[A-3]COURSE SYLLABUS

1. Course Description (Approximately 100 words)

The course "Bases of digital automatics" is a cycle of special disciplines of the educational standard of the specialty 5311000, "Automation and management of technological processes and production".

This discipline is read in the 6th semester. In accordance with the program of the course specialty 5311000, "Bases of Digital Automatics" provides 102 hours. Of them - 36 hours of lectures.

The course "Bases of digital automatics" is one of the most important specialized disciplines that define the profile of the training of engineers in the specialty 5311000, "Automation and management of technological processes and production". The purpose of training - to prepare future engineers to make informed decisions at the expense of automation and computerization of production on different types of enterprises.

2. Course Goals and Objectives (Approximately 100 words)

The purpose of discipline is to develop students' knowledge and skills development of automated digital control systems, the choice of means of automation and the development of project documentation on the basis of the decisions taken.

The study of the basic provisions for the design of automated digital control systems, the use of assistance and scientific and technical literature, computer design technologies.

3. Textbook (Title, Author, Publisher, Year of Publication, etc.)

Bases of Digital Automatics. Shomirzaev Bobir Publishing house of the Andizhan machine-building institute, 2017.

Lectures "Bases of Digital Automatics" The course is one of the core courses, which will be read by the author in 2016-2017 in Andijan Machine Building Institute, for students " Automation and management of technological processes and manufactures." The course can also be useful for professionals working in the field of automation of technological processes and production.

1. G. Olson, J. Piani. Digital automatic control system ./- SPb .: Nevskiy Dialekt, - 2001, 1-2 t.
2. Tochchi, Ronald, Di., Uidmer, Nil, S. Digital systems. Theory and Practice, 8-e edition. M.:

4. Reference

1. Методы классической и современной теории автоматического управления Под ред. К.А.Пуикова. Том 1-4. М.: МГТУ им.Баумана. 2001 г.
2. Дорф Р. Современные системы управления. Р. Дорф. Р. Бишоп: Пер. с англ. М.: Лаборатория базовых знаний, 2004. 832 с.
3. Рапопорт Э.Я. Структурное моделирование объектов и систем управления с распределенными параметрами: Уч. пос. 2003.-300с.
4. Егупов Н.Д. Методвы анализа, синтеза и оптимизации нестационарных систем автоматическиго управления. МГТУ, 1999.
5. Мирахмедов Д.А. Автоматик бошқариш назарияси. - Т.: Узбекистан, 1993.
6. Рақамли автомат асослари фанидан маърузалар курси/ Шомирзаев Б. - Андижон: АндМИИ 2016 й -107 б.

5. Course Requirements and Grades

The discipline «Bases of Digital Automatics» is the basic discipline of the professional block of disciplines.
The discipline is based on courses of cycles of natural-science and professional disciplines: Higher mathematics, the Electrical engineer and electronics, the automatic control Theory, automation Means, Computers, systems and networks, automation and management Means.

6. Course Calendar

Week	Main Content
1	1. The concept of information and its measurement
2	2. Coding Information. 3. Number systems
3	4. General concepts of algebra of logic
4	5. TExpression of logical functions using logical elements. 6. Minimizing Log
5	7. Abstract and limited automata. Miley and Moore machines
6	8. Synthesis of digital automata with memory 9. Digital - analog converters, t
7	10. Analog-to-digital converters, their circuits
8	11. Microprogram Automat 12. Programmable Logic Controllers
9	13. Synthesis of automata with logical control
10	14.Ensuring the stable operation of digital machines 15. Automated control a
11	16. Implementing mechanisms, their structure and working principle
12	17. Digital analogue speed control of the synchronous motor
13	18. Examples of digital regulation
14	