



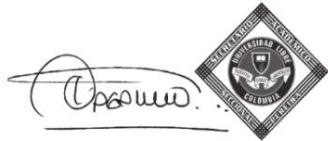
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FREE UNIVERSITY PEREIRA SECTION

UNDERGRADUATE PROGRAM IN ENVIRONMENTAL ENGINEERING



SUBJECT: ADVANCED MATHEMATICS

CODE: -----

SEMESTER: ROOM

HOURS **WEEKLY: 4**

THEORETICAL: 4

PRACTICES: 0

REQUIREMENTS: PHYSICS II AND LABORATORY,

CALCULUS III

GOALS :

To train engineering students in the handling and mastery of tools

mathematics that will be very useful in your engineering designs and work.

Understand and master the theory of Laplace transforms,

also known as operational calculus.





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METHODOLOGY:

The teacher must make his classes interesting and understandable to his students.

. It will use the best teaching methodologies for the study of the mathematics, will vary the methodology of the classes, will make the student very involved in the class and will take advantage the advantages of modern mathematics education.



CONTENT :

1. Laplace transforms.
2. Inverse Laplace transform
3. Applications to differential and integral equations.
4. Complex variable theory
5. Fourier series and integrals
6. Applications to boundary values



BIBLIOGRAPHY:





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SPIEGEL M. Laplace transforms. ISBN: 968-422-881-3. McGraw Hill. 1991

SPIEGEL M. Complex Variable. ISBN: 968-422-883-X McGraw Hill. 1991



 **CAMINANDO EN LA EXCELENCIA**



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Pereira, campus Universitario Belmonte - Av. Las Américas carrera 28 No. 96-102. Sede Centro, calle 40 No. 7-30. Sede Comité de Cafeteros Cra. 9a. 36-43.
PBX: (6)3401081 - 3401043