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Personería Jurídica No. 192 de 1946 de Mingobierno  
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**FREE UNIVERSITY PEREIRA SECTION**

**UNDERGRADUATE PROGRAM IN ENVIRONMENTAL ENGINEERING**



**SUBJECT :**                    **PHYSICS III**

**CODE:**                    **-----**

**SEMESTER:**                **ROOM**

**HOURS**                    **WEEKLY: 4**

**THEORETICAL: 4**

**PRACTICES: 0**

**REQUIREMENTS:**                    **PHYSICS II AND LABORATORY,**  
**CALCULUS III,**

**GOALS :**

Reinforce the basic theoretical knowledge that the student already has about physics, mainly in the areas of electricity and magnetism, in order to ensure their assimilation and understanding in the application to the solutions of basic problems of Engineering.





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Motivate the student to delve deeper into the topics of physics and to focus on research into this important science.

#### **METHODOLOGY:**

The teacher will have the obligation to use teaching techniques that allow the clear understanding of physical phenomena, such as videos, experiments and others, besides of his master classes. He will propose individual research projects. and in a group, to achieve the best learning by the student.



#### **CONTENT :**

1. Columbus's Law.
2. Electric field: Gauss's Law
3. Electric potential
4. Capacitance and properties of dielectrics
5. Electric current, resistance and automotive force
6. Magnetic field
7. Quantum theory





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SCOTT. Electrical circuits.

EISBERG M. Physics: Fundamentals and Applications. Ed. McGraw Hill 1990

