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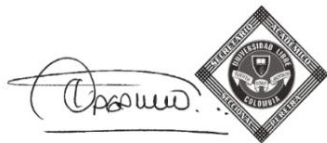
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**FREE UNIVERSITY PEREIRA SECTION**

**UNDERGRADUATE PROGRAM IN ENVIRONMENTAL ENGINEERING**



**SUBJECT: SYSTEMS III**

**CODE:** -----

**SEMESTER:** THIRD

**HOURS** WEEKLY: 4

**THEORETICAL: 2**

**PRACTICES: 2**

**REQUIREMENTS:** SYSTEMS II

**GOALS :**

To train the engineering student in the basic concepts and tools of computer programming, starting with the design of programs in a language of algorithms and data structures , as well as teaching programming techniques common to all languages, giving special emphasis to the preparation of the design in the structured languages such as Pascal, QUICK, FORTRAN and BASIC.





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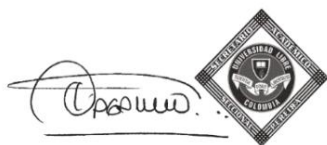
## METHODOLOGY:

The teaching of this subject will be done in a very practical way, providing each student with your own computer following the teacher's basic guides for understanding and learning the objectives of the subject. The completion of assignments will be essential individual and group exercises and the ongoing development of programming exercises



## CONTENT :

1. Basic algorithmic structures
2. Design of iterative algorithms
3. General structure of a program
4. Programming languages
5. Numerical algorithms
6. Data structures
7. File management



## BIBLIOGRAPHY:





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JOYANES L. Programming Fundamentals. ISBN: 847-615-201-9. McGraw Hill 1988

GOTTFRIED B. Programming in Pascal. (Shcaum) ISBN: 968-451-810-2 McGraw/86

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