Entre Ciencia E Ingeniería (Between science and Engineering) is a Magazine of Universidad Católica de Pereira which aims is to contribute to the development in Basic Science and Engineering of papers that show the advance and condition of the knowledge, the technique and the technology and the training in these areas.

Science and Technology are considered to be a product of the intelligence and they are in the service of mankind for its benefit and welfare, they are an authentic and indisputable sample of its humanity, of its anxious, insightful, adventurous and explorative nature of its reality, which has allowed it to survive through time, to be promoted and to differ from other species; even more when the knowledge has blown up with the creativity allowing mankind to design tools, to displace through the night, during the day or to transform nature.

But the exercise of Science and Technology entrails repercussions (sometimes unexpected). New ways of doing and thinking can improve the conditions of life or even threaten living beings and their habitat. Thus: The more human beings know reality and the world the more he knows about himself in his uniqueness, the question about the meaning of things and human’s self-existence becomes more urgent.

Science and engineering conceive the world as comprehensive, with rules governing its functioning and which are demonstrated through careful and systematic study. They can be evidenced by constant patterns that allow to examine the fundamental characteristics that best describe the phenomena and how they relate, it would be possible to learn more about the world, its evolution, its transformations, adjustments and future behavior.

In the search of the truth there are aspects that are prioritized because of the context in which the Universidad Católica de Pereira is placed, the perception from and to the region allows updating and having a preparation on the world stage so that parallels can be set with the development of Science and Engineering in the world.

Additionally, this perception is developing a two-way relationship; while the region poses countless opportunities and challenges for the University to develop academically, it benefits from having suitable solutions to their needs, providing the right for living conditions, justice, freedom, life, social opportunities and human development.

The manifestation regarding the durability and accessibility of the research and the means par excellence for the dissemination of knowledge manifestation is called scientific publication. Thus, the Magazine wants to make a contribution with its scientific publication for the continuous renewal of
theories, practices and an approach to spreading scientific work and the possibility of integration into industrial, economic, social and cultural contexts.

Therefore, the writings referred to this magazine must maintain the rigor of science, and focus on recent developments in Science and Engineering, trends, validations and scope. An editorial/Scientific committee, two national or international arbitrators, a periodicity of two numbers in the year and the publication of original results of research projects supports the production of this magazine.

Guide for Authors

The magazine *Entre Ciencia e Ingeniería*, is aimed at the academic community, science and society interested in the development of Science and Engineering, through the dissemination of works of review, reflection and basic research, applied research and education in these areas.

Authorized Papers

The magazine will evaluate the kinds of papers accepted by Colciencias:

- **Paper of scientific and technological research.** Document presents, in detail, the original results of research projects completed. The structure generally used contains four important sections: introduction, methodology, results and conclusions.

- **Paper of reflection.** Document that presents results of completed research, from an analytical perspective, interpretive or criticism of the author on a specific topic, resorting to original sources.

- **Review paper.** Document of a completed research where the findings of published or not published papers are analyzed, systematized and integrated on the field of science or technology, in order to give an account of the progress and trends of development. It is characterized by a careful review of the literature of at least 50 references.

- **Discussion.** Critical positions, analytical and interpretive on the documents published in the magazine, which in the opinion of the Editorial/Scientific Committee constitute an important contribution to the discussion of the item on the part of the scientific community of reference.

- **Response.** Document that responds to a writing of discussion. It is done by the author of the paper that started the debate.

Receipt and evaluation of papers

- The authors should send their work to the editorial/scientific committee of the magazine, to the email address [entrecei@ucp.edu.co](mailto:entrecei@ucp.edu.co), attaching the following formats duly completed: file of the author(s), file of the project and charter of originality.
The editorial/scientific committee verifies if the document is relevant to the identity, purpose and form of the Magazine, given its compliance, it is subjected to an assessment of disciplinary research for its due assessment.

For the evaluation, two disciplinary evaluators (considered as a trained academic with appropriate discipline) will give his/her expert opinion on the paper to ensure the academic rigor, the relevance and its quality; the evaluator of style is an academic authority in the process of reading and writing, who will review the drafting, spelling, cohesion and coherence of the writing. Each one of them will inform in writing, through established formats, the editorial/scientific committee consideration as to whether the paper is suitable or not for publication or whether corrections are required. In the evaluation process takes in account the following:

- If the document is not accepted at first instance by the editorial/scientific committee, the author is informed so that he or she disposes of the paper.

- The evaluators are unaware of the authors’ names and vice versa.

- Based on the evaluations results provided by the evaluators, the editorial/scientific committee proceeds to:
  - Reject for publication, in the case that any of the two evaluators or both consider that the paper does not fulfil with the conditions to be published.
  - Must be corrected and send back to evaluation, in the event that one or both arbitrators consider that changes need to be made.
  - Is accepted for publication, if both evaluators consider that, the paper meets the conditions required for this purpose.
  - If one or both evaluators considered that the paper can be accepted but with corrections, that request will be made to the authors. The authors decide to make corrections or remove the paper of the call. When corrections are made, the authors must return the document to the editorial/scientific committee. In order to get the final endorsement for publishing, the editorial/scientific committee will send the paper corrected to the evaluators and they verified the corrections and suggest to the Committee if the paper may or may not be published.
  - The document corrected will be send once to the evaluator for the final endorsement; therefore authors must be careful and make all the evaluators observations.
- If the document is not accepted after the results of the arbitration the author must be informed so that the composer can dispose of the paper.

- If an paper is rejected, the magazine has as a policy no to reconsider the decision.

- After the disciplinary revision, if the paper is accepted will go to style revision. The style evaluator is a trained academic with the appropriate knowledge in reading and writing, whom will review the writing, spelling, cohesion and coherence of the paper. The style evaluator will inform to the editorial/scientific committee if any correction by the authors is necessary.

- The author must make a final revision to the paper printed in the dummy of the magazine or in PDF, which is sent via email.

The author

- The corresponding author, is considered to act in good faith on behalf of all authors and submitting responsibly. Ensuring the authenticity of the work and it must not be presented simultaneously to another publication in a period of 12 months, unless it is rejected in this Magazine. For this purpose, the author must send a letter of originality signed according to the format established by the magazine, at the time of sending the paper.

- The corresponding author on behalf of the sponsors, with full power granted by them, gives the Universidad Católica de Pereira the rights for the publication of the paper in all languages and all possible means of disclosure.

- When submitting an paper, the author or the authors approve the paper and electronic publication of his/her work in the entre Ciencia e Ingeniería Magazine, ISSN 1909-8367, if approved by the evaluators and the editorial/scientific committee.

- The judgments issued by the author or authors of the paper are their entire responsibility. Therefore, do not commit neither the policies of the Universidad Católica de Pereira, nor those of the Magazine.

- The authors are responsible for ensuring the copyright of all the material used in the paper.

- Only a single paper per author will be evaluated in each edition.

Paper Guide

- Papers for publication must be unpublished and exclusive for the Magazine.
• Works in Spanish, Portuguese or English are accepted. Prevailing standards and appropriate language use.

• The minimum extension of the paper is 6 pages and a maximum of 8, following the format and rules with regard to images, reference, tables and other of the IEEE, according to the template for the paper to be sent to the authors or they can access through the magazine website.

Format rules for the papers - Graphical presentation (follow the Templates/Model-Paper submitted)

1. The papers must be sent in Microsoft Word format. A page letter size of 215.9×279.4 mm (8.5×11 inches or 51×66 picas) with top, bottom, left and right margins of 16.9 mm (0.67 inch or 4 picas) and double column with central separation of 4.3 mm (0.16 inch or 1 pic) must be chosen, which gives a column of 88.9 mm (3.5 inches or 21 picas) wide and 245, 6 mm high (9.66 inches or 58 picas). The line spacing adopted is 1.05 points, it can vary from 1.03 to 1.07 to help complete pages.

2. The paper must have an average of six to eight (6-8) pages excluding references.

3. Title of the paper in Spanish, in English and Portuguese: Times New Roman, size 18 and text centered, example:

Template for the preparation of technical papers in Microsoft Office Word processor

4. The authors’ names must be just below the title, in Times New Roman size 11, in the format. Initials for the names followed by period with space between them and followed by the surname. Example, Juan Luis Arias Vargas (J. L. Arias).

5. The Abstract (a brief summary of the paper) and key words (words that allow us to identify the topic of the paper) must be in Spanish, Portuguese and English, italic and bold, followed by a dash (-, ALT 0151) without any space (Abstract- Key Words-); the text must contain a paragraph written in bold, in Spanish, English and Portuguese all in Times New Roman, size 9. The summary must not exceed 150 words and cannot contain equations, figures, tables, or references. You must provide keywords (in alphabetical order), up to a maximum of 10, to help identify the issues or main aspects of the paper.

7. The first word letter, in the first paragraph (Introduction) must be equivalent to two lines size. Example:

This document provides an example of an edition design of a technical paper in Spanish for the IEEE Latin American Magazine. It is a template made with the…

8. Content of the paper in Times New Roman 10. Each paragraph begins with tabulation of 5 spaces (indent), there are no spaces between paragraphs.

9. Title of the tables in Times New Roman 8, uppercase and with Roman numerals (table I below the table name.). Example:

<table>
<thead>
<tr>
<th>TABLE I</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIZES AND STYLES OF THE TIMES NEW ROMAN FONT USED IN THE COMPOSITION OF AN PAPER WITH THIS TEMPLATE OR WITHOUT IT</td>
</tr>
</tbody>
</table>

10. Figures caption must be written "Fig. 1. Xxx ", left aligned in Times New Roman 8, ending with a period; to cite figures in the paper’s body, use “Fig. 1”. Example:

![Fig. 1. Magnetic Induction in function of the magnetized field.](image)

11. The equations must be justified to the left and numbered with Arabic numerals in parentheses right justified.

12. The title of the appendix must be text centered and each of the Appendices left-justified, with the label Appendix A: xxx, Appendix B: xxx.

13. The sections REFERENCES and ACKNOLEDGEMENTS are not numbered, Times New Roman font, size 8, and must follow exactly the IEEE model i.e., numbered in order of appearance and according to the type of document you are referencing (see the model for each type of document: books, papers, web pages, etc.) There is for example [1] within the document and at the end in the REFERENCES section format must be:

14. The paper must have the Biographies of the authors at the end, follow the format defined in the model. It must come after the references, without section title, typed in Times New Roman 8. The authors’ names with surnames, in bold. Example:

Nikola Tesla (M’1888, F’17) was born in Smiljan, Yugoslavia, on July 9, 1856. He graduated from the Austrian Polytechnic School in Graz and studied at the University of Prague. He worked professionally in the American Telephone Company of Budapest, the Edison Machine Works, the Westinghouse Electric Company and Nikola Tesla Laboratories. The high-frequency phenomena was one of his areas of interest. Engineer Tesla received honorary degrees from various institutions of higher education including universities such as Columbia, Yale, Belgrade and Zagreb. He obtained the Elliott Cresson Medal in Franklin Institute and the IEEE Edison Medal. In 1956, the term "tesla" (T) was adopted as a unit of magnetic induction or magnetic flux density, the system measures MKSA. In 1975 the Power Engineering Society established the Nikola Tesla Award in his honor. Tesla died in New York on January 7, 1943.

15. If the paper is the result of a research a footer must be done on the first page column on the left, indicating: the name of the project from which it is derived, the faculty or department, the institution and the research group to which it belongs, in Times New Roman size 8. As well as in the content of the paper each paragraph begins with tabulation of 5 spaces. And there are no spaces between paragraphs. The size of line spacing is 1.0. The information of the authors must be mentioned in a footer on the first page left column this way: The names as they appear in the top (initials for the names and the first full last name), followed by the labor affiliation, city-country and email, example:

Note 1: on the Magazine web page: http://biblioteca.ucp.edu.co/OJS/index.php/entrecei, you can find and download all formats and guide for authors.

Note 2: Important to comply with these rules so that the paper can be received.

The Editorial/Scientific Committee