"Theory of Optimal Systems"
(name of the discipline)

OUTLINE

TO THE CURRICULUM OF THE INSTITUTION OF HIGHER EDUCATION

Specialty 1-40 80 02 "System analysis, management and information processing" (by branches)
Professionalization: Information Control Systems
II level of higher education (master's degree)

	Form of higher education
	Full-time
Course	1
Semester	1
Lectures, hours	36
Laboratory, hours	26
Exam, Semester	1
Classroom hours in the educational discipline	62
Independent work, hours	154
Total hours of the discipline / credit units	216/6

1.Summary of the content of the discipline
Getting profound knowledge in the methods of optimal control of dynamic systems, developing methods of calculation and construction of optimal control systems, including those based on modern computer technologies.

2 Course objectives
As a result of the study of the discipline, the student should
know:
- criteria of optimality of controlled systems;
- methods of finding optimal solutions;
- existing solutions for optimization of controlled systems;
be able to:
- determine the fields of applicability of optimal control systems;
- determine the main features of the methods of optimal control theory and statements of the optimal control systems problems
- analyze processes, occurring in optimal control systems;
- apply acquired knowledge to specific technical systems in terms of formulating and solving optimization problems;
master:
- skills of practical implementation of methods and algorithms of optimal control in the construction of optimal systems.

3. Competencies to be formed
PC-4 Apply the skills of formulation and solution of the optimal control problems

4.Requirements and forms of current and intermediate attestation.
ZLR, TA, exam.