, can express, tell the essence of science (topic) and when it is considered that he has an idea about science (topic) - he is evaluated with 4 (good) marks. <p>3 – “Satisfactory” grade</p> <ul style="list-style-type: none"> - The student can apply the acquired knowledge in practice; - understands, knows, can express, tell the essence of science (topic) and when it is considered that he has an idea about science (topic) - he is evaluated with 3 (satisfactory) marks. <p>2 – “Unsatisfactory” grade</p> <ul style="list-style-type: none"> - When it is considered that the student has not mastered the science program, does not understand the essence of the science (subject) and does not have an idea about the science (subject) - he is evaluated with a grade of 2 (unsatisfactory). 		
	<p>B population types</p>	<p>Max. score</p>	<p>Transfer time</p>

	<p>Intermediate control (conducting the ON type and evaluating the student's knowledge in this type of control is carried out by the professor who conducted the subject training).</p> <p>Mid-term supervision is conducted during the course of the semester in order to assess the knowledge and practical skills of the student after the completion of the relevant section of the work science program.</p> <p>The type of intermediate control can be conducted up to 2 times for each subject, depending on the nature of the subject, and the form and duration of the examination are determined by the department based on the nature of the subject and the hours allocated to the subject.</p> <p>The grades obtained by the student on the basis of the intermediate control type 1st intermediate practical training, 2nd intermediate independent education are taken into account .</p> <p>have passed the intermediate test before the final test for the relevant subject .</p> <p>has not passed the intermediate control type and has been evaluated with a "2" (unsatisfactory) grade for this</p>	5	9-12 weeks
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	<p>control type will not be included in the final control type.</p>		
	<p>Final control Conducting the final type of control and evaluating the student's knowledge on this type of control is carried out by a professor who did not conduct the training.</p>	<p>5</p>	<p>15-16 weeks</p>

	final control type depends on the nature of the subject, based on the hours allocated to the subject is determined.		
	Written work, oral, test , etc	5	

IX. Basic and additional literature and sources of information.

Main literature :

1. Azizov Q.KH Fundamentals of organization of traffic safety. Tashkent, Science and technology, 2009.-244b.
2. Клинковштейн.Г.И., Афанасьев М.Б, организация дорожного движения Транспортб, 2001.-247с.
3. Организация и безопасность движения. Учебное пособие для студ. высш.учеб.заведений/ И.Н.Пугачёв, А.Э.Олешенко, М.:Издательский центр “Академия”, 2009-272с

Additional literature

1. Sh.Mirziyayev We will build a free and prosperous democratic country of Uzbekistan together. T.: Uzbekistan . 2016
2. Decree of the President of the Republic of Uzbekistan “On the Strategy of Actions for Further Development of the Republic of Uzbekistan” (“Halq Sozi” newspaper, February 8, 2017)

Internet sources

1. Organization of traffic. <https://google.com/search>
2. Organization of road transport. <https://twirpx.com/file/154410/>
3. Методы оценки проектных решений по организации дорожного движения <https://www.tekhnosfera.com>.
4. Исследование транспортных потоков <https://www.vestnik.get>
5. Московский государственный автомобильно-дорожный университет (МАДИ) www.madi.ru
6. Сибирский автомобильно-дорожный университет Белорусский государственный университет транспорта (БелГУТ) www.bsut.bywww.lex.uz.
_ - National database of legal documents of the Republic of Uzbekistan .
7. www.ziyonet.uz .
8. <http://www.motorpage.ru>
9. www.uzavto@list.uz
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11. www.uzavtosanoat.uz

