



Virtual lab for learning equipment and treatment of experimental measurements of rainfall, runoff and erosion in small rural catchments

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A virtual lab for learning to use devices and to treat experimental measurements of hydrological and erosive processes in small agricultural catchments was created to support the practical content of the subject Restoration of Forest Ecosystems of the Master of Forest Engineer (University of Cordoba). The objective was to build a virtual place representing a real site equipped to make measurements of rainfall, runoff and sediment concentration. The virtual lab included pictures, videos and explanations that facilitate learning. Moreover, some practical cases were proposed to apply the explained terms. The structure of menu consisted of: Experimental measurements in catchments; Gallery of videos; Equipment; Practical case; Glossary and Additional Information. Their contents were carefully carried out by professors and scientists of Hydrology and Electronics.

The main advantages of the virtual lab were its compatibility with on-line platforms such as Moodle and the presentation of examples for the direct analysis as a basis for solving the proposed practical cases. It has been successfully used for two years and was well-valued by the students due to the opportunities offered by self-access learning tools. In addition, constraints associated with field trips such as logistical complexity and economic aspects are removed.